National Institute for Health and Care Excellence

Draft for Consultation

Social, emotional and mental wellbeing in primary and secondary education

[H] Evidence reviews for targeted mental health support

NICE guideline <number>

Evidence reviews underpinning recommendations 1.4.1 to 1.4.7 and research recommendations in the NICE guideline

January 2022

Draft for Consultation

These evidence reviews were developed by the Public Health Internal Guidelines team

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ISBN:

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1.1 Review question

What is the effectiveness and cost-effectiveness of targeted mental health support interventions for children in primary education?

1.1.1 Introduction

Social and emotional skills are key during children and young people's development and may help to achieve positive outcomes in health, wellbeing and future success. Some children may experience subclinical signs and symptoms of mental health conditions and may be at risk of poor social, emotional and mental wellbeing outcomes. Targeted mental health support aims to provide extra support for these children and young people.

1.1.2 PICO table

Table 1: PICO targeted mental health support in primary education

Population	Children and young people in primary education (UK key stages 1 and 2 or equivalent [usually ages 5-11 years]) who have been identified as being at risk of depression, anxiety or stress.
Intervention	Usual practice plus individual or small group interventions (including face to face or digital interventions) aimed at • reducing symptoms or • preventing symptoms in those at risk of depression, anxiety or stress.
Comparator	Usual practice
Outcomes	**Social and emotional wellbeing outcomes** Any validated measure of mental, social, emotional or psychological wellbeing categorised as: • Social and emotional skills and attitudes (such as knowledge) • Emotional distress (such as depression, anxiety and stress) • Behavioural outcomes that are observed (such as positive social behaviour; conduct problems) **Academic outcomes** Academic progress and attainment **Secondary outcomes** School attendance School exclusions Quality of life Unintended consequences

1.1.3 Methods and process

This evidence review was developed using the methods and process described in Developing NICE guidelines: the manual and in the methods chapter. Methods specific to this review question are described in the review protocol in appendix A and in the methods document.

Declarations of interest were recorded according to NICE's 2018 conflicts of interest policy

Methods specific to this reviewTimepoints

The most common timepoint for each outcome was used. Other timepoints, including baseline data was reported in the evidence table for information only.

Outcome measures

Where social and emotional outcome measures were reported in a study from multiple sources, the data used followed the following hierarchy of preference:

1. Child/ student reported
2. Teacher reported
3. Parent reported

However, for behavioural outcomes, measures reported by teachers were the preferred option as they are generally outcomes that are observed.

Where there were multiple social and emotional wellbeing outcomes for individual studies, the outcome chosen for the analyses matched the criteria used for inclusion in that study. For example, if the study population included students with depressive symptoms then the outcome measure included in the analysis was a depression outcome.

Cluster randomised controlled trials

Where cluster randomised controlled trials have been pooled with individually randomised controlled trials, the number of people included in the analysis from these trials have been adjusted using a reported or imputed intra-class correlation coefficient (ICC) for that outcome.

1.1.4 Evidence

1.1.4.1 Included studies

In total 47,322 references were identified through systematic searches (see Appendix B) after duplicates were removed. Of these, 248 references were considered relevant, based on title and abstract, to the protocols for targeted social and emotional interventions and targeted mental health interventions in schools and were ordered at full text. A total of 59 references were included across both reviews (20 for targeted social and emotional interventions and 39 for targeted mental health interventions) and 189 references were excluded.

Of the 39 references for targeted mental health interventions, a total of 6 effectiveness studies for primary education were included in this review. See Table 2 for a summary of studies included in this review and Table 3 for a brief outline of the interventions in these studies. See Appendix D for full evidence tables

1.1.4.2 Excluded studies

Please see Appendix K for the list of excluded studies and the reasons for exclusion.

1.1.4.3 Summary of included studies included in the evidence review

Table 2: Summary of studies for targeted mental health support in primary education

Study [Country]	Study design	Setting	Population	Intervention	Comparator	Outcome(s)
Bazzano 2018 [USA]	RCT	One publicly funded elementary school	Key stage 2 children who screened positively for symptoms of anxiety using the validated Screen for Child Anxiety Related Emotional Disorders (SACRED) (N=52)	Small group yoga and mindfulness sessions	Care as usual	**Social and emotional wellbeing** Not reported **Academic outcomes** Not reported **Other outcomes** Quality of life - PedsQL
Fernandez-Martinez 2020 [Spain]	Cluster RCT	Primary schools	Key stage 1 and 2 children who were invited to participate in the study if their score was above 4 on the Emotional Symptoms subscale of the parent-report Strengths and Difficulties Questionnaire. (N=107)	Super Skills for Life (SSL)	Waitlist control	**Social and emotional wellbeing** • Depression – parent reported • Anxiety – parent reported • SDQ (emotional symptoms, conduct problems, hyperactivity, peer problems) – parent reported • Behavioural outcomes – pro-social behaviour **Academic outcomes** Not reported
Humphrey 2020 [England]	Cluster RCT	Mainstream, state-funded primary schools	Key stage 2 children who were assessed by teachers as reporting at least one indicator of an emerging mental health disorder on the basis of guidance used in the HeadStart programme. (N=326)	Bounce Back (BB)	Practice-as-usual	**Social and emotional wellbeing** • Behavioural problems – self-reported • Self-esteem – self-reported **Academic outcomes**

Study [Country]	Study design	Setting	Population	Intervention	Comparator	Outcome(s)
						Not reported
Loevaas 2020 [Norway]	Cluster RCT	Public schools	Key stage 2 children who scored above a predetermined cut-off on either anxious or depressive symptoms (N=873)	EMOTION	Control and intervention schools were given half-day seminar focusing on increasing knowledge about internalising symptoms in children and how schools can support them.	**Social and emotional wellbeing** • Anxiety – self-report • Depression – self-report **Academic outcomes** Not reported
McLoone 2012 [Australia]	RCT	Private and public, coeducational and single-sex schools from high and low socio-economic areas	Key stage 2 children who were: identified as 'high anxious' if total SCAS score placed them in the top 10% of their age appropriate group; Nominated by their teachers if they thought that they were ‘‘far more anxious than their peers’’. (N=96)	Cool Kids program	Waiting list	**Social and emotional wellbeing** • Anxiety – child reported • Anxiety - parent reported **Academic outcomes** Not reported
Miller 2011 [Canada]	Cluster RCT	Elementary schools	Key stage 2 children who were invited to participate in the study if their self-reported anxiety total score was elevated (T-score of 56 or higher) and for whom parental consent was received. (N=191)	FRIENDS	Attention control (reading of an adventure story)	**Social and emotional wellbeing** • Anxiety • Behavioural assessment system for children – Teacher rated (BASC-T) • Behavioural assessment system for children • (BASC-P) **Academic outcomes** Not reported

See Appendix D for full evidence tables.

1.1.4.4 Summary of interventions

Table 3: Summary of interventions included in for targeted mental health support in primary education

Brief name	Studies	Rationale, theory or goal	Materials used	Procedures used	Provider	Delivery method	Duration/ intensity	Treatment fidelity
Yoga and mindfulness	Bazzano 2018	School-based yoga and mindfulness programmes may equip children with coping strategies needed to help them deal with stressors	'Yoga Ed' validated curriculum and materials. Content included breathing exercises, guided relaxation, suitable Vinyasa Ashtanga poses	Yoga and mindfulness sessions delivered in the classroom using an evidence-based curriculum.	Experienced children's yoga instructor	Small groups of 10 children	Ten 40-minute sessions delivered over an 8 week period	Not reported
Super Skills for Life (SSL)	Fernandez-Martinez 2020	Based on principles of Cognitive Behavioural Therapy (CBT) and uses a transdiagnostic approach	Facilitators' manual and a workbook for children containing all activities and homework	The program targets the core common risk factors of anxiety and depression such as low self-esteem, cognitive bias, and deficits in social skills.	Psychologists with a Psychology Masters degree; all received training and supervision on SSL	Small groups of 4-6 children	Eight weekly 45-minute sessions	Not reported
Bounce Back (BB)	Humphrey 2020	Academic resilience framework	Session plans, step-by-step participant guidance to support learning, prompt cards, inspirational and motivational case studies, and intervention	Using an action learning approach, participants set weekly personal behaviour challenges and rate their progress towards achieving it. Topics include sleep, hygiene, friendships, and	Trained youth practitioner	Groups of up to 15	10 weekly sessions lasting up to 1 hour	Not reported

Brief name	Studies	Rationale, theory or goal	Materials used	Procedures used	Provider	Delivery method	Duration/ intensity	Treatment fidelity
			workbooks and journals	responsibilities, and how these all link to well-being and emotional resilience				
EMOTION	Loevaas 2020	CBT-based	The EMOTION manual	Group sessions for children and parents. Children's session focused on recognising emotions, coping, goal setting, problem solving, exposure, cognitive restructuring and positive self-schema. Parent's session focused on positive parenting, positive reinforcement, psychoeducation, exposure, behavioural activation, and cognitive restructuring.	Group leaders with a range of professional backgrounds (e.g. nurses, educational and psychological counsellors)	Small groups of 3-7 children	For children: 2 sessions per week for 10 weeks. For parents: 7 sessions across a 10 week period	Sessions recorded and rated on a 6-point scale for adherence; fidelity was supported (M = 3.55; SD = 1.24)
FRIENDS	Miller 2011	FRIENDS teaches children to identify and understand anxiety signals, physical/bodily symptoms, worried thoughts, and maladaptive behaviours associated with feeling worried or anxious. 'FRIENDS' is an	Manualised-CBT programme	Not reported	Trained school person (e.g. teacher) paired with a trained school counsellor.	Small groups	9 weekly 1 hour sessions	Adherence (Likert-scaled checklist of program objectives) was 79.51%

Brief name	Studies	Rationale, theory or goal	Materials used	Procedures used	Provider	Delivery method	Duration/ intensity	Treatment fidelity
		acronym that helps children to recall the coping and problem-solving skills taught.						
Cool Kids program	McLoone 2012	Cognitive-behavioural therapy to manage anxiety.	Worksheets, summaries and guides.	The program is manualized, and both child and parent receive written summaries, worksheets and guides for home practice.	School counsellors who had attended a one-day training seminar on how to administer the Cool Kids program in a school setting.	Group face to face	10 weekly 1 hour sessions over the course of a school term	80% of school counsellors completed all sessions (school counsellors completed 9 sessions on average.

1.1.5 Summary of the effectiveness evidence

Group interventions delivered by external specialists vs. control for social and emotional skills and attitudes

Patient or population: children and young people with poor social, emotional and mental wellbeing
Settings: Primary education
Intervention: Group interventions delivered by external specialists
Comparison: usual practice

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
	Assumed risk	Corresponding risk				
	Control	**Group interventions delivered by external specialists**				
Social and emotional skills (Humphrey 2020)		The mean social and emotional skills in the intervention group was **0.47 higher** (0.24 lower to 1.18 higher)		213 (1 study)	⊕⊕⊖⊖ **low**[1,2]	MD 0.47 (-0.24 to 1.18)

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **RR:** Risk ratio;

GRADE Working Group grades of evidence
High quality: Further research is very unlikely to change our confidence in the estimate of effect.
Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.
Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.
Very low quality: We are very uncertain about the estimate.

[1] Participants were most likely aware of allocation of intervention
[2] 95% CI crosses line of no effect

Group interventions delivered by external specialists vs. control for behavioural outcomes

Patient or population: children and young people with poor social, emotional and mental wellbeing
Settings: Primary education
Intervention: Group interventions delivered by external specialists
Comparison: usual practice

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
	Assumed risk	Corresponding risk				
	Control	**Group interventions delivered by external specialists**				
Behavioural outcomes (Fernandez-Martinez 2020 and Humphrey 2020)		The mean behavioural outcome in the intervention group was **0.17 standard deviations lower** (0.39 lower to 0.05 higher)		320 (2 studies)	⊕⊕⊖⊖ **low**[1,2]	SMD -0.17 (-0.39 to 0.05)

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **RR:** Risk ratio;

GRADE Working Group grades of evidence
High quality: Further research is very unlikely to change our confidence in the estimate of effect.
Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.
Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.
Very low quality: We are very uncertain about the estimate.

[1] Participants were most likely aware of allocation of intervention
[2] 95% CI crosses line of no effect

Group interventions delivered by external specialists vs. control for emotional distress

Patient or population: children and young people with poor social, emotional and mental wellbeing
Settings: Primary education
Intervention: Group interventions delivered by external specialists
Comparison: usual practice

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
	Assumed risk **Control**	Corresponding risk **Group interventions delivered by external specialists**				
Emotional distress (Fernandez-Martinez 2020 and Loevaas 2020)		The mean emotional distress in the intervention group was **1.86 standard deviations lower** (5.25 lower to 1.52 higher)		782 (2 studies)	⊕⊖⊖⊖ **very low**[1,2,3]	SMD -1.86 (-5.25 to 1.52)

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **RR:** Risk ratio;

GRADE Working Group grades of evidence
High quality: Further research is very unlikely to change our confidence in the estimate of effect.
Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.
Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.
Very low quality: We are very uncertain about the estimate.

[1] Participants were most likely aware of allocation of intervention
[2] Downgraded twice as I^2 = 99%
[3] 95% CI crosses line of no effect and 1 MID

Group interventions delivered by external specialists vs. control for quality of life

Patient or population: children and young people with poor social, emotional and mental wellbeing
Settings: Primary education
Intervention: Group interventions delivered by external specialists
Comparison: usual practice

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
	Assumed risk **Control**	Corresponding risk **Group interventions delivered by external specialists**				
Quality of life (Bazzano 2018)		The mean quality of life in the intervention group was **6.31 higher** (3.76 lower to 16.38 higher)		52 (1 study)	⊕⊕⊖⊖ **low**[1,2]	

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **RR:** Risk ratio;

GRADE Working Group grades of evidence
High quality: Further research is very unlikely to change our confidence in the estimate of effect.
Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.
Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.
Very low quality: We are very uncertain about the estimate.

[1] Participants were most likely aware of allocation of intervention
[2] 95% CI crosses line of no effect and 1 MID

Group interventions delivered by school specialists vs. control for behavioural outcomes

Patient or population: children and young people with poor social, emotional and mental wellbeing
Settings: Primary education
Intervention: Group interventions delivered by school specialists
Comparison: usual practice

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
	Assumed risk	Corresponding risk				
	Control	Group interventions delivered by school specialists				
Teacher reported behavioural assessment (BASC) at 2.5 months (Miller 2011)		The mean teacher reported behavioural assessment in the intervention group was **7.35 lower** (11.27 to 3.43 lower)[1]		161 (1 study)	⊕⊕⊖⊖ **low**[1,2]	

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **RR:** Risk ratio;

GRADE Working Group grades of evidence
High quality: Further research is very unlikely to change our confidence in the estimate of effect.
Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.
Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.
Very low quality: We are very uncertain about the estimate.

[1] Unclear if intervention allocation was known where parents and teachers assessed outcomes
[2] 95%CI crosses 1 MID

Group interventions delivered by school specialists vs. control for emotional distress

Patient or population: children and young people with poor social, emotional and mental wellbeing
Settings: Primary education
Intervention: Group interventions delivered by school specialists
Comparison: usual practice

Outcomes	Illustrative comparative risks* (95% CI)	Comments

[1] Although this finding shows a positive effect of the intervention on behavioural outcomes, there were significant differences between the intervention and control groups on this measure at baseline which make this an unreliable result.

	Assumed risk **Control**	Corresponding risk **Group interventions delivered by school specialists**	**Relative effect (95% CI)**	**No of Participants (studies)**	**Quality of the evidence (GRADE)**
Child-reported anxiety (MASC) at 2.5 months (Miller 2011)		The mean emotional distress (child-reported anxiety MASC) at 2.5 months in the intervention group was **1.47 higher** (3.83 lower to 6.77 higher)		180 (1 study)	⊕⊕⊖⊖ **low**[1,2]
Child-reported anxiety (SCAS) at 12 months (McLoone 2012)		The mean emotional distress (child-reported anxiety SCAS) at 12 months in the intervention group was **4.56 lower** (12.35 lower to 3.23 higher)		95 (1 study)	⊕⊖⊖⊖ **very low**[3,4]

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **RR:** Risk ratio;

GRADE Working Group grades of evidence
High quality: Further research is very unlikely to change our confidence in the estimate of effect.
Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.
Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.
Very low quality: We are very uncertain about the estimate.

[1] Unclear if intervention allocation was known where parents and teachers assessed outcomes
[2] 95%CI crosses line of no effect
[3] Consent was obtained after randomisation once participants were aware of allocation
[4] 95%CI crosses line of no effect and 1 MID

1.1.6 Economic evidence

A guideline wide search of published cost-effectiveness evidence was carried out for review questions 1.1, 3.1, 4.1, 5.1 and 6.1.

1.1.6.1 Included studies

3504 records were assessed against eligibility criteria.

3433 records were excluded based on information in the title and abstract. Two reviewers assessed all the records. The level of agreement between the two reviewers was 100%.

The full-text papers of 71 documents were retrieved and assessed. 15 papers were assessed as meeting the eligibility criteria. However, this accounted for 13 distinct studies since some papers used the same underlying data. For RQ 5.1a, 1 studies (1 papers) was included. Two reviewers assessed all full-text papers. The level of agreement between the two reviewers was 100%.

The study selection process can be found in Appendix G and economic evidence tables found in Appendix H.

1.1.6.2 Excluded studies

69 full text documents were excluded for this guideline. The documents and the reasons for their exclusion are listed in Appendix L – Excluded studies.

1.1.7 Summary of studies included in the economic evidence review

Study	Limitations	Applicability	Other comments	Incremental			Uncertainty
				Costs	Effects	Cost-effectiveness	
McCabe (2007) A universal intervention broadly based on the Promoting Alternative Thinking	Potentially serious limitations [c]	Partly applicable [d]	The study conducted a cost-effectiveness analysis using UK costs. The Health Utilities Index Mark 2 (HUI2) [d] data from the MRC UK Paediatric Intensive Care Outcome Study (UK PICOS) was used to simulate age-	**Intervention cost per person; £:** Universal intervention 125	Not reported	**ICER; £:** Universal intervention vs. usual school provision	Sensitivity analysis was conducted for the universal intervention only. For emotional functioning alone, the probability that the ICER is less than

Study	Limitations	Applicability	Other comments	Incremental			Uncertainty
				Costs	Effects	Cost-effectiveness	
Strategies (PATHS) [a] programme to promote mental health vs. a focused intervention [b] vs. usual school provision			specific primary school children's health-related quality of life (HRQoL) [f]. The difference in the results is driven by the large reduction in the number of children who benefit from the focused intervention compared to the universal programme without a proportionate reduction in the cost of providing the intervention.	(£158 GBP 2020[k]) Focused intervention Not reported [g] Usual school provision Not reported		Emotional functioning alone [h] 10,594 per QALY (£13,406 GBP 2020[k]) Emotional and cognitive functioning [i] 5,278 per QALY (£6,679 GBP 2020[k]) Focused intervention vs. usual school provision Emotional functioning alone [h] 988,404 per QALY (£1,250,811 GBP 2020 [k]) Emotional and cognitive functioning [j] 177,560 per QALY (£244,699 GBP 2020[k])	£30,000 per QALY is 65%. For emotional and cognitive functioning, the probability that the ICER is below £30,000 per QALY is 66%. The focused intervention was not deemed cost-effective at any reasonable threshold.

Study	Limitations	Applicability	Other comments	Incremental			Uncertainty
				Costs	Effects	Cost-effectiveness	
Abbreviations: HRQoL: health-related quality of life; HUI2: Health Utilities Index Mark 2; ICER: incremental cost-effectiveness ratio; PATHS: Promoting Alternative Thinking Strategies; PICOS: Paediatric Intensive Care Outcome Study; QALY: quality-adjusted life year							
a. The intervention involved 3 20-minute sessions per week for a total of 3 years. Each teacher attends a 3-day training course with a half refresher course at the start of years 2 and 3. Parent training is assumed to consist of a 10-week course of weekly sessions, with each session lasting 2 hours.							
b. Similar in content to the universal intervention. However, unlike the universal intervention, children with identified problems receive the intervention outside of the classroom in small groups or individually. The focused intervention was provided to children at level 3 (out of 5) or below on the emotion dimension of the HUI2.							
c. It is unclear which costs have been included and the source of this information. The effects were not clearly reported nor was the study perspective or time horizon.							
d. The intervention considered is relevant to the UK context. However, the perspective and time horizon of the study are not clear.							
e. The HUI2 consists of seven dimensions (sensation, mobility, emotion, cognition, self-care, pain and fertility), each of which has between three and five levels, describing a range from 'normal functioning for age' to 'extreme disability.'							
f. This was used to identify the HRQoL for each primary school class group in the absence of the intervention and was compared to the HRQoL improvement with the interventions.							
g. According to the report, the cost of the focused intervention is similar to that of the universal intervention, except for a reduction in school co-ordinator time and parent training resource costs. This cost was not reported.							
h. This represents the ICER assuming the intervention produces a one-level improvement upon the emotion dimension of HRQoL only.							
i. This represents the ICER assuming the intervention produces a one-level improvement upon both the emotion and cognition dimensions of HRQoL.							
j. This represents the ICER assuming the intervention produces a two-level improvement on both the emotion and cognition dimensions of HRQoL.							
k. Converted by the reviewer using historical exchange rates and PSSRU inflation indices. Assuming 2007 currency year.							

1.1.8 Economic model

A bespoke model was developed to capture the costs and consequences of an intervention, or combination of interventions, that promote social, emotional and mental wellbeing in children and young people in primary and secondary education. It covers more than 1 evidence review in the guideline so the full write up is contained in a separate document rather than in Appendix I (see Evidence review J).

Study	Limitations	Applicability	Other comments	Incremental			Uncertainty
				Costs	Effects	Cost-effectiveness	
Coote [a] (2021) A cost-consequence and cost-benefit analysis of interventions to improve social, emotional and mental wellbeing in schools	Potentially serious limitations [b]	Directly applicable	A bespoke model was developed to capture the costs and consequences of an intervention, or combination of interventions, that promote social, emotional and mental wellbeing in children and young people in primary and secondary education. It is recommended that the model is used as a guide to explore the potential economic and wellbeing implications of interventions. The model was pre-populated with evidence from the NICE guideline reviews but it also allows users to adapt the perspective and input values and generate results, specific to the educational environment of interest. A worked example was provided that considered an intervention for transition between schools and its impact on bullying perpetration. The example used a hypothetical cohort of 200 pupils, a 1-year time	**Costs of the intervention per person; £:** 17.71 **Total intervention cost; £** 3,542	**Relative Risk bullying perpetration** 0.98 (Assumes the intervention reduces bullying by 2%, 4 out of 200 individuals undergoing the intervention) **Utility value assigned to bullying** 0.06 **Length of utility benefit** 1 year **QALYs;** 4 x 0.06 = 0.24 **Monetary QALY; £:** 4,800 (using monetary equivalent per	**Net benefit; £:** 1,258	Sensitivity analyses showed that: • an increase in the intervention cost resulted in a reduction of net benefit • an increase in the number of students undergoing the intervention increased the net benefit • a reduction in the change in utility per student attributed to bullying below 0.044 would result in a negative net benefit

Study	Limitations	Applicability	Other comments	Incremental			Uncertainty
				Costs	Effects	Cost-effectiveness	
			horizon and took a societal perspective.		QALY of £20,000)		

Abbreviations: ICER: incremental cost-effectiveness ratio; NHS: National Health Service; PSS: Personal Social Service; QALY: quality-adjusted life-year

a. This economic model was developed for the current guideline update. Full details can be found in the separate economic modelling report.
b. Due to substantial variability in the interventions available and heterogeneity across schools it is neither possible, nor judicious, for this model to provide 'generalised' results.

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1.1.9 Economic evidence statements

- McCabe (2007) found that a universal intervention to improve mental health was likely to be cost-effective compared with usual school provision at a £30,000 per QALY threshold, while the focused intervention was unlikely to be cost-effective compared with usual school provision for any realistic threshold. For the universal intervention, the ICER was £10,594 per QALY when impacting emotional functioning alone, and £5,278 when impacting emotional and cognitive functioning. For the focused intervention, the ICER was £988,404 per QALY when impacting emotional functioning alone, and £177,560 when impacting emotional and cognitive functioning. For the universal intervention compared with usual school provision, sensitivity analysis showed that the probability that the ICER is less than £30,000 per QALY is 65% when impacting emotional functioning alone, and 66% when impacting emotional and cognitive functioning. The author comments that the sample used to describe the health-related quality of life in children in mainstream schools may not be genuinely representative. The reviewer found that the study did not clearly report important information such as costs, QALYs, study perspective and time horizon. The analysis was assessed as partly applicable to the review question, with potentially serious limitations.

Coote (2021) aimed to quantify the costs and effectiveness, and hence the impact, of introducing a range of mental health and wellbeing interventions. The large range of interventions on offer and the circumstances in which an intervention is implemented made it difficult to draw robust conclusions regarding the effectiveness of an intervention and the economic impact.

2 Targeted mental health support in secondary education

2.1 Review question

What is the effectiveness and cost-effectiveness of targeted mental health support interventions for children and young people in secondary and further education?

2.1.1 Introduction

Social and emotional skills are key during children and young people's development and may help to achieve positive outcomes in health, wellbeing and future success. Some children and young people may experience subclinical signs and symptoms of mental health conditions and may be at risk of poor social, emotional and mental wellbeing outcomes. Targeted mental health support aims to provide extra support for these children and young people.

2.1.2 PICO table

Table 4: PICO targeted mental health support in secondary and further education

Population	Children and young people in secondary education and further education (UK key stages 3, 4 and post-16 education or equivalent [usually ages 11-18 years]) who have been identified as being at risk of depression, anxiety or stress.
Intervention	Usual practice plus individual or small group interventions aimed at • reducing symptoms or • preventing symptoms in those at risk of depression, anxiety or stress.
Comparator	Usual practice
Outcomes	**Social and emotional wellbeing outcomes** Any validated measure of mental, social, emotional or psychological wellbeing categorised as: • Social and emotional skills and attitudes (such as knowledge) • Emotional distress (such as depression, anxiety and stress) • Behavioural outcomes that are observed (such as positive social behaviour; conduct problems) **Academic outcomes** Academic progress and attainment **Secondary outcomes** School attendance School exclusions Quality of life Unintended consequences

2.1.3 Methods and process

This evidence review was developed using the methods and process described in Developing NICE guidelines: the manual and in the methods chapter. Methods specific to this review question are described in the review protocol in appendix A and in the methods document.

Declarations of interest were recorded according to NICE's 2018 conflicts of interest policy.

Methods specific to this review **Timepoints**

The most common timepoint for each outcome was used. Other timepoints, including baseline data was reported in the evidence table for information only.

Outcome measures

Where social and emotional outcome measures were reported in a study from multiple sources, the data used followed the following hierarchy of preference:

1. Child/ student reported
2. Teacher reported
3. Parent reported

However, for behavioural outcomes, measures reported by teachers were the preferred option as they are generally outcomes that are observed.

Where there were multiple social and emotional wellbeing outcomes for individual studies, the outcome chosen for the analyses matched the criteria used for inclusion in that study. For example, if the study population included students with depressive symptoms then the outcome measure included in the analysis was a depression outcome.

Cluster randomised controlled trials

Where cluster randomised controlled trials have been pooled with individually randomised controlled trials, the number of people included in the analysis from these trials have been adjusted using a reported or imputed intra-class correlation coefficient (ICC) for that outcome.

2.1.4 Evidence

2.1.4.1 Included studies

In total 47,322 references were identified through systematic searches after duplicates were removed. Of these, 248 references were considered relevant, based on title and abstract, to the protocols for targeted social and emotional interventions and targeted mental health interventions in schools and were ordered at full text. A total of 59 references were included across both reviews (20 for targeted social and emotional interventions and 38 for targeted mental health interventions) and 189 references were excluded.

Of the 39 references for targeted mental health interventions, a total of 24 effectiveness studies for secondary education were included in this review. See Table 5 for a summary of studies included in this review and Table 6 for a brief outline of the interventions in these studies. See Appendix D for full evidence tables.

2.1.4.2 Excluded studies

See Appendix K for a full list of excluded studies and reason for exclusion.

2.1.4.3 Summary of studies included in the evidence review

Table 5: Summary of studies for targeted metal health support in secondary education

Study [Country]	Study design	Setting	Population	Intervention	Comparator	Outcome(s)
Arnarson 2009 [Iceland]	RCT	School	Key stage 3 students considered at risk based on scoring between the 75th and 90th percentile on the Children's Depression Inventory (CDI) or higher on the negative composite of the Child Assessment Scale (CASQ). (N=171)	Prevention program	Treatment as usual	**Social and emotional wellbeing outcomes** • Initial episode of depressive disorder **Academic Outcomes** • Not reported
Balle 2010 [Spain]	RCT	4 schools	Key stage 4 students scoring high on the Children AS Index (over the 80th percentile) and reporting no current mental disorder and not receiving any mental health treatment. (N=92)	Brief anxiety prevention program	Waiting list control	**Social and emotional wellbeing outcomes** • Anxiety sensitivity • Anxiety symptomatology • Depression symptomatology **Academic Outcomes** Not reported
Berry 2009 [Australia]	RCT	7 secondary Catholic schools	Key stage 3 male students with: An anxiety score of at least one standard deviation above the population mean on any subscale of the Screen for Child Anxiety Related Emotional Disorders (SCARED); An experience of being bullied within the last month, rated as definitely disabling and disturbing, on the Bullying Incidence Scale (BIS) An adequate command of English. (N=46)	Confident Kids program	Waiting list control	**Social and emotional wellbeing outcomes** • Anxiety • Depression **Academic Outcomes** Not reported

Study [Country]	Study design	Setting	Population	Intervention	Comparator	Outcome(s)
Brown 2019 [UK]	cRCT	Inner London secondary schools	16–19 year olds recruited from Sixth forms (Years 12 and 13) who were fluent in English, with no severe learning difficulties and available to attend the one-day workshop. Participants needed to refer themselves to the workshop (no clinical criteria were used). Written informed consent was required from the participants (N= 155)	DISCOVER workshop	Waiting list control	**Social and emotional wellbeing outcomes** • Anxiety • Depression • Quality of life **Academic Outcomes** Not reported
Cooper 2010 [UK]	RCT	5 secondary schools - 3 in Scotland and 2 in England	Key stage 3 and 4 students aged 13-18 who were: Experiencing moderately high levels of emotional distress; motivated to attend counselling; considered capable of giving informed consent to participate; had greater than 85% attendance. (N=27)	School-based humanistic counselling	Waiting list control	**Social and emotional wellbeing outcomes** • Young person's CORE (YP-CORE) • SDQ total difficulties • SDQ prosocial **Academic Outcomes** Not reported
Do 2021 [South Korea]	RCT	Two high schools, three private academies and one adolescent centre	Key stage 4 students who scored above the threshold for mild depression (PHQ-9, CES-D). (N=55)	Computer-based Cognitive Behavioural Therapy (CCBT)	Waiting list control	**Social and emotional wellbeing outcomes** • Depression (CES-D) – self reported • Self-esteem – self reported **Academic outcomes** Not reported **Other outcomes** Quality of life
Fleming 2012 [New Zealand]	RCT	Alternative education school	Key stage 3 and 4 students who were excluded or alienated from mainstream education. (N=32)	SPARX	Waiting list control	**Social and emotional wellbeing outcomes** • Child Depression Rating Scale Revised (CDRS-R) • Anxiety

Study [Country]	Study design	Setting	Population	Intervention	Comparator	Outcome(s)
						• Remission **Academic Outcomes** Not reported **Other outcomes** Quality of life
Fung 2016 [USA]	RCT	K-8 Elementary schools (a combination of elementary and junior high school)	Key stage 3 students scoring in the top 20% of PHQ-9 for depression in participating schools. (N=19)	Learning to BREATHE	Waiting list control	**Social and emotional wellbeing outcomes** • Child behaviour checklist – parent – Internalizing • Child behaviour checklist – parent –externalizing **Academic Outcomes** Not reported
Fung 2019 [USA]	RCT	Urban public school district	Key stage 3 students who scored in the top 20% of the SMFQ in each school. (N=145)	Learning to BREATHE	Waiting list control	**Social and emotional wellbeing outcomes** • Internalizing problems • Stress • Externalizing problems **Academic Outcomes** Not reported
Gaete 2016 [Chile]	RCT	"2 Medio" grade (equivalent to 10 years of education) from eleven municipal schools.	Key stage 4 adolescents attending 2 Medio in a municipal school participating as control schools in the previous study; BDI score ≥10 (among boys) and ≥15 (among girls). (N=342)	Yo Pienso Siento Actuo (YPSA) [I Think Feel Act]	Normal teaching activities.	**Social and emotional wellbeing outcomes** • Recovery rate (depression) • Beck Depression Inventory II - BDI-II • Revised Child Anxiety and Depression Scale (RCADS) **Academic Outcomes** Not reported

Study [Country]	Study design	Setting	Population	Intervention	Comparator	Outcome(s)
Goossens 2016 [The Netherlands]	Cluster RCT	15 schools	Key stage 3 students with: lifetime use of at least one glass of alcohol; scoring at least one standard deviation above the sample mean on one of the four personality risk scales of the Substance Use Risk Profile Scale (SURPS); attending a school where at least five students per personality risk group were eligible and willing to be included in the intervention condition. (N=699)	Preventure	No intervention control	**Social and emotional wellbeing outcomes** • Depression • Anxiety • Hyperactivity **Academic Outcomes** Not reported
Hunt 2009 [Australia]	Cluster RCT	19 Catholic secondary schools in the metropolitan area, Sydney.	Key stage 3 students at risk for the development of an anxiety disorder, using a cut-off score of 11, 1 SD above the average score based on an age-related normative sample. (N=396)	FRIENDS	Monitoring control	**Social and emotional wellbeing outcomes** • Anxiety • Depression **Academic Outcomes** Not reported
Livheim 2015a [Australia]	RCT	5 Australian high schools (1 providing alternative provision). 4 in a largely populated area and 1 in a small town.	Key stage 3,4, and post 16 students nominated by school counsellor/welfare co-ordinators if they were experiencing mild to moderate depressive symptoms including: anxious thoughts; change in appetite or weight; depressed mood; feelings of worthlessness; irritability; loss of interest; reduced ability at school; social withdrawal. Also included on the basic of a brief clinical interview. (N= 58)	ACT Experiential Adolescent Group	Treatment as usual	**Social and emotional wellbeing outcomes** • Reynolds adolescent depression scale - RADS-2 **Academic Outcomes** Not reported
Matos 2019 [Portugal]	Non RCT	27 schools	Key stage 3 and 4 students: experiencing subsyndromal depressive symptoms; never met clinical criteria for a depressive disorder. (N=168)	Prevention Program	Assessment only	**Social and emotional wellbeing outcomes** Depressive disorder diagnosis **Academic Outcomes**

Study [Country]	Study design	Setting	Population	Intervention	Comparator	Outcome(s)
						Not reported
McArthur 2013 [UK]	RCT	3 secondary schools in the Glasgow region, Scotland	Key stage 3,4 and post 16 students, aged at least 13 at baseline assessment; experiencing moderate or high levels of psychological distress; considered capable of giving informed consent for participation; with greater than 80% attendance at school; not at serious risk of harm to self or others. (N=33)	School-based humanistic counselling	Waiting list control	**Social and emotional wellbeing outcomes** • Young Person's CORE (YP-CORE) • SDQ total difficulties • SDQ prosocial • Rosenberg Self Esteem Scale RSES **Academic Outcomes** Not reported
McCarty 2011 [USA]	RCT	4 Public Middle schools in Seattle	Key stage 3 students who scored higher than 14 (top 25%) on the Mood and Feelings Questionnaire (MFQ). (N=67)	Positive Thoughts and Actions programme (PTA)	Usual care	**Social and emotional wellbeing outcomes** • Moods and Feelings Questionnaire • CDRS **Academic Outcomes** Not reported
O'Leary-Barrett 2013 [UK]	Cluster RCT	19 schools from 9 randomly selected London Boroughs.	Key stage 3 students with: passive consent from parents; active assent from students; high risk students defined as those scoring 1 standard deviation above the school mean on 1 of 4 subscales of the Substance Use Risk Profile Scale (SURPS). (N=1210)	Adventure; Personality-targeted based on Preventure Programme	Statutory drug education according to national curriculum requirements.	**Social and emotional wellbeing outcomes** • Depression • Anxiety • Conduct problems **Academic Outcomes** Not reported
Pearce 2017 [UK]	RCT	Urban state secondary schools located in deprived areas.	Key stage 3, 4 and post 16 students aged between 11-18 years: experiencing moderate or high levels of emotional distress; capable of giving informed consent to participate; >85% school attendance. (N=64)	School-based humanistic counselling	Usual care	**Social and emotional wellbeing outcomes** • Young Person's CORE (YP-CORE) • SDQ total difficulties • SDQ prosocial

Study [Country]	Study design	Setting	Population	Intervention	Comparator	Outcome(s)
						• Rosenberg Self Esteem Scale RSES **Academic Outcomes** Not reported
Poppelaars 2016 [The Netherlands]	RCT	7 secondary schools	Key stage 3 adolescent girls in grades 7 and 8 with scores at or above the 70th percentile on depressive symptoms (Reynolds Adolescent Depression Scale; RADS-2 score ≥59). (N=101)	Op Volle Kracht	Monitoring control	**Social and emotional wellbeing outcomes** • Depressive symptoms (RADS-2) **Academic Outcomes** Not reported
Pybis 2015 [UK]	RCT	Four English schools in an urban area with a diverse population. (included both private and public sector, single and mixed sex schools and were located in both affluent and economically deprived areas).	Key stage 3,4 and post 16 students aged at least 13 years at baseline assessment: experiencing moderate or high levels of psychological distress; considered capable of giving informed consent for participation; had greater than 80% attendance at the school. (N=42)	School-based humanistic counselling	Waiting list control	**Social and emotional wellbeing outcomes** • Young Person's CORE (YP-CORE) • SDQ total difficulties • Rosenberg Self Esteem Scale RSES **Academic Outcomes** Not reported
Saelid 2017 [Norway]	RCT	1 high school	Post 16 students who scored above 8 on the Hospital Anxiety and Depression Scale (HADS). (N=41)	ABC model of rational emotive behaviour therapy.	No treatment control	**Social and emotional wellbeing outcomes** • Hospital Anxiety and Depression Scale (HADS)

Study [Country]	Study design	Setting	Population	Intervention	Comparator	Outcome(s)
						Academic Outcomes Not reported
Smith 2015 [UK]	RCT	3 large non-selective state-sector secondary schools in south London.	Key stage 3 and 4 students with a score >= 20 on the Mood and Feelings Questionnaire-Child Report, MFQ-C. (N=112)	Stressbusters	Waiting list control	**Social and emotional wellbeing outcomes** • Depression (MFQ-C) • Anxiety **Academic Outcomes** Not reported
Stice 2008 [USA]	RCT	High school	Key stage 3,4 and post 16 students with a score of 20 or more on the Center Epidemiologic Studies-Depression scale (CESD). (N=173)	CB Depression intervention	Assessment only	**Social and emotional wellbeing outcomes** • Depressive symptoms • Beck Depressive Inventory (BDI) • Major depression diagnosis • Social adjustment (Social Adjustment Scale-Self Report of Youth) **Academic Outcomes** Not reported
Wijnhoven 2014 [The Netherlands]	Cluster RCT	3 secondary schools	Key stage 3 adolescent girls with elevated depressive symptoms (Child Depression Inventory, CDI score ≥16). (n=102)	Op Volle Kracht	Control (not further described)	**Social and emotional wellbeing outcomes** • Depressive symptoms • Children's Depression Inventory (CDI) **Academic Outcomes** Not reported

See appendix D for full evidence tables.

2.1.4.4 Summary of interventions

Table 6: Summary of interventions for targeted mental health support in secondary and further education

Brief name	Studies	Rationale, theory or goal	Materials used	Procedures used	Provider	Delivery method	Duration/ intensity	Treatment fidelity
ABC model of rational emotive behaviour therapy.	Saelid 2017	Attempts to change an irrational and biased perception of reality to a rational and adaptive one.	Information sheet and homework assignments	The therapist worked through the ABC model with the participant's example.	Certified REVT therapist	Individual	3 x 45min sessions	Not reported
ACT	Livheim 2015	To increase psychological flexibility to change or persist in behaviour in accordance with one's values	Not reported	The program uses experiential mediums, e.g. painting and role-play, to facilitate adolescents' experience of the six ACT processes.	Psychologists	Group	8 weeks	Not reported
Brief anxiety prevention program	Balle 2010	Based on psycho-educational and cognitive-behavioural procedures and grounded on FRIENDS.	A treatment manual and a student booklet	All sessions incorporate direct instruction, pen and pencil exercises, and behavioural experiments	A final-year psychology degree student and one PhD level student supervised by a senior PhD psychologist	Group	6 x twice weekly 45 mins sessions	Not reported
CB Depression intervention	Stice 2008	Based on cognitive behavioural concepts to	Not reported	In-session exercises, motivational exercises,	Graduate students	Group	6 x weekly 1-hour sessions	96% full adherence

Brief name	Studies	Rationale, theory or goal	Materials used	Procedures used	Provider	Delivery method	Duration/ intensity	Treatment fidelity
		prevent and treat depression		behavioural techniques, group activities and homework.				94% good competence
Computer-based Cognitive Behavioural Therapy (CCBT)	Do 2021	Based on CBT for depression, interpersonal skills, and learning ability training.	Laptop and treatment manual	Adolescents completed the CCBT program next to a researcher through the researcher's laptop. They also received 10 minutes of therapeutic support during each session	Laptop-based	Individual, via laptop	10 x twice-weekly 30 minute sessions	Not reported
Confident Kids program	Berry 2009	To target emotional regulation, internalizing behaviours, self-esteem, social skills, and coping behaviours and reduce the incidence and impact of bullying experiences	Not reported	Cognitive-behavioural-based anxiety strategies, psychoeducation, enhancement of social skills, self-esteem. The programme used skill demonstration, role plays and group discussion and included homework.	Clinical psychologists	Group	8 x weekly 1-hour sessions	Not reported
DISCOVER workshop	Brown 2019	CBT principles	Video vignettes and workbooks	The clinical and research team provided school staff	Two qualified clinical psychologists	Group	1 x 20-30 minute session	Not reported

Brief name	Studies	Rationale, theory or goal	Materials used	Procedures used	Provider	Delivery method	Duration/ intensity	Treatment fidelity
				with written guidance and advice on encouraging suitable studentsto enrol, using a supportive and non-coercive approach.	and one assistant			
FRIENDS	Hunt 2009	Not reported	Not reported	Strategies taught within the programme included learning to be aware of symptoms of anxiety, to relax, to challenge unhelpful thoughts, to use graded exposure to overcome avoidance, and problem solving.	School counsellor	Group	10 x weekly 50 mins sessions	Setting and review of self-practice tasks were rated as being poorly implemented or were not conducted at all
Learning to BREATHE	Fung 2016, Fung 2019	To help students understand their thoughts and feelings, to learn how to use mindfulness-based skills to manage emotions,	Student workbook	Short didactic presentations	Doctoral clinical psychology students	Group	12 x 50-60 mins sessions	The average adherence score was 89.6% (Fung 2019)

Brief name	Studies	Rationale, theory or goal	Materials used	Procedures used	Provider	Delivery method	Duration/ intensity	Treatment fidelity
		and to provide opportunities for guided group practice.						
Op Volle Kracht	Poppelaars 2016, Wijnhoven 2014	Aims to reduce depressive symptoms in young adolescents using CBT techniques	Not reported	First 8 lessons teach CBT principles (students learn to recognise their own emotions and cognitions and how they relate to each other and to events they may experience) Includes homework	Therapist	Group	8 x 50-60mins sessions	Not reported
Prevention program	Arnarson 2009, Matos 2019	To prevent the development of initial depressive disorder	Manual for group leaders Student/homework manuals for participants	The focus of the group leaders' and students' manuals was on the development of adaptive coping skills to enhance self-esteem and well-being.	School psychologists	Group	14 sessions over 11 weeks (Arnarson 2009) 14 x weekly 90mins sessions (Matos 2019)	Not reported
Preventure/Adventure	Goossens 2016,	Targeting personality-specific	Manuals based on a cognitive-behavioural	All exercises discussed thoughts,	Teachers, school counsellors	Group	2 x 90 mins sessions	Reported as not being able to rule out that

Brief name	Studies	Rationale, theory or goal	Materials used	Procedures used	Provider	Delivery method	Duration/ intensity	Treatment fidelity
	O'Leary-Barrett 2013	distortions aims to directly improve internalizing and externalizing symptoms in the personality group most at risk for a particular problem	therapy model incorporating psychoeducational and motivational enhancement therapy components and included real life scenarios.	emotions, and behaviours in a personality-specific way.	and pastoral staff (O'Leary-Barrett 2013) Counsellors (Goossens 2016)			implementation was not as high as other Preventure trials (Goossens 2016)
PTA	McCarty 2011	This programme included aspects of behavioural, cognitive, interpersonal, and family-systems interventions. It taught three major skills: thinking positively, taking positive action, and problem solving.	Not reported	Students applied these skills to self-identified problems/goals, and parents were given communication and problem-solving tools to help support their children	Intervention specialist	Group	12 x weekly sessions 2 home visits Parent workshops	Not reported

Brief name	Studies	Rationale, theory or goal	Materials used	Procedures used	Provider	Delivery method	Duration/ intensity	Treatment fidelity
School-based humanistic counselling	Cooper 2010, McArthur 2013, Pearce 2017, Pybis 2015	The intervention is based on competences for humanistic psychological therapy adapted for young people. It assumes that young people have the capacity to address difficulties if they have an opportunity to talk about them with a counsellor.	Not reported	Counsellors use a range of techniques including active listening, empathic reflections, and helping clients reflect on emotions and behaviours.	Humanistic counsellors	Individual	6-12 x weekly 45mins sessions	For 1 of 4 counsellors the score indicated that practice did not meet the required standard
SPARX	Fleming 2012	Content was based on CBT and included psycho-education, relaxation skills, problem solving, activity scheduling, challenging and replacing	Computerised program consisting of seven 30 minute modules	Includes direct instructional content as well as narrative and experiential learning components. Voice over, written text and music were also used	N/A	Online	7 sessions over 5 weeks	Not reported

Brief name	Studies	Rationale, theory or goal	Materials used	Procedures used	Provider	Delivery method	Duration/ intensity	Treatment fidelity
		negative thinking and social skills						
Stressbusters	Smith 2015	Based on cognitive behavioural therapy.	Online modules	Treatment components include psycho education about depression and its treatment; behavioural activation; identifying and changing negative automatic thoughts; improving problem solving; improving social skills; relapse prevention	N/A	Online	8 weeks	Not reported
Yo Pienso Siento Actuo [I think Feel Act]	Gaete 2016	CBT-based programme	Facilitators had a detailed manual specifying key learning points and objectives for each session	An introductory session Three sessions dealing with thought restructuring, Three sessions on problem solving	Psychologists	Group	8 x 45mins weekly sessions	Not reported

2.1.5 Summary of the effectiveness evidence

Group interventions delivered by external specialists vs. control for social and emotional skills and attitudes

Patient or population: children and young people with poor social, emotional and mental wellbeing
Settings: Secondary education
Intervention: Group interventions delivered by external specialists
Comparison: usual practice

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
	Assumed risk	Corresponding risk				
	Control	**Group interventions delivered by external specialists**				
Social adjustment (Stice 2008) (follow-up: 6 months; measured with: Social adjustment scale, youth-reported; Better indicated by lower values)		The mean social adjustment score in the intervention group was **0.17 lower** (0.32 to 0.02 lower)		173 (1 study)	⊕⊕⊕⊖ **moderate**[1]	

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **RR:** Risk ratio;

GRADE Working Group grades of evidence
High quality: Further research is very unlikely to change our confidence in the estimate of effect.
Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.
Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.
Very low quality: We are very uncertain about the estimate.

[1] Participants were most likely aware of allocation of intervention

Individual interventions delivered by external specialists vs. control for social and emotional skills and attitudes

Patient or population: children and young people with poor social, emotional and mental wellbeing
Settings: Secondary education
Intervention: Individual interventions delivered by external specialists
Comparison: usual practice

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
	Assumed risk	Corresponding risk				
	Control	**Individual interventions delivered by external specialists**				
Self-esteem (McArthur 2011, Pybis 2013, Pearce 2017) (follow-up mean 3 months; measured with: RSES- student reported; Better indicated by lower values)		The mean self-esteem in the intervention group was **3.24 higher** (0.4 lower to 6.87 higher)		125 (3 studies)	⊕⊖⊖⊖ **very low**[1,2,3]	

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **RR:** Risk ratio;

GRADE Working Group grades of evidence
High quality: Further research is very unlikely to change our confidence in the estimate of effect.
Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.
Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.
Very low quality: We are very uncertain about the estimate.

[1] Participants were most likely aware of allocation of intervention
[2] $I^2 > 50\%$
[3] 95% CI crosses line of no effect

1

Group interventions delivered by school specialists vs. control for behavioural outcomes

Patient or population: children and young people with poor social, emotional and mental wellbeing
Settings: Secondary education
Intervention: Group interventions delivered by school specialists
Comparison: usual practice

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
	Assumed risk	Corresponding risk				
	Control	**Group interventions delivered by school specialists**				
Conduct problems (O'Leary-Barrett 2013) (follow-up mean 2 years; measured with: Strengths and difficulties questionnaire; Better indicated by lower values)		The mean conduct problems in the intervention group was **0.19 lower** (0.55 lower to 1.17 higher)		162 (1 study)	⨁⨁⨀⨀ **low**[1,2]	

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **RR:** Risk ratio;

GRADE Working Group grades of evidence
High quality: Further research is very unlikely to change our confidence in the estimate of effect.
Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.
Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.
Very low quality: We are very uncertain about the estimate.

[1] Participants were most likely aware of allocation of intervention
[2] 95% CI crosses line of no effect

2

Group interventions delivered by external specialists vs. control for behavioural outcomes

Patient or population: children and young people with poor social, emotional and mental wellbeing
Settings: Secondary education
Intervention: Group interventions delivered by external specialists
Comparison: usual practice

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
	Assumed risk	Corresponding risk				
	Control	**Group interventions delivered by external specialists**				
Behavioural outcomes (Fung 2016, Fung 2019, Goossens 2016)		The mean behavioural outcome in the intervention group was **0.16 standard deviations lower** (0.54 lower to 0.22 higher)		253 (3 studies)	⨁⨁⨀⨀ **low**[1,2]	SMD -0.16 (-0.54 to 0.22)

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes.
The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **RR:** Risk ratio;

GRADE Working Group grades of evidence
High quality: Further research is very unlikely to change our confidence in the estimate of effect.
Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.
Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.
Very low quality: We are very uncertain about the estimate.

[1] Participants were most likely aware of allocation of intervention. Randomisation mostly happened within schools. One study randomised two cohorts at different times. Bias could impact subjective outcomes although the use of clinical interviews for assessment may have reduced this.
[2] 95% CI crosses line of no effect

1

Individual interventions delivered by external specialists vs. control for behavioural outcomes

Patient or population: children and young people with poor social, emotional and mental wellbeing
Settings: Secondary education
Intervention: Individual interventions delivered by external specialists
Comparison: usual practice

Outcomes	Illustrative comparative risks* (95% CI) Assumed risk Control	Corresponding risk Individual interventions delivered by external specialists	Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
Behavioural outcomes (difficulties) (Cooper 2010, McArthur 2011, Pybis 2013, Pearce 2017) (follow-up 6-12 weeks; measured with: Strength and difficulties questionnaire - student rated; Better indicated by lower values)		The mean behavioural outcomes (difficulties) in the intervention group was **0.6 standard deviations lower** (0.93 to 0.28 lower)		155 (4 studies)	⊕⊕⊕⊖ **moderate**[1]	SMD -0.6 (-0.93 to 0.28)
Behavioural outcomes (prosocial) (Cooper 2010, McArthur 2011, Pearce 2017) (follow-up 6-12 weeks; measured with: Strengths and difficulties questionnaire - Student rated; Better indicated by higher values)		The mean behavioural outcomes (prosocial behaviour) in the intervention group was **0.76 higher** (0.03 to 1.49 higher)		123 (3 studies)	⊕⊕⊕⊖ **moderate**[1]	

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes.
The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **RR:** Risk ratio;

GRADE Working Group grades of evidence
High quality: Further research is very unlikely to change our confidence in the estimate of effect.
Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.
Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.
Very low quality: We are very uncertain about the estimate.

[1] Participants were most likely aware of allocation of intervention, randomisation mostly happened within schools

2

Group interventions delivered by school specialists vs. control for emotional distress

Patient or population: children and young people with poor social, emotional and mental wellbeing
Settings: Secondary education
Intervention: Group interventions delivered by school specialists
Comparison: usual practice

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
	Assumed risk	Corresponding risk				
	Control	**Group interventions delivered by school specialists**				
Emotional distress (Hunt 2009, O'Leary-Barrett 2013) (follow-up mean 2 years; measured with: Student rated; Better indicated by lower values)		The mean emotional distress gin the intervention group was **0.01 standard deviations lower** (0.31 lower to 0.3 higher)		327 (2 studies)	⊕⊕⊖⊖ **low**[1,2]	SMD -0.01 (-0.31 to 0.3)
Initial episode of depressive disorder (Arnason 2009) (follow-up mean 12 months)	**210 per 1000**	**40 per 1000** (8 to 166)	**RR 0.19** (0.04 to 0.79)	113 (1 study)	⊕⊕⊕⊖ **moderate**[1]	

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **RR:** Risk ratio;

GRADE Working Group grades of evidence
High quality: Further research is very unlikely to change our confidence in the estimate of effect.
Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.
Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.
Very low quality: We are very uncertain about the estimate.

[1] Participants were most likely aware of allocation of intervention in one study
[2] 95% CI crosses line of no effect

1

Group interventions delivered by external specialists vs. control for emotional distress

Patient or population: children and young people with poor social, emotional and mental wellbeing
Settings: Secondary education
Intervention: Group interventions delivered by external specialists
Comparison: usual practice

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
	Assumed risk	Corresponding risk				
	Control	**Group interventions delivered by external specialists**				
Emotional distress (Stice 2008, Berry 2009, Balle 2011, Wijnhoven 2014, Livheim 2015, Fung 2016, Poppelaars 2016, Goossens 2016, Gaete 2016, Fung 2019, Brown 2019) (follow-up 2-6 months; Better indicated by lower values)		The mean emotional distress in the intervention group was **0.29 standard deviations lower** (0.52 to 0.06 lower)		1180 (11 studies)	⊕⊕⊖⊖ **low**[1,2]	SMD -0.36 (-0.62 to -0.10)
Response (Balle 2011, Gaete 2016) (follow-up mean 3-5 months)	**414 per 1000**	**729 per 1000** (443 to 1000)	**RR 1.76** (1.07 to 2.87)	276 (2 studies)	⊕⊕⊖⊖ **low**[1,2]	
Depression diagnosis – RCT (Stice 2008) (follow-up mean 6 months)	**131 per 1000**	**67 per 1000** (26 to 174)	**RR 0.51** (0.2 to 1.33)	173 (1 study)	⊕⊕⊕⊕ **high**	
Depression diagnosis – NRCT (Matos 2019) (follow-up mean 2 years)	**190 per 1000**	**36 per 1000** (8 to 152)	**RR 0.19** (0.04 to 0.8)	119 (1 study)	⊕⊖⊖⊖ **very low**[3]	

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes.
The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **RR:** Risk ratio;

GRADE Working Group grades of evidence
High quality: Further research is very unlikely to change our confidence in the estimate of effect.
Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.
Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.
Very low quality: We are very uncertain about the estimate.

b

c

d

[1] Participants were most likely aware of allocation of intervention. Randomisation mostly happened within schools. Bias could impact subjective outcomes although the use of clinical interviews for assessment may have reduced this.
[2] Significant heterogeneity. I squared >50%
[3] Participants self-selected the intervention they were allocated to which may have an impact on the self-reported measures as well as increasing bias whereby those who were seeking the intervention may show a better response
[4] Participants were most likely aware of allocation of intervention. Bias could impact subjective outcomes.
[5] MD not estimable as number or participants were not reported for the analysis

1

Individual interventions delivered by external specialists vs. control for emotional distress

Patient or population: children and young people with poor social, emotional and mental wellbeing
Settings: Secondary education
Intervention: Individual interventions delivered by external specialists
Comparison: usual practice

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
	Assumed risk	Corresponding risk				
	Control	**Individual interventions delivered by external specialists**				
Emotional distress (Cooper 2010, McArthur 2011, Pybis 2013, Saelid 2017, Pearce 2017) (follow-up mean 6-24 weeks; measured with: Self-report; Student-rated; Better indicated by lower values)		The mean emotional distress in the intervention group was **0.71 standard deviations lower** (1 to 0.41 lower)		192 (5 studies)	⊕⊕⊕⊖ **moderate**[1]	SMD -0.71 (-1 to -0.41)

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes.
The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **RR:** Risk ratio;

GRADE Working Group grades of evidence
High quality: Further research is very unlikely to change our confidence in the estimate of effect.
Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.
Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.
Very low quality: We are very uncertain about the estimate.

a

[1] Participants were most likely aware of allocation of intervention. Randomisation mostly happened within schools. One study used weak randomisation methods. Bias could impact subjective outcomes.

2

Computer-based interventions vs. control for emotional distress and quality of life

Patient or population: children and young people with poor social, emotional and mental wellbeing
Settings: Secondary education

Intervention: Computer-based interventions
Comparison: usual practice

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)	Comments
	Assumed risk Control	Corresponding risk Computer-based interventions				
Depression (Smith 2013) (follow-up mean 8 weeks; measured with: MFQ-child rated; Better indicated by lower values)		The mean emotional distress (MFQ – child rated) in the intervention group was **10.9 lower** (15.85 to 5.95 lower)		110 (1 study)	⊕⊕⊕⊖ **moderate**[1]	
Depression (Fleming 2012) (follow-up mean 5 weeks; measured with: CDSR- child-rated ; Better indicated by lower values)		The mean emotional distress (CDSR – child rated) in the intervention group was **13.6 lower** (19.52 to 7.68 lower)		31 (1 study)	⊕⊕⊕⊖ **moderate**[1]	
Quality of life (Do 2021, Fleming 2012)		The mean quality of life in the intervention group was **0.36 standard deviations higher** (0.39 lower to 1.11 higher)		81 (2 studies)		SMD -0.36 (-0.39 to 1.11)

*The basis for the **assumed risk** (e.g. the median control group risk across studies) is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **RR:** Risk ratio;

GRADE Working Group grades of evidence
High quality: Further research is very unlikely to change our confidence in the estimate of effect.
Moderate quality: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.
Low quality: Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.
Very low quality: We are very uncertain about the estimate.

[1] Likely that allocation was known to participants. Randomisation within schools so there may be risk of contamination. Bias can impact on subjective outcomes

1

2.1.6 Economic evidence

A guideline wide search of published cost-effectiveness evidence was carried out for review questions 1.1, 3.1, 4.1, 5.1 and 6.1.

2.1.6.1 Included studies

3504 records were assessed against eligibility criteria.

3433 records were excluded based on information in the title and abstract. Two reviewers assessed all the records. The level of agreement between the two reviewers was 100%.

The full-text papers of 71 documents were retrieved and assessed. 15 papers were assessed as meeting the eligibility criteria. However, this accounted for 13 distinct studies since some papers used the same underlying data. For RQ 5.1b, 1 studies (1 papers) was included. Two reviewers assessed all full-text papers. The level of agreement between the two reviewers was 100%.

The study selection process can be found in Appendix G and economic evidence tables found in Appendix H.

2.1.6.2 Excluded studies

69 full text documents were excluded for this guideline. The documents and the reasons for their exclusion are listed in Appendix L – Excluded studies.

2.1.7 Summary of studies included in the economic evidence review

Study	Limitations	Applicability	Other comments	Incremental			Uncertainty
				Costs	Effects	Cost-effectiveness	
Lee (2017) A hypothetical universal and a hypothetical	Potentially serious limitations [b]	Partly applicable [c]	The study conducted a cost-effectiveness analysis with a 10-year time horizon from a	**Incremental net costs [d] (95% UI);**	**Incremental DALYs averted (95% UI):**	**ICER (95% UI); mean, AUD$:**	Across the majority of univariate sensitivity analyses, cost-effectiveness results were

Study	Limitations	Applicability	Other comments	Incremental			Uncertainty
				Costs	Effects	Cost-effectiveness	
indicated (targeted) intervention delivered face-to-face to prevent the onset of depression vs. no intervention [a]			health and education perspective. The study reviewed literature on the prevention of depression for universal interventions involving group-based psychological delivered to all participating school students; and indicated interventions involving group-based psychological interventions delivered to students with subthreshold depression. Effect sizes were calculated using meta-analyses. A Markov model was used to calculate the total disability-adjusted life-years (DALYs) under the intervention and comparator scenarios.	**AUD$ thousands:** Universal vs. no intervention 21,802 (£14,729 GBP 2020[f]) (-75 to 55,743) Indicated vs. no intervention 58,843 (£39,754 GBP 2020[f]) (23,460 to 102,573)	Universal vs. no intervention 3,367 (£2,274 GBP 2020[f]) (1,618 to 5,184) Indicated vs. no intervention 4,083 (£2,757 GBP 2020[f]) (1,295 to 9,361)	Universal vs. no intervention 7,350 (£4,965 GBP 2020 [f])per DALY averted (dominates to 23,070) Indicated vs. no intervention 19,550(£13,208 GBP 2020[f]) per DALY averted (3,081 to 56,713)	either consistent or more favourable relative to baseline model. Sensitivity analysis found that unmoderated internet-delivered [e] prevention interventions were highly cost-effective when assuming intervention effect sizes of 100 and 50% relative to effect sizes observed for face-to-face delivered interventions. While clinician moderated internet-delivered [e] prevention interventions were not deemed cost-effective, it is likely that the unmoderated intervention pathway would be implemented in practice.

Abbreviations: DALY: disability-adjusted life-year; ICER: incremental cost-effectiveness ratio; UI: uncertainty interval

a. The eligible population receives neither the proposed intervention nor any established prevention services currently being delivered by the education/health sector. This equates to a 'partial null' comparator scenario.
b. Health benefit linked to other internalising behaviours are not captured nor are potential improvement in educational outcomes.
c. The intervention considered is relevant to the UK context, but caution is required when transferring the results of the study given the difference in prices and healthcare systems between the UK and the Australia.
d. Net costs were calculated as the intervention cost minus the cost offsets – i.e. the costs of treating major depression that are averted due to the prevention of incident cases.

Study	Limitations	Applicability	Other comments	Incremental			Uncertainty
				Costs	Effects	Cost-effectiveness	
e. The study was unable to identify any relevant RCT studies involving internet-delivered prevention interventions, which met the inclusion criteria for the model. Therefore, it was assumed that the effect sizes of internet-delivered prevention interventions were equal to some proportion of the pooled intervention effect sizes calculated for face-to-face prevention interventions. Given the heroic nature of this assumption, this investigation was relegated to a separate sensitivity analysis and not included in the main analysis. Unmoderated modalities (i.e., self-help) or clinician-moderated modalities (i.e., self-directed treatment with periodic monitoring by a health professional or clinician) were both considered in sensitivity analysis.							
f. Converted by the reviewer using historical exchange rates and PSSRU inflation indices.							

2.1.8 Economic model

A bespoke economic model was developed (Coote et al 2021) to capture the costs and consequences of an intervention, or combination of interventions, that promote social, emotional and mental wellbeing in children and young people in primary and secondary education (see section 1.17). It covers more than 1 evidence review in the guideline so the full write up is contained in a separate document rather than in appendix I (see Evidence review J).

2.1.9 Economic evidence statements

Lee (2017) found that hypothetical universal and indicated (targeted) prevention interventions delivered to students via face-to-face pathways were both cost-effective relative to a $50,000 (£33,780 GBP 2020) per DALY threshold. The study found an ICER of $7,350 (£4,965 GBP 2020) per DALY averted for a universal prevention intervention and an ICER of $19,550 (£13,208 GBP 2020) per DALY averted for an indicated prevention intervention. The author comments that the health benefits are limited to those linked to the prevention of incident depression only and that, due to short time horizons of RCT studies used within the analyses, it is unclear whether interventions prevent or merely delay onset of depression. Across the majority of univariate sensitivity analyses, cost-effectiveness results were either consistent or more favourable relative to baseline model. The analysis was assessed as partly applicable to the review question, with potentially serious limitations.

Coote (2021) aimed to quantify the costs and effectiveness, and hence the impact, of introducing a range of mental health and wellbeing interventions. The large range of interventions on offer and the circumstances in which an intervention is implemented made it difficult to draw robust conclusions regarding the effectiveness of an intervention and the economic impact.

3 Acceptability of targeted mental health support in primary, secondary and further education

3.1 Review question

Are targeted mental health support approaches acceptable to the children and young people receiving them and to those delivering them?

3.1.1 Introduction

Social and emotional skills are key during children and young people's development and may help to achieve positive outcomes in health, wellbeing and future success. Some children may experience subclinical signs and symptoms of mental health conditions and may be at risk of poor social, emotional and mental wellbeing outcomes. Targeted mental health support aims to provide extra support for these children and young people. This review aims to evaluate the views and experiences of those receiving and delivering the interventions to help understand what components or approaches are acceptable to them.

3.1.2 PICO table

Table 7: PICO targeted mental health support in primary education

Population	Children and young people in primary, secondary and further education (UK key stages 1 to 4 and post-16 education or equivalent [usually ages 5-18 years]) who have been identified as being at risk of depression, anxiety or stress.
Intervention	Usual practice plus individual or small group interventions (including face to face or digital interventions) aimed at • reducing symptoms or • preventing symptoms in those at risk of depression, anxiety or stress.
Comparator	Usual practice
Outcomes	Views and experiences of: • teachers and practitioners delivering interventions • children and young people receiving interventions. • parents/carers of children and young people receiving the interventions

3.1.3 Methods and process

This evidence review was developed using the methods and process described in Developing NICE guidelines: the manual and in the methods chapter. Methods specific to this review question are described in the review protocol in appendix A and in the methods document.

Declarations of interest were recorded according to NICE's 2018 conflicts of interest policy.

3.1.4 Evidence

3.1.4.1 Included studies

In total 47,322 references were identified through systematic searches after duplicates were removed. Of these, 248 references were considered relevant, based on title and abstract, to the protocols for targeted social and emotional interventions and targeted mental health interventions in schools and were ordered at full text. A total of 59 references were included across both reviews (20 for targeted social and emotional interventions and 39 for targeted mental health interventions) and 189 references were excluded.

Of the 39 references for targeted mental health interventions, a total 9 qualitative studies were included for this review of the acceptability of targeted mental health support. See summary of studies (Table 8) included in this review, a summary of the key themes in these studies (Table 9) and a summary of qualitative evidence (Table 10). See Appendix D for full evidence tables.

3.1.4.2 Excluded studies

Please see Appendix K for the list of excluded studies and the reasons for exclusion.

3.1.4.3 Summary of included studies included in the evidence review

Table 8: Summary of studies for acceptability of targeted mental health support

Study	Setting	Informants	Intervention type	Method	Themes in study
Hamilton-Roberts 2012 [UK]	Secondary school	Teachers (n=4) Counsellors (n=9)	School counselling	Semi-structured interviews Questionnaires Focus groups	• Perceived attributes of the service • Perceived impacts of the service
Kernaghan 2016 [UK]	Primary school	Children (n=120)	Time 4 Me (School counselling)	Questionnaire (completed verbally with counsellor)	• Reasons for Using Time 4 Me • Preferences Within the Time 4 Me Service • Change at a Personal Level (Individual) • Changes at an Interpersonal Level (Family) • Changes at a Social Level (School and Peer Relationships) • Learning for the Future (Resilience)
Lewis-Smith 2021 [UK]	Secondary schools	Students (n=9)	Brief Behavioural Activation Therapy	Semi-structured interviews	• Helpful aspects • Unhelpful aspects
McKeague 2018 [UK]	Further education (within a secondary school)	Young people (n=15) School staff (n=10)	DISCOVER (Small group workshop)	Semi-structured interviews	• Understanding and managing stress • Preference for engaging and interactive content • The importance of an individualised approach • Attending a workshop in the school setting • Experience of a group-based workshop • Fit with school values and existing school support • Clarity regarding workshop remit • Role in recruitment
Prior 2012 (a and b) [UK]	Secondary school	Children and young people (n=19)	School counselling	Semi-structured interviews	• Acknowledgement of problem • A facilitative conversation • Contemplation of counselling

Study	Setting	Informants	Intervention type	Method	Themes in study
					• Evaluating trustworthiness • Decision to disclose
Rupani 2012 [UK]	Secondary school	Children and young people (n=21)	School counselling	Semi-structured interviews	• The impact of difficulties on the capacity to study and learn The impact of counselling on the capacity to study and learn
Segrott 2013 [UK]	Secondary school	Children and young people School staff (n=21)	Bounceback (school counselling)	Semi-structured interviews	• Organisation of service delivery • Working with young people • Working with schools • Receipt and acceptability
Spratt 2010 [UK]	Primary and secondary school	Children and young people School staff (n=66)	Therapeutic support, counselling, drop-in sessions	Semi-structured interviews	• Self-referral opportunities
Weeks 2017 [UK]	Secondary school	Children and young people School staff (n=19)	Cognitive behavioural therapy (group)	Semi-structured interviews Questionnaires	• Commissioning the group • Measuring change • Managing the therapeutic process in schools • Pupil engagement

See Appendix D for full evidence tables.

3.1.5 Summary of the qualitative evidence

Iterative aggregation of codes generated 9 main themes and 27 sub-themes. A brief summary of these key themes is presented in table 9. A summary of the qualitative findings is presented in table 10. Full GRADE CERQual tables are presented in appendix G.

Table 9: Summary of themes and sub-themes

Themes	Findings
The need for intervention	Types of problem
	Unable to talk about problems
	Impact of problems
Introducing interventions to the young people	Informing and demystifying
	Motivation for engagement
	Perceived benefits and harms
Identifying children and young people who may benefit from interventions	How to identify
	Self-referral
The importance of having a 'safe space'	Freedom to speak
	A space separate from class
	Physical space
Acceptability of intervention content	Types of intervention
	Materials
	Fit with existing school values and policies
Acceptability of intervention delivery	Approaches
	Working in groups
Acceptability of the intervention provider (young people)	Confidentiality
	Trust
	Treated as an equal
Acceptability of the intervention provider (school staff)	Follow-up
	Links with teachers
Effectiveness of the intervention	Impact of intervention observed by school staff
	Impact of intervention reported by children and young people: individual level
	Impact of intervention reported by children and young people: family level
	Impact of intervention reported by children and young people: school level
	Measuring change after intervention
	Generalisability of skills learned

Table 10: Summary of qualitative findings

Review theme summary	Studies contributing (Study theme)	CERQual confidence rating	Supporting statements
The need for intervention **Types of problem** The most common reason for children engaged with counselling was due to relational problems. This was more common in girls. Most relational problems were to do with family (e.g. family separation). Where children engaged with counselling due to behavioural problems, they described feeling angry, losing their temper or being violent. Those children presenting with emotional problems described this as feeling sad, worried or stressed. **Unable to talk about problems** Young people described they acknowledged that they were 'having problems' that they felt they could not discuss with family or friends. This feeling often came from the feeling of shame guilt, lack of trust in others' ability to maintain confidentiality and the anxiety linked to disclosing to others as well as the need to appear 'normal' especially in the eyes of their peers. **Impact of problems** Young people felt that their problems negatively affected their concentration at school. They felt that problems were occupying their minds and that they had 'no space' in their heads for schoolwork and they lacked motivation to go to school or lost interest in participating in class. Some young people felt that	Kernaghan 2016 (Reasons for Using Time 4 Me) Prior 2012a (Acknowledgement of problem) Rupani 2012 (The impact of difficulties on the capacity to study and learn)	High confidence	*"I needed to talk to someone about my daddy going to jail." (Female, 10 years old) [Kernaghan 2016]* *"Because I was angry all the time. My behaviour was getting me into trouble." (Male, 11 years old) [Kernaghan 2016]* *"Because I was sad and no-one understood what I was saying." (Female, nine years old) [Kernaghan 2016]* *"I didn't feel I could talk about it at home. Mum and Dad would be really upset if they knew I was upset." (Student)[Prior 2012a]* *"I just couldn't stop thinking about them [the problems] and it was stressing me out and stuff. And obviously if I was getting stressed out, I wasn't concentrating on my work and stuff. "(Student) [Rupani 2012]* *"I didn't really want to come to school and I wasn't doing work and I found school boring and I wouldn't really try and just didn't care" (Student) [Rupani 2012]* *"Before the counselling, whenever stuff happened in class, I always like was not into it at all. I was just upset and stuff and not taking part in it." (Student) [Rupani 2012]*

Review theme summary	Studies contributing (Study theme)	CERQual confidence rating	Supporting statements
this also affected their relationships with teachers due to misbehaving in class.			
Introducing the interventions to young people **Informing and demystifying** Young people described how a member of school staff introduced them to the idea of counselling. They emphasised the expertise of a counsellor relative to other school staff. The process of counselling was explained with an emphasis on confidentiality. They also demystified counselling by presenting it as 'just talking and listening'. **Motivation for engagement** There were some concerns that the motivation of young people to participate in an intervention may lie with the person who had suggested it e.g. school staff/ parent rather than being self-selected. **Perceived benefits and harms** Young people perceived counselling as a potential solution to the problems they were experiencing. However, they were also concerned about what others might think if they knew they were receiving counselling.	Prior 2012a (A facilitative conversation; Contemplation of counselling) Weeks 2017 9 Pupil engagement)	High confidence	*"Well, my guidance teacher, she spoke to me and she explained everything clearly to me and she said that once I'd tried it for the first time, if I didn't want to go back, I didn't have to. It was up to me" (Student)[Prior 2012a]* *".. suggested it, because she felt that it wouldn't help me, or do me any good, to continue talking to her, it would be better if I spoke to someone who would know more and be probably able to help me more than she could." (Student)[Prior 2012a]* *"I just think it's very hard to explain why you're offering them, this is about something you want…" (Head of Year) [Weeks 2017]* *"…with certain individuals in the group, we want them to change more than they want to change and that's a bit of an issue I think." (TA) [Weeks 2017]* *"I was like that, I'm gonna get to hear, like, there's something wrong with me or something like that. People would think, like, I'm psycho or that." (Student) [Prior 2012a]*
Identification of children and young people who may benefit from interventions **How to identify**	Weeks 2017 (Commissioning the group)	High confidence	*"Anxiety means different things to different people and people use the wrong words for something, they call it anxiety and it isn't." (SENCo) [Weeks 2017]*

Review theme summary	Studies contributing (Study theme)	CERQual confidence rating	Supporting statements
School staff raised concerns about identifying children and young people with anxieties. They noted that students would be identified through adult perceptions of experiences of anxiety which students may or may not agree with. Teachers also suggested that counselling was not to be used to address behavioural difficulties. It was also noted that the key person identifying students varied from school to school. **Self-referral** Some teachers viewed the 'opt in' or self-referral approach to interventions for (post-16) students as being important. They felt more comfortable encouraging groups of students to enrol.	Hamilton-Roberts 2012 (Perceived attributes of the service) McKeague 2018 (Role in recruitment)		*". . it's very unlikely to send a behaviour issue to counselling unless there are deep-rooted issues . . .." (Teacher) [Hamilton-Roberts 2017]* *"The person whose role it is in school to identify the students has to be very clear and there has to be a complete match between what you're looking for, given what you're planning to do, and what we're trying to identify, for it to work well." (SENCo) [Weeks 2017]* *". .they have to make that decision. That they want to take part in it. I don't think it should be forced upon them, because some students are quite laid back and they don't feel they need it." (School staff) [McKeague 2018]*
The importance of having a 'safe space' **Freedom to speak** Young people valued sessions that created a safe environment in which they could choose what to talk about. **A space separate from class** Young people felt that counselling provided a space for them to talk about their problems so that they did not have to think about them while in class. It allowed them to separate their problems from their schoolwork so that they could concentrate on work in class and problems in counselling. **Physical space**	Segrott 2013 (Receipt and acceptability; Working with young people) Rupani 2012 (Increased concentration) McKeague 2018 (Attending a workshop in the school setting) Weeks 2017 (Managing the	High confidence	*"… you can take as long as you want, you can talk about whatever you want. 'You're here because you have this problem, that's what we want to talk about. But if you're not comfortable talking we won't.' And that's the most important thing in it I think." (Student) [Segrott 2013]* *"Well all the other services I did … you know the NHS, and … it was all very clinical and it wasn't comfortable. I mean [Bounceback] made the effort sort of thing; it was little things like, you know, you could sit and you could eat with them … It's like you go in and they know how to make you feel warm and welcome." (Student) [Segrott 2013]* *"Like whenever I talk to somebody, just after [the counselling], it helps me clear my thoughts and get*

Review theme summary	Studies contributing (Study theme)	CERQual confidence rating	Supporting statements
Young people described having workshops at school as being convenient, familiar, comfortable, safe and secure. School staff however raised practical concerns with holding CBT in a school setting such as timetabling and securing a suitable room to ensure confidentiality and boundaries of privacy.	therapeutic process in schools)		*my thinking straight . . . I find it easier to concentrate on different things whenever I've been talking to somebody" (Student) [Rupani 2012]* *"Yeah they [the counselling services] did [improve concentration], because when you talked about your problems, you didn't have to think about it as much." (Student) [Rupani 2012]* *"I think we've got an ideal room for you and I think any school that undertakes intervention groups has to have…(this)…it was private, you were able to put the blinds down…a small environment which made it more nurturing." (SENCo) [Weeks 2017]*
Acceptability of intervention content **Types of intervention** Young children (aged 4-8) preferred play-based interventions which incorporated communication with the counsellor. Older children (aged 9-11) tended to prefer receiving help/guidance about problems and a combination of therapeutic play compared to interventions that were just play-based. Girls and older children found self-help techniques and psychoeducation were particularly effective as they made them feel better. **Materials** Young people found workshops engaging, interactive and different in terms of new ideas and techniques. They liked the variety of materials used including PowerPoint presentations, videos and	Kernaghan 2016 (Preferences Within the Time 4 Me Service) McKeague 2018 (Preference for engaging and interactive content; Fit with school values and existing school support)	High confidence	*"Reading lots of stories. The sand and the animals. The puppets." (Male, four years old) [Kernaghan 2016]* *"That I get to talk to a person and get to talk about what happened instead of keeping it all in". (Female, 10 years old) [Kernaghan 2016]* *"Talking about my problems and realising that some of them were not so big. Understanding what was causing the problem helped me think about another way of dealing with it." (Male, eight years old) [Kernaghan 2016]* *". . . the ones [techniques] that the workshop delivered were quite different and quite unique so they sort of made it easier to deal with things because there's*

Review theme summary	Studies contributing (Study theme)	CERQual confidence rating	Supporting statements
workshop booklet. They preferred the active and interactive parts of the workshop. **Fit with existing school values and policies** School staff felt that the workshop was in line with existing school values, especially in terms of student welfare and pastoral care. They described the intervention as addressing a gap in the support that the school offers. They highlighted the importance of helping students become self-managers of their mental health and felt that the workshop was in keeping with their aims to support students to do this.			*stuff that you haven't really done before." (Student) [McKeague 2018]* *"It [the workshop day] was great, we did, it was a whole day, we did so many activities, we learnt so many things, we tried new things, it was really fun." (Student) [McKeague 2018* *"I think the more preventative work we can do the better, really, because I think young people do need to learn to be more resilient and develop skills to develop that resilience, cause you know, life is difficult and there's no getting away from that, but I think we just need to make young people realise that that is normal and how to actually handle it." (School staff) [McKeague 2018]*
Acceptability of intervention delivery **Approaches** Young people valued the personalised approach to workshop provision such as when psychologists asked them to describe their experience of stress. In contrast, some young people did not think it was individualised enough or that there was not enough one-to-one interaction with the psychologists. **Working in groups** Many young people said that they benefitted from hearing peers sharing information about themselves because it helped them realise that other people were experiencing similar things. Some young people described this as a way of making them feel more comfortable in disclosing information. They	McKeague 2018 (The importance of an individualised approach; Experience of a group-based workshop) Weeks 2017 (Managing the therapeutic process in schools)	High confidence	*"[the workshop was] really interactive and because there* *wasn't a really large group of people, there was about 12 of us, it was quite individual as well. So personally I feel like that I got, got quite a good amount of attention and my questions were answered in quite detail [sic] because we had the time to do it." (Student) [McKeague 2018]* *". . .helping young people that are feeling stressed, the best* *thing to do would be talk to them about their individual circumstance if they're willing to tell you their personal lives,* *'cause if they do then you know, you sort of know what angle to talk to them from" (Student) [McKeague 2018]*

Review theme summary	Studies contributing (Study theme)	CERQual confidence rating	Supporting statements
commented that the size of the group was important in determining willingness to disclose. A teaching assistant described problems that arise where the groups are based on existing friendships and roles within peer groups.			*"It was nice to see what other people thought and how they* *dealt with stress and what they felt stress was like." (Student) [McKeague 2018]* *"Because of the fact that they know each other so well…if they fell out that day there was an issue that had to be resolved on that day…so it'd be like they'd come to the CBT and then we'd get all the issues of the day that had exploded in break…so that was a hindrance." (TA) [Weeks 2017]*
Acceptability of intervention provider (young people) **Confidentiality** Even though young people considered talking to someone they don't know to be 'strange', it was often this unfamiliarity and separateness of the counsellor that was key in the decision to try counselling. The use of a provider who is not part of the school establishment may reassure young people in terms of privacy and confidentiality. Children trust the confidentiality of services and welcome the non-judgemental response which they describe as different from usual teaching. **Trust** Some young people felt able to trust their counsellor immediately whilst others took several weeks. his is because of being uncertain in this new situation, feeling initially uncomfortable with a stranger, anxious that they might be judged, interrogated or	Weeks 2017 (Managing the therapeutic process in schools) Spratt 2010 (Self-referral opportunities) Hamilton-Roberts 2012 (Perceived attributes of the service) Prior 2012a (Evaluating trustworthiness; Decision to disclose) Segrott 2013 (Receipt and acceptability;	High confidence	*"…someone who's not part of the establishment, someone who they know comes in and goes out, in their heads they know you don't go into the staff room and talk about them or talk about their issues. So I think that means a lot to the students." (Head of Year) [Weeks 2017]* *"Teachers don't really have time sit and listen, and they [the project staff] have time for you." (Student) [Spratt 2010]* *". . . the client is aware that we don't go to the staff room and discuss all the issues. So they can . . . they are free to discuss anything . . . anything they need to do . . . and also we don't need to have parental consent . . .. "(Counsellor focus group) [Hamilton-roberts 2012]* *"I sort of know it will be private cos I know [BB Staff 4]'s the kind of guy who won't just go blabbing out 'Oh yeah I went to the school yeah and this guy's Nan died'. I know he's not that sort of person, I*

Review theme summary	Studies contributing (Study theme)	CERQual confidence rating	Supporting statements
reported on. In this scenario, young people initially assess the counsellor's reaction to carefully planned partial disclosures until they are happy with the trustworthiness of the counsellor. **Treated as an equal** Being accepted, not being judged or criticised, being treated as an equal and not being talked down to, are key factors in their decision to entrust the counsellor with their more disturbing worries.	Contemplation of counselling)		*know my information is safe with him. I just feel really trusted with him."* *"I also thought like, maybe, cos of like my age, Jan would treat me like a child, but she just treated me more like a grown up, because I'm getting older. So that was good as well. We sat and laughed, we had a good laugh. She just treated me like, ah, like someone nearer her age. Just like an adult type person. Jan just sat there, an' I just, she asked me a couple of questions to start me off, cos I didn't know where to start, and then I just never shut up after that." (Student) [Prior 2012a]* *"… it was nice to know that they are not always going to have the answers. . . You kind of felt that even though they were older than you, you were kind of in the same boat, you were on the same level" (Student) [Segrott 2013]*
Acceptability of the intervention provider (school staff) **Follow-up** School staff raised concerns about the potential for difficulties with ongoing support or follow-up when using external service providers. **Links with teachers** Most school staff felt that they did not receive enough information or expressed a desire to learn more about the intervention (delivered by external providers). This is so that they would be able to feel	Weeks 2017 (Managing the therapeutic process in schools) McKeague 2018 (Clarity regarding workshop remit) Hamilton-Roberts 2012 (Perceived attributes of the service)	High confidence	*"The worry is that I don't see…(named three students)…so where's the reminder of it and going to remember…why you are using that strategy again?" (TA) [Weeks 2017]* *". . .it would be beneficial for us to be able to have some acknowledgment of what particular strategies work well so that we can reinforce that with students." (School staff) [McKeague 2018]* *"It has enabled us to address issues with pupils who need specialist provision and substantial time and input over and above what a year/assistant*

Review theme summary	Studies contributing (Study theme)	CERQual confidence rating	Supporting statements
better equipped to provide continuing support for their students. Teachers also commented on the benefits of the specialist nature of some of the counselling services			*year leader could do." (Teacher) [Hamilton-roberts 2012]*
Effectiveness of the intervention **Impact of intervention observed by school staff** School staff observed notable changes in their students' self-esteem and confidence following intervention. Young peoples' attendance at school improved due to the perception of this support giving more chance of securing jobs or further education. **Impact of intervention reported by children and young people: individual level** Young children experienced an emotional change after receiving counselling, described mostly as a reduction in worry. This was more common in girls. Boys were more likely to experience a change in their behaviour. Young people indicated that the workshop had helped them to understand their stress or made them aware of useful techniques. Participants commented that having someone to talk to and being provided with coping tools and strategies were helpful aspects of the intervention. Some participants struggled to maintain positive changes in symptoms once the intervention had ended due to losing motivation.	Segrott 2013 (Receipt and acceptability) Kernaghan 2016 (Change at a Personal Level; Changes at an Interpersonal Level; Changes at a Social Level; Learning for the Future) McKeague 2018 (Understanding and managing stress) Lewis-Smith 2021 (Helpful aspects) Rupani 2012 (Improved relationship with teachers)	High confidence	*"I am sleeping better. I get all my work done in class. I have started to go out and play again." (Male, six years old) [Kernaghan 2016]* *"I think it's made me think more about where the stress came from and that there are ways to deal with it rather than just freaking out." (Student) [McKeague 2018]* *"My brother is sort of getting me angry, but I know that gets me into trouble so I'm not going to let him anymore." (Male, nine years old) [Kernaghan 2016]* *"I can talk to mum and dad about my worries." (Female, nine years old) [Kernaghan 2016]* *"I stay in class and I get more work done. I get more involved in class activities." (Male, 11 years old) [Kernaghan 2016]* *"So like, now [after counselling] if I was arguing with my teacher, I wouldn't end up screaming at them. I'd tend rather just to, not ignore them but just pretend to listen but not really listen so you don't end up reacting into it." (Student) [Rupani 2012]* *"I'm such a person that will actually stand outside the unit at break and lunch time and just observe*

Review theme summary	Studies contributing (Study theme)	CERQual confidence rating	Supporting statements
Impact of intervention reported by children and young people: family level Young children experienced an improvement in relationships with the family and behaviour at home after receiving counselling. **Impact of intervention reported by children and young people: school level** Following counselling, young children reported an improvement in their classroom behaviour, which was mostly described as increased concentration, finding school work easier and better attendance. They also reported better relationships with teachers, increased confidence and reduced school-related anxiety. However, some children said counselling made no difference to their school life in terms of academic achievement. After counselling, young people reported feeling more in control of their temper and were less likely to get into arguments with their teachers. They reported improvements in confidence which positively affected their schoolwork. Most young people felt more motivated to attend school after counselling. **Measuring change after intervention** School staff highlighted that quantitative measurements of change in students was needed, however, it was found that most school staff rely on more qualitative observations. It was felt that this had greater importance in identifying and monitoring needs of students in the absence of an observed undesirable behaviour.	Weeks 2017 (Measuring change; Pupil engagement)		*students and see how they're interacting socially…so that is not a hard and fast data but I think that gives you a feeling of how they feel about themselves, their self-esteem, their confidence." (SENCo) [Weeks 2017]* *"No news is good news with students like that. If they don't come forward in any shape or form to any member of staff as being a concern you can usually assume they're fine." (Head of Year) [Weeks 2017]* *"Not to keep things inside, it always helps to talk. I think I kept things bottled up—too much longer I would have exploded! Counselling really helps!" (Female, 10 years old) [Kernaghan 2016]* *"I think it was quite hard for them to get their heads around why they were in the group."(TA) [Weeks 2017]*

Review theme summary	Studies contributing (Study theme)	CERQual confidence rating	Supporting statements
Generalisability of skills learned Young children identified that being able to talk about their worries was an important tool to help them in the future and felt that they should be able to discuss future worries with a family member. Young people found it difficult to continue using the techniques they learned from the workshop due to increasing academic pressures. Other young people found it difficult to generalise the principles they learned in CBT sessions beyond the examples presented.			

4 Barriers and facilitators to targeted mental health support in primary, secondary and further education

4.1 Review question

What are the barriers and facilitators to using targeted mental health support?

4.1.1 Introduction

Social and emotional skills are key during children and young people's development and may help to achieve positive outcomes in health, wellbeing and future success. Some children may experience subclinical signs and symptoms of mental health conditions and may be at risk of poor social, emotional and mental wellbeing outcomes. Targeted mental health support aims to provide extra support for these children and young people. This review aims to evaluate the views and experiences of barriers and facilitators from those receiving and delivering or implementing the interventions to help understand what prevents or facilitates effective implementation.

4.1.2 PICO table

Table 10: PICO targeted mental health support in primary education

Population	Children and young people in primary, secondary and further education (UK key stages 1 to 4 and post-16 education or equivalent [usually ages 5-18 years]) who have been identified as being at risk of depression, anxiety or stress.
Intervention	Usual practice plus individual or small group interventions (including face to face or digital interventions) aimed at • reducing symptoms or • preventing symptoms in those at risk of depression, anxiety or stress.
Comparator	Usual practice
Outcomes	Views and experiences on barriers and facilitators of: • teachers and practitioners delivering interventions • children and young people receiving interventions. • parents/carers of children and young people receiving the interventions

4.1.3 Methods and process

This evidence review was developed using the methods and process described in Developing NICE guidelines: the manual and in the methods chapter. Methods specific to this review question are described in the review protocol in appendix A and in the methods document.

Declarations of interest were recorded according to NICE's 2018 conflicts of interest policy.

4.1.4 Evidence

4.1.4.1 Included studies

In total 47,322 references were identified through systematic searches after duplicates were removed. Of these, 248 references were considered relevant, based on title and abstract, to the protocols for targeted social and emotional interventions and targeted mental health interventions in schools and were ordered at full text. A total of 59 references were included across both reviews (20 for targeted social and emotional interventions and 39 for targeted mental health interventions) and 189 references were excluded.

Of the 39 references, a total 5 qualitative studies were included in this review of barriers and facilitators of targeted mental health support. See summary of studies (Table 11) included in this review and a summary of the qualitative evidence in these studies (Table 12). See Appendix D for full evidence tables

4.1.4.2 Excluded studies

Please see Appendix K for the list of excluded studies and the reasons for exclusion.

4.1.4.3 Summary of included studies included in the evidence review

Table 11: Summary of studies for acceptability of targeted mental health support

Study	Setting	Informants	Intervention type	Method	Themes in study
Hamilton-Roberts 2012 [UK]	Secondary school	Teachers (n=4) Counsellors (n=9)	School counselling	Semi-structured interviews Questionnaires Focus groups	• Perceived barriers and facilitators
Lewis-Smith 2021 [UK]	Secondary schools	Students (n=9)	Brief Behavioural Activation Therapy	Semi-structured interviews	• Helpful aspects • Unhelpful aspects
McKeague 2018 [UK]	Further education	Young people (n=15) School staff (n=10)	DISCOVER (Small group workshop)	Semi-structured interviews	• Barriers to attending a school-based intervention
Segrott 2013 [UK]	Secondary school	Children and young people School staff (n=21)	Bounceback (school counselling)	Semi-structured interviews	• Organisation of service delivery • Working with young people • Working with schools
Spratt 2010 [UK]	Primary and secondary school	Children and young people School staff (n=66)	Therapeutic support, counselling, drop-in sessions	Semi-structured interviews	• Self-referral opportunities • Teachers as the main point of referral

See Appendix D for full evidence tables.

4.1.5 Summary of the qualitative evidence

Iterative aggregation of codes generated 4 main themes, each of which had associated barriers and facilitators. A summary of these key themes is presented in table 12. Full GRADE CERQual tables are presented in appendix G.

Table 12: Summary of themes

Theme	Findings
Raising awareness and identifying those who may benefit from the interventions: Barriers	• Lack of teacher training • Inappropriate referral • Low self-referral rates • Limited knowledge of services
Raising awareness and identifying those who may benefit from the interventions: Facilitators	• Improving accessibility • Understanding and follow referral criteria
Confidentiality, trust and 'safe space': Barriers	• Physical space
Confidentiality, trust and 'safe space': Facilitators	• Ensuring confidentiality • Building trust • Physical space
Working with schools: Barriers	• Teacher time • Conflicting outcome priorities
Working with schools: Facilitators	• Dedicated staff members
Allocating time for interventions: Barriers	• Missing lessons

Table 13: Summary of qualitative evidence

Review theme summary	Studies contributing	CERQual confidence rating	Supporting statements
Raising awareness and identifying those who may benefit from the interventions: Barriers • There was very little evidence of teachers being offered training to recognise the types of behaviour that may be associated with poor	Spratt 2010 (Teachers as the main point of referral;	High confidence	*"I think there is something to be said to the argument that the brightest will receive attention, and the most difficult will receive attention, and the ones in the middle might be missed. I perfectly understand why there might be some level of truth to*

Review theme summary	Studies contributing	CERQual confidence rating	Supporting statements
mental health. Specialist providers expressed little confidence in teacher's capacities to respond appropriately. • Schools are most likely to identify mental health difficulties in pupils showing disruptive behaviour which means that those whose behaviour was 'more passive' or withdrawn were not readily addressed. • Not all interventions offer other accessible gateways through which young people can seek support. Self-referral is not sufficient to draw children and young people into the system. • How children and young people view the intervention will impact on their decision to take part. If most users had been referred by teachers as a result of disruptive behaviour, this could discourage use by the general school population, especially when it is not recognised as form of help.	Self-referral opportunities)		*that argument in simply looking at what teachers are expected to do in a classroom." (Youth counsellor) [Spratt 2010]* *"Yes, these are the ones that are much, much harder to deal with because in some ways these children are behaving as you would ask them to behave.… They are being quiet and they are being good and they are appearing to get on with it. These are the ones who, the danger is, that they may very well slip through the net" (Teacher) [Spratt 2010]* *"Well … for this age group [secondary school] self referral is not expected to be high. I think at the moment we are running with about 10%. And that actually is a pretty good figure for self-referral for this age group so we can't expect that those young people who are pretty isolated […] are going to refer anyway." (Counsellor) [Spratt 2010]* *Interviewer: "What role does she [school counsellor] have in the school?"* *YP1 "The bad people go and speak to her, the really extreme cases, the ones who have behavioural problems — the ones who bully people, folk who don't work in class."* *YP2 "There's one girl I know of and everybody knows she's a nasty piece of work and she had to go and see her" [Spratt 2010]*
Raising awareness and identifying those who may benefit from the interventions: Facilitators • An example in a primary school showed counselling/therapy providers who maintaining a high profile in school and cultivating a welcoming and friendly image with no lower threshold to access the service. This allowed children to discuss anything and consequently remove stigma. Those children who reported serious difficulties were indistinguishable to their peers.	Spratt 2010 (Self-referral opportunities) Segrott 2013 (Organisation of service delivery)	High confidence	*"People say, 'What's the success due to?' I think its because we are there and we are accessible and we are familiar and we are consistent, and they see us there at the same times and the same places … so it's a known factor, so it doesn't feel like something strange and external to their daily lives." (Charity Chief Exec) [Spratt 2010]* *""It is good to be in school but … if one person is being bad then the whole class gets it and that is not very good. The drop*

Review theme summary	Studies contributing	CERQual confidence rating	Supporting statements
An example was a drop-in session in a secondary school. A key advantage noted by young people was that they could use the drop in on their own terms and this allowed them to exert some control over the process. • Teachers should refer young people (to Bounceback) with emotional difficulties/mental health issues, which had the potential to cause a crisis or have a negative effect on emotional well-being but not young people who disrupt lessons. They should emphasise that it is voluntary.			*in is good and it is good to be able to go and get your lunch or to play pool or just relax." (Student) [Spratt 2010]*
Confidentiality, trust and 'safe space': Barriers • Service providers noted several young people who decided not to continue with their sessions linked to unsuitable accommodation.	Segrott 2013 (Working with young people)	Moderate confidence	*[None]*
Confidentiality, trust and 'safe space': Facilitators • Where young people needed to released from a lesson for a session, they were provided with passes which stated "appointment" or "interview". This was so the young person could choose whether to share this information or not. While some participants found the sharing of risk information challenging at first, all participants who discussed the issue acknowledged that it was part of the therapists' role to help keep them safe. • Providers of the intervention gave young people as long as they needed to get to know and trust them. They sometimes used activity worksheets to help with this and allow the conversation to happen naturally. • The same room should be available every week so that young people knew where to go. It should not be used as a route into other rooms. There	Segrott 2013 (Working with young people; Working with schools) Lewis-Smith 2021 (Helpful aspects)	High confidence	*[None]*

Review theme summary	Studies contributing	CERQual confidence rating	Supporting statements
should be no window in the door and other windows should not be overlooked by public areas.			
Working with schools: Barriers • Teachers were unable to devote much time to planning or monitoring how the service operated. It was difficult to contact them due to other commitments. • Counsellors queried the appropriateness of being run by the local authority (LA). This is because the counsellor's primary role is not necessarily related to educational or school outcomes.	Segrott 2013 (Working with schools) Hamilton-Roberts 2012 (Perceived barriers and facilitators)	High confidence	*". . we are in the education system . . . but because the work we do is with mental health really . . . it doesn't seem . . . it just doesn't sit here . . . within education . . . I would say that if a young person was sent to me because of education and I thought it was another issue . . . something going on underlying . . . I wouldn't be bothered about their education . . . and that's different to here [the LA] . . .." (Counsellor focus group) [Hamilton-Roberts 2012]*
Working with schools: Facilitators • Communication between school and external providers became easier when members of school staff were allocated as named contacts.	Segrott 2013 (Working with schools)	Moderate confidence	*[None]*
Allocating time for interventions: Barriers • Young people expressed a conflict between attending the intervention and missing lessons. A workshop that takes a whole day took too much time.	McKeague 2018 (Attending a workshop in the school setting; Barriers to attending a school-based intervention)	Moderate confidence	*"I think it just took a lot of time. It took a whole school day and for me that's really a lot of information that I missed and had to catch up on." (Student) [McKeague 2018]* *"It was just about missing the lessons, I thought that that was kind of going to add to the stress rather than take it away because just more to juggle with and I just thought at the time it was on I wasn't really ready for missing lessons or anything like that." (Student) [McKeague 2018]*

5 Integration and discussion of the evidence

5.1 Mixed methods integration

The JBI methodology for mixed methods systematic reviews was used to guide the convergent segregated approach to integrating the quantitative and qualitative evidence. The following 5 questions were used to inform this integration:

Are the results/findings from individual syntheses supportive or contradictory?

Overall the findings from the quantitative and qualitative reviews were broadly supportive. The quantitative reviews showed that interventions for primary school children were largely ineffective relative to standard care, and the qualitative evidence highlighted a number of barriers and challenges to delivering interventions for primary school children which may explain why the identified interventions had limited success in improving outcomes. For secondary school children there was some evidence of effectiveness, and this was supported by the qualitative evidence which indicated that interventions that allow children and young people to have a safe space to open up to a trusted person about problems or issues they may be experiencing can be beneficial, particularly because they do not always feel able to discuss those issues with their family or friends.

Does the qualitative evidence explain why the intervention is or is not effective?

Themes from the qualitative evidence suggested that school staff can find it difficult to identify children with mental health concerns and that this can be a barrier to ensuring the right children are referred for support. The qualitative themes suggested that children prefer an opt-in approach to accessing services that are promoted as voluntary, rather than being selected to attend. In many of the studies included in the quantitative review, the participants had been identified as being at risk of poor mental health by teachers or other school staff, or by using threshold scores on measures of mental well-being, suggesting that they were largely preselected to receive the interventions rather than being offered the choice to opt in. This may have impacted intervention efficacy and could explain why there was limited evidence of effectiveness in many of the studies.

The qualitative evidence also highlighted that children and young people preferred intervention providers that were not part of the school establishment and where there was confidentiality and a degree of separateness from school. The quantitative evidence for secondary school children showed that interventions delivered by external specialists tended to be effective, while those delivered by school staff showed limited effectiveness. The qualitative themes suggest that external providers that are not connected to the school may be an important factor in intervention effectiveness and may explain why interventions delivered by external specialists had a positive impact on some key outcomes.

Does the qualitative evidence help explain differences in the direction and size of effect across the included quantitative studies?

The qualitative evidence demonstrated that there were mixed preferences for group-based and individual or 1-to-1 interventions. Some children preferred group-based activities and felt that they benefitted from hearing peers sharing information about themselves and their issues. Others wanted more individualised approaches and some felt that the interventions did not include enough one-to-one interaction with psychologists or providers. These individual preferences relating to intervention delivery format may explain why both group- and individually-based interventions showed mixed effectiveness.

Which aspects of the quantitative evidence are/are not explored in the qualitative studies?

A large majority of the quantitative interventions followed a CBT-based approach and included activities such as psychoeducation, exposure, cognitive restructuring, overcoming avoidance, problem solving, and relapse prevention. The qualitative studies did not report any themes that specifically related to the acceptability of using these techniques or whether they were perceived to be effective.

Which aspects of the qualitative evidence are/are not tested in the quantitative evidence?

The qualitative evidence indicated that interventions should be age appropriate and that younger children expressed a preference for play-based therapies. The interventions included in the quantitative review for primary school children were predominantly CBT-based manualised interventions and did not contain play-based elements, so it was not possible to examine the effectiveness of play-based interventions for primary school children.

Themes from the qualitative evidence also identified a range of intervention impacts that were not outcomes assessed in the quantitative studies. For example, children described impacts such as reduced worry, better understanding of their stress, learning useful techniques, coping tools and strategies, improvements in their relationships at home or with their teachers, and improvements in concentration. These self-reported positive outcomes were not captured by the quantitative evidence. Similarly, the qualitative evidence suggested that school staff often rely on qualitative observations of children rather than quantitative assessments, which would be difficult to capture and test in quantitative trials.

5.2 The committee's discussion and interpretation of the evidence

5.2.1 The outcomes that matter most

The committee categorised outcomes of interest as social and emotional wellbeing (SEW) outcomes and academic outcomes and agreed that more weight should be given to the social and emotional outcomes. This is because, in theory, improvement in social and emotional wellbeing may lead to improvements in academic progression and attainment. Ultimately, an improvement in social and emotional outcomes may lead to overall improvement in quality of life. Within the category of social and emotional wellbeing, the committee agreed that these could be sub-categorised into social and emotional skills, behavioural outcomes and emotional distress.

Within the category of social and emotional outcomes, the committee agreed that a measure of emotional distress (e.g. depression or anxiety) was the most important, as this is often the reason a child or young person is identified as needing additional support. Furthermore, a reduction in symptoms of emotional distress is likely to have an immediate impact on the child's wellbeing and reduce the chance of being diagnosed with a mental health disorder. This reduction in emotional distress may lead to fewer experiences of mental health difficulties and may also help the child or young person to concentrate better in class and achieve their academic goals for that school year. The committee also felt that less weight should be given to behavioural outcomes in this context as these might be a result of experiencing emotional distress. The committee acknowledged that social and emotional skills are very important in order to build the resilience needed to help manage adverse circumstances that might otherwise lead to emotional distress. However, they felt these skills are relatively less important when measuring the effectiveness of targeted mental health interventions to reduce emotional distress.

As mental health difficulties can impact on outcomes such as poor school attendance and school exclusions, these measures may serve as a proxy for identifying mental health-related problems. School exclusions are often a result of behavioural problems linked with emotional distress. The consequences of school exclusions often include family distress which may have a negative impact on mental wellbeing.

5.2.2 The quality of the evidence

Quantitative evidence

The committee noted that the confidence in most of the outcomes as assessed by GRADE was low or very low, with some evidence being moderate. The main reason for downgrading was the risk of bias of the studies.

Primary education

The committee acknowledged that the evidence base for targeted mental health support in primary education is very limited. Six studies were identified, one was conducted in the UK with the remaining five conducted outside the UK, one in Australia, one in Spain, one in Canada, one in Norway and one in the USA. The majority of studies (n=5) only included children in the equivalent of UK key stage 2. The committee considered the generalisability of the evidence and acknowledged that because education environments vary in structure and the delivery of interventions varies in response to this, this may factor into the generalisability of the evidence from outside of the UK. Social and mental health constructs also vary

across countries due to cultural differences. However, the use of standardised tools to measure SEW outcomes across both studies may help to mediate this.

The committee acknowledged that the evidence base reports outcomes between 2.5 and 12 months and as a result, the committee were concerned that the follow up time of the studies was too short, considering the complex nature of issues, such as depression. However, the committee thought short-term improvement can be of benefit considering the developmental stage of the students. Also, the committee discussed that school leaders would be interested in short-term findings as they are inclined to support interventions that will enable students to learn and progress throughout the school year. However noting this limitation in the current evidence base, the committee made a research recommendation regarding the long-term impact of interventions (see appendix L).

The interventions were delivered over an 8-to-10-week timeframe. The committee noted that this fitted an older model of school term time whereas in the UK, schools are starting to move towards a 6-term academic year with each term lasting at least 6 weeks. The committee acknowledged that the 8 to 10-week timeframe for interventions in the evidence might not be generalisable to this system and noted that in their experience targeted support interventions generally last for around 6 weeks

In the studies, the sessions were delivered by school counsellors, psychologists, trained practitioners, group leaders and yoga instructors. The committee noted that some of the interventions evaluated were developed to be used as universal interventions but, in these studies were used as a targeted intervention with selected populations. They noted that using an intervention in a way that it was not designed for may impact on the effectiveness.

All the outcomes reported in this review were obtained through self-reported measures. The committee identified that this may have implications with regards methodological limitations. For example, it is likely that participants knew which intervention they were allocated to and therefore the use of self-reported outcomes may introduce bias in outcome reporting.

There were no studies identified that reported on social and emotional skills and attitudes, academic progress and attainment, school attendance or school exclusions. There were no unintended consequences reported in either of the studies. The committee noted that there was no evidence that the interventions led to a worsening of symptoms based on the outcomes that were reported.

Secondary education

The committee acknowledged that the evidence base showed short-term benefit in reducing emotional distress. However, they were concerned that the average follow-up time of the studies was 3 months, which the committee considered to be too short, given the complex nature of issues such as depression. The committee considered that studies with longer follow-up would be more useful in decision making. However, as with primary education, the committee agreed that the short-term improvement shown in the evidence was useful and would be of interest to school leaders.

Of the 22 studies evaluated, 6 were carried out in the UK, 4 in the USA, 3 in Australia, 3 in the Netherlands and 1 each in New Zealand, Spain, Portugal, Iceland, Norway and Chile. The committee acknowledged that because education environments vary in structure and delivery of interventions across different countries, this may factor into the lack of generalisability of the evidence from outside

of the UK. However, this may be mediated by the use of standardised tools to measure SEW outcomes as described in the evidence from primary education.

The interventions evaluated in the studies included behavioural therapy, cognitive behavioural therapy (CBT), psychoeducation or humanistic psychological therapy. These interventions were all delivered by specialist providers such as psychologists and counsellors, either school-based or external providers. The committee discussed the description of the professional roles provided in the included studies and noted the terminology used in the studies may be different to what is used in UK schools but can probably be considered as the same role. For example, school-psychologists might be interchangeable with educational psychologists. It was less clear whether the external specialists required a different set of qualifications to implement the interventions evaluated. However, the committee are aware of the forthcoming changes proposed in Transforming children and young people's mental health provision: a green paper where all schools will have a designated mental health school lead and Mental Health Support Teams (MHST) will be rolled out across 25% of schools, which may help when deciding who is best to provide these interventions. The committee noted that many schools currently commission school-counselling services either through direct employment of a school counsellor or through links with the voluntary sector and children and young people's mental health services (CYPMHS). The committee were also aware of existing advice for school leaders on commissioning school-based counselling (Counselling in schools: a blueprint for the future, Department for Education, 2016).

The interventions evaluated in the studies were generally delivered over a 7 to 12 week setting. The committee noted that this fitted an older model of school term time whereas more UK schools are starting to move towards a 6-term academic year with targeted support interventions generally lasting for 6 weeks. The committee acknowledged that the 7 to 12-week timeframe for interventions in the evidence might not be generalisable to this system.

The studies used usual support, waiting list or other undefined control interventions as the comparator but did not always explain in detail what the students received. The committee would have liked to have had this detail, to enable a better interpretation of the findings and how it might apply to or differ from the UK setting.

The studies mostly included children and young people in the equivalent of UK key stages 3 and 4. Some studies also included young people in post-16 education. Although the data did not always allow for disaggregation between key stages, the committee felt that schools would be interested in interventions that could apply to all students in secondary school.

The committee identified some methodological limitations as regards to study design. Most of the studies allocated individual children to the interventions or control within schools. This can increase the risk of contamination between groups, which may introduce bias in the results. The committee also identified limitations in study conduct. In some studies, participants were likely to know which intervention they were allocated to. This may introduce bias in outcome reporting, especially where the outcomes are self-reported. All the outcomes reported in this review were obtained through these measures

Some of the evidence came from cluster randomised controlled trials (cRCTs). In a cluster design, participant data cannot be assumed to be independent of one another and should be accounted for in the analysis of the cRCT. Failure to do so leads to a unit of analysis error and over-estimation in the results. Whilst this is a known

concern about analysing data in cRCTs, all the included studies adjusted their analyses for clustering through statistical methods and calculating the intraclass correlation coefficient (ICC).

There were no studies identified that reported on academic progress and attainment, school attendance or school exclusions. There were no unintended consequences reported in the studies.

The committee noted that there was a lack of evidence to compare the relative effectiveness of group vs. individual interventions. Therefore, they agreed that this should be included as a research recommendation (see appendix L).

Qualitative evidence

All of the themes identified in the qualitative evidence synthesis were of moderate to high confidence when assessed using GRADE CERQual. This mean the committee were able to have high confidence in recommendations based on this evidence.

Two studies in primary education contributed to the qualitative acceptability findings and one study from primary education contributed to the barriers and facilitators findings. Overall, the confidence in evidence for themes reported in these studies was high.

Six studies in secondary education contributed to the qualitative findings. These studies included the views of school staff and the children and young people receiving mental health support and contributed to the themes on the need for intervention, introducing the interventions to young people, identification of children and young people who may benefit from interventions, the importance of having a 'safe space', acceptability of intervention content, acceptability of intervention delivery, acceptability of intervention provider and effectiveness of the intervention. Overall, the confidence in evidence for themes reported in these studies was high. Of these 6 studies, 4 also contributed to the findings on barriers and facilitators.

Although there was no qualitative evidence from parents for targeted mental health support, the committee felt that it was important that parents or carers are kept informed about the support that their child is receiving and reflected this in the recommendations The committee considered that one of the best ways to involve parents was through the whole-school approach.

Whilst the committee generally found that the qualitative evidence supported their experiences, they also felt that practice has moved on since the studies were carried out and publication of the evidence and that experiences of targeted support are starting to improve. This is likely due to progress in the implementation of a whole-school approach.

5.2.3 Benefits and harms

Quantitative evidence

Two studies provided data on group interventions provided in primary education by school specialists (e.g. school counsellors) and four studies provided data on group interventions in primary schools provided by external specialists. No studies reported that the intervention was better than the control in improving social and emotional skills or quality of life. The interventions were also no better at reducing behavioural difficulties or emotional distress.

The committee also agreed that the findings showed an improvement or no difference in outcomes and no study showed a worsening of the outcomes. The committee concluded that this was an important consideration because they could be reassured that there were no adverse outcomes from the interventions.

In secondary schools, 3 RCTs provided data on group interventions provided by school specialists (e.g. school counsellors). Evidence from 1 RCT showed that these interventions significantly reduced the rate of initial episode of depression diagnosis. However, the studies showed that the interventions were no better than usual support at reducing emotional distress symptomatology or conduct disorders. There were 10 RCTs that provided data on group interventions in secondary schools provided by external specialists (e.g. psychologists) which showed that these interventions significantly reduced emotional distress among children and young people in key stages 3, 4 and post-16. Some of the evidence showed a benefit in response rate for recovering from depressive symptomatology and an improvement in social adjustment. Evidence was mixed for reduced rates of depression diagnosis. The interventions were also no better than usual support in reducing behavioural outcomes.

There were 5 RCTs set in secondary schools that provided data on individual interventions provided by external specialists. These interventions significantly reduced emotional distress, behavioural difficulties and improved prosocial behaviour. However, they were no better than usual support at improving self-esteem.

2 RCTs that provided data on computer-based interventions for secondary schools. It showed that these interventions reduced symptoms of depression but they were no better than usual support in improving quality of life.

Qualitative evidence

The qualitative evidence supported the need for targeted mental health interventions delivered in schools as it reported that children may find it difficult to talk about their problems with friends or family and that this impacts negatively on their relationships and school life. The evidence suggested that the intervention content should be age appropriate, accounting for the preferences of children. For example, young children expressed a preference for therapeutic play.

One of the barriers to successful implementation of targeted mental health support is the difficulty that school staff have in identifying children with mental health concerns, especially if they are withdrawn and not expressing externalising behaviour. It can be difficult when trying to identify young people who have internalising problems especially as this is usually done based on adult perceptions This leads to inappropriate referral and increasing negative experiences due to the association of being identified and referred with bad behaviour. The evidence supported committee experience where the majority of referrals in secondary schools are based on problem behaviours. In contrast, where the support is promoted as a voluntary service, children and young people tend to become more involved and the likelihood of negative perceptions and stigma are reduced. This is because the support is open to all so the association with bad behaviour, for example, is removed. The committee commented that this evidence supports their experience where there have been successful examples of drop-in or lunchtime sessions which have also helped to identify vulnerable children and young people who might not have been identified through other means.

Young people are often more willing to take part in an intervention if it is explained to them so that they can make an informed decision and the committee reflected this in their recommendations. These factors support the idea of having a self-referral option, especially for older students. This supported the committee view that children and young people need to be willing to participate in the interventions and give their consent.

The evidence suggested that the intervention content should be age appropriate, accounting for the preferences of children. For example, older children and young people prefer talking therapies. The evidence was slightly contradictory in that some young people do feel the benefit of working in small groups with their peers but others had a preference for more one-to-one opportunities.

If the setting for the intervention is not suitable, children and young people are unlikely to continue with the support. This can be alleviated by giving the child or young person the option to disclose to others that they are attending a session. It is important that the intervention is carried out in a safe environment with a level of confidentiality so that a young person can feel comfortable enough to disclose information. Whilst the committee agreed that this is important they acknowledged that absolute confidentiality is not always possible especially if safeguarding concerns are raised.

5.2.4 Cost effectiveness and resource use

The committee discussed evidence from 2 studies, the first was a cost effectiveness analysis of interventions targeting youth with subthreshold depression. A group based psychological intervention for children with subthreshold depression (Lee 2017). The second was a cost effectiveness analysis of an intervention broadly based on the Promoting Alternative Thinking Strategies (PATHs) programme delivered to children with identified problems outside of the classroom in small groups or individually (McCabe 2007).

Lee (2017) constructed a Markov model to assess the cost-effectiveness of delivering universal and indicated interventions in the population relative to a ‘no intervention’ comparator over a 10-year time horizon. Health benefits were measured as Disability-adjusted Life Years (DALYs) averted attributable to reductions in depression incidence. Net costs of delivering interventions were calculated using relevant Australian data. Uncertainty and sensitivity analyses were conducted to test model assumptions. The base-case analysis showed a cost of £7 350 (Australian $19 500) per DALY averted and the results were robust to changes in model assumptions.

McCabe (2007) conducted an exploratory analysis using the Health Utilities Index Mark 2 (HUI2) framework to estimate the cost effectiveness of a focussed intervention based on PATHs. The results suggested it is not cost effective in the short term for any realistic cost effectiveness threshold. This is attributed to the small number of children who benefit from the focussed intervention. The expected ICER for the focussed intervention ranged from £177,560 per QALY assuming a two-level improvement on both the emotion and cognition dimensions to £988,404 per QALY if the intervention produces only a 1 level improvement on the emotion dimension.

The committee noted several limitations of the evidence including paucity of data on the effectiveness of the programmes and in the case of McCabe (2007) lacked

important details regarding the approach such as the time horizon and perspective adopted. They agreed both studies were partly applicable but were mindful that the studies were limited in the extent to which they captured any sustained health, educational or socio-economic benefits of the intervention.

As only two published studies had been identified on targeted mental health approaches and the findings were mixed the committee agreed it would be informative to develop a bespoke economic model to support decision makers understanding of the potential economic and wellbeing implications of introducing a new intervention. The model adopted cost consequences analysis as well as cost benefit analysis out of concern that the QALY is limited with regard to capturing the wide variety of outcomes relevant to childhood current and future wellbeing. Expert views were taken into account in the model. The committee noted that data paucity considerably limited the assessment of impact and cost effectiveness.

The committee considered the findings of the model which showed the interventions could be cost effective and what the key drivers of cost effectiveness were. However, they were mindful that the outcomes used in the model are associated with great uncertainty. They observed that children and young people's outcomes could be positive or negative or a combination of the two. and that there was no evidence available to know the combined effect of an intervention across different outcomes. For positive outcomes they considered the model may over-estimate the overall benefit whereas for negative outcomes it may underestimate the total benefit. The committee believed it crucially important schools and other education settings take account of any potential adverse consequences in deciding whether to fund an intervention.

The committee were particularly concerned by the lack of studies on the long-term impact of intervening. They agreed that improvement in social and emotional wellbeing could lead to improvements in quality of life as well as improvements in academic progression and attainment. They also agreed there were likely to be benefits to the wider system including helping young people to become happy and successful adults, prepared for the opportunities, responsibilities and experiences of adult life. That the model was unable to capture these potential benefits due to an absence of data was considered a major limitation. From this view, the model could underestimate the benefit of all interventions. Other limitations noted include an oversimplification of the effect of an intervention by dichotomising continuous variables above and below a determined threshold and the lack of evidence on utility values. This could result in either underestimates or overestimates of the cost effectiveness outcomes.

They were also aware that the lack of data meant it had not been possible to adopt a holistic approach which captures the importance of a supportive and secure environment (e.g. supportive peers, role models, personal feelings of safety - to feel safe from being bullied, safe to report things without fear of stigma) and an ethos that avoids stigma and discrimination in relation to mental health and social and emotional difficulties.

The committee agreed that the potential cost effectiveness of an intervention is impacted by a myriad of factors including those relating to the intervention such as the local cost of delivery and who delivers the intervention as well as external factors such as family and peer relationships. It was also acknowledged by some that this is a relatively new field of science by which very minor changes in context or circumstance can dramatically impact the findings. Taken together with the substantial variability in the interventions available, the heterogeneity across schools

and the limitations of the evidence the committee considered it unwise to draw broad conclusions from the model. Rather the committee agreed decision makers should make use of the economic model to understand the potential economic and wellbeing implications when considering the introduction of a new intervention in school and help identify any gaps in current research. The committee believe this could also help guide future research with the aim of improving the mental health and wellbeing of children and young people.

The committee highlighted that schools and higher educational settings have a statutory duty to address mental health issues – by teaching about and promoting mental well-being and ways to prevent negative impacts on mental well-being.

Finally, whilst the committee considered that implementing interventions might incur additional costs where these are not already in place, they believe that an integrated approach, using universal, whole school, targeted and transition interventions could prevent outcomes which can lead to costly consequences for the wider system including the NHS, social services and the criminal justice system.

5.2.6 Recommendations supported by this evidence review

This evidence review supports recommendations 1.4.1 to 1.4.7 and the research recommendation on Targeted Support. Other evidence supporting these recommendations can be found in the evidence review G.

5.2.7 References – included studies

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1 Appendices

2 Appendix A: Review protocols

Field	Content
PROSPERO registration number	N/A
Review title (50 Words)	Targeted mental health support in primary, secondary and education.
Review question (250 words)	Quantitative (effectiveness) 5.1a What is the effectiveness and cost-effectiveness of targeted mental health support approaches for children in primary education? 5.1b What is the effectiveness and cost-effectiveness of targeted mental health support approaches for children and young people in secondary and further education? Qualitative (views and experiences) 5.2 Are targeted mental health support approaches acceptable to Children and young people receiving them Teachers/practitioners delivering the interventions Parents/Carers of children and young people receiving the interventions Qualitative and Quantitative (Survey data and views and experiences) 5.3 What are the barriers and facilitators to using targeted mental health support?
Objective	Quantitative (effectiveness) 5.1a To identify which targeted interventions that aim to provide mental health support are effective and cost-effective for children primary education (UK key stages 1 and 2 or equivalent). 5.1b To identify which targeted mental health interventions are effective and cost-effective for children and young people in UK key stages 3,4 and post-16 education or equivalent Qualitative (views and experiences) 5.2 To understand the acceptability of targeted mental health support interventions in UK key stages 1 to 4 and post-16 education or equivalent through views and experiences of: Children and young people Teachers/practitioners delivering the interventions

Field	Content
	Parents/Carers of children and young people receiving the interventions Quantitative and Qualitative (Survey data and views and experiences) 5.3 To identify the barriers and facilitators of targeted mental health support interventions for children and young people in UK key stages 1 to 4 and post-16 education or equivalent. The purpose of this review is to identify which interventions work rather than which interventions work best. The implication of this is that any effective intervention arising from this evidence review and associated reviews (cost-effectiveness, acceptability and barriers/facilitators) will be recommended in a list of options for schools to use.
Searches (300 words)	The following databases will be searched: Medline and Medline in Process (OVID) Embase (OVID) CENTRAL (Wiley)) Cochrane Database of Systematic Reviews (Wiley) PsycINFO (Ovid) Social Policy and Practice (OVID) ERIC (Proquest) Web of Science Database functionality will be used, where available, to exclude: non-English language papers animal studies editorials, letters and commentaries conference abstracts and posters registry entries for ongoing or unpublished clinical trials dissertations duplicates Searches will be restricted by: January 2007 to date Study design – No filter needed Secondary Databases A simple keyword-based search approach will be taken in the following databases: DARE (legacy database - records up to March 2014 only) (CRD) National Guidelines Clearinghouse (US Dept. of Health and Human Services) Bibliomap (eppicentre)

Field	Content
	Dopher (eppicentre) Trophi (epicentre) Citation searching Depending on initial database results, forward citation searching on key papers may be conducted, if judged necessary, using Web of Science (WOS). Only those references which NICE can access through its WOS subscription would be added to the search results. Duplicates would be removed in WOS before downloading. The reference list of current (within 2 years) systematic reviews will be checked for relevant studies Websites Web searches will also be conducted. Google and Google Scholar will be searched for some key terms and the first 50 results examined to identify any UK reports or publications relevant to the review that have not been identified from another source. Searches will also be conducted on key websites for relevant UK reports or publications: Websites PSHE association Public Health England Department of Health Department for Education OFSTED National Foundation for Educational Research Research in Practice Education Endowment Foundation Office for Children's Commissioner Council for disabled children Results will be saved to EPPI Reviewer. A record will be kept of number of records found from each database and of the strategy used in each database. A record will be kept of total number of duplicates found and of total results provided to the Public Health team. The searches will be re-run 6 weeks before final submission of the review and further studies retrieved for inclusion. The full search strategies for MEDLINE database will be published in the final review.
Condition or domain being studied (200 words)	Social, emotional and mental wellbeing

Field	Content
Population (200 words)	Quantitative and Qualitative Population Children (including those with SEND) in UK key stages 1 and 2 or equivalent in primary education Children and young people (including those with SEND) in UK key stages 3 to 4 or equivalent in secondary education Young people in post-16 education (further education) up to the age of 18 or 19 for young people without SEND up to the age of 25 for young people with SEND who have been identified as being at risk of depression, anxiety or stress.) Qualitative (views and experiences) and quantitative (survey data) only Other populations: Teachers/practitioners delivering the interventions Parents/Carers of children and young people receiving the interventions Settings: The following settings will be included: Schools providing primary education including maintained schools, academies, free schools, independent schools, non-maintained schools, and alternative provision including pupil referral units (see Department for Education's Types of school). Special schools. Secure children's homes. Exclusion: Population: Children in early years foundation stage (EYFS) (Where the studies define the population by age/UK key stage, we will only exclude if more than 50% of the population is in EYFS.) Setting: Private homes
Intervention (200 words)	Usual practice plus individual or small group interventions (including face to face or digital interventions) aimed at reducing symptoms or preventing symptoms in those at risk of depression, anxiety or stress
Comparator (200 words)	Quantitative (effectiveness) Usual practice (can include waiting list or no intervention) Quantitative (survey)

Field	Content
	Not applicable Qualitative (views and experiences) Not applicable
Types of study to be included (150 words)	Quantitative (Effectiveness) Randomised controlled trials non-randomised comparative studies Quantitative (Survey) Mixed-method studies with a quantitative component Survey or other cross-sectional studies that report on barriers and facilitators to these interventions. Qualitative (Views and experiences) Qualitative studies of interventions for example focus groups and interview-based studies or mixed-methods studies with a qualitative component
Other exclusion criteria (no separate section for this to be entered on PROSPERO – it gets included in the section above so within that word count)	Quantitative (effectiveness) Papers published in languages other than English will be excluded. Studies from countries outside of OECD list (n=36) will be excluded. Studies published before the year 2007 will be excluded. Studies not published in full text (e.g. protocols or summaries) will be excluded. Studies that do not have a control group. Quantitative (survey) Studies from outside the UK will be excluded. Papers published in languages other than English will be excluded. Studies not published in full text (e.g. protocols or summaries) will be excluded. Studies published before the year 2007 will be excluded Qualitative (views and experiences) Studies from outside the UK will be excluded. Papers published in languages other than English will be excluded. Studies not published in full text (e.g. protocols or summaries) will be excluded. Studies published before the year 2007 will be excluded

Field	Content
Context (250 words)	Population and setting: Selected population of children in primary school education (UK key stages 1 and 2 or equivalent) and children and young people in secondary and further education (UK key stages 3, 4 and post-16 education). Within this, there may be differences in context depending on type of school, geographical location or socioeconomic status as well as subgroups of children such as those with special educational needs and disabilities. Intervention: Targeted mental health support delivered within school and during usual school hours. Social and emotional skills are key during children and young people's development that may help to achieve positive outcomes in health, wellbeing and future success. These skills encompass five core competencies, self-awareness, self-regulation, social awareness, responsible decision-making and relationship skills. These skills can be taught during primary school in a cumulative approach whereby the skills acquired increase in complexity as appropriate to age and act as a foundation for further development in secondary school. Some children may be experiencing subclinical signs and symptoms of mental health conditions and may be at risk of poor social, emotional and mental wellbeing outcomes. Targeted mental health support aims to provide extra support for these children.
Primary outcomes (critical outcomes) (200 words) A separate mandatory box for Timing and Measures of these outcomes needs to be completed within PROSPERO. Please list these under timing and measures heading (200 words)	Quantitative (effectiveness) Social and emotional wellbeing outcomes Any validated measure of mental, social, emotional or psychological wellbeing categorised as: Social and emotional skills and attitudes (such as knowledge) Emotional distress (such as depression, anxiety and stress) Behavioural outcomes that are observed (such as positive social behaviour; conduct problems) Academic outcomes Academic progress and attainment Quantitative (survey) Proportional data e.g. proportion of schools reporting on a specific barrier Qualitative (views and experiences)

Field	Content
	Views and experiences in terms of acceptability and barriers and facilitators of: teachers and practitioners delivering interventions children and young people receiving interventions. parents/carers of children and young people receiving the interventions
Timings and measures	Quantitative (effectiveness) At least 3 months Studies that report outcomes at less than 3 months will be downgraded for indirectness. Quantitative (survey) Not applicable Qualitative (views and experiences) Not applicable
Secondary outcomes (important outcomes) (200 words) As above a separate entry for the timing and measures of these additional outcomes (200 words)	Quantitative (effectiveness) School attendance School exclusions Unintended consequences (e.g. stigma, reinforcement of negative behaviours) Quality of life Quantitative (survey) None Qualitative (views and experiences) None
Data extraction (selection and coding) (300 words)	All references identified by the searches and from other sources will be uploaded into EPPI-R5 and de-duplicated. This review will use the EPPI-R5 priority screening functionality. At least 50% of the identified abstracts (or 1,000 records, if that is a greater number) will be screened. After this point, screening will only be terminated if a pre-specified threshold is met for a number of abstracts being screened without a single new include being identified. This threshold is set according to the expected proportion of includes in the review (with reviews with a lower proportion of includes needing a higher number of papers without an identified study to justify termination) and is always a minimum of 500. A random 10% sample of the studies remaining in the database when the threshold is met will be additionally screened, to check if a substantial number of relevant studies are not being correctly classified by the algorithm,

Field	Content
	with the full database being screened if concerns are identified. The full text of potentially eligible studies will be retrieved and will be assessed in line with the eligibility criteria outlined above (see sections 6-10). A standardised EPPI-R5 template will be used when extracting data from studies (this is consistent with the Developing NICE guidelines: the manual section 6.4). Details of the intervention will be extracted using the TIDieR checklist in EPPI-R5. Outcome data will be extracted into EPPI-R5 as reported in the full text. Study investigators may be contacted for missing data where time and resources allow.
Risk of bias (quality) assessment (200 words)	Quantitative (effectiveness) Risk of bias will be assessed on an outcome basis using the following NICE preferred study design appropriate checklists for intervention studies as described in Developing NICE guidelines: the manual (Appendix H) Individual RCTs: Cochrane risk of bias tool 2.0 Cluster RCTs: Cochrane risk of bias tool 2.0 NRCTs: Cochrane ROBINS-I Quantitative (Survey) Risk of bias will be assessed on an outcome basis using the NICE preferred study design appropriate checklist for surveys as described in Developing NICE guidelines: the manual (Appendix H) CEBM checklist Qualitative (views and experiences) Risk of bias will be assessed on an outcome basis using the NICE preferred study design appropriate checklists for qualitative studies as described in Developing NICE guidelines: the manual (Appendix H) CASP qualitative checklist Mixed methods studies Risk of bias will be assessed using the MMAT (mixed methods appraisal tool).
Strategy for data synthesis (300 words)	Quantitative (effectiveness) The outcomes will be categorised at data extraction into four categories: social and emotional skills

Field	Content
	emotional distress behavioural outcomes and academic outcomes. Where meta-analysis is appropriate, the data will be pooled within the categories above using a random effects model to allow for the anticipated heterogeneity. Dichotomous data will be pooled where appropriate and the effect size will be reported using risk ratios in a standard pair-wise meta-analysis. Continuous outcomes reported on the same scale will be pooled in a standard pair-wise meta-analysis using mean difference where possible. Continuous outcomes not reported on the same scale will be pooled using a standardised mean difference in a standard pair-wise meta-analysis. Methods for pooling cluster randomised controlled trials will be considered where appropriate. Unit of analysis issues will be dealt with according to the methods outlined in the Cochrane Handbook. Methods for pooling cluster randomised controlled trials will be considered where appropriate. Unit of analysis issues will be dealt with according to the methods outlined in the Cochrane Handbook. Unexplained heterogeneity will be examined where appropriate with a sensitivity analysis. Where appropriate, the quality or certainty across all available evidence will be evaluated for each outcome using the 'Grading of Recommendations Assessment, Development and Evaluation (GRADE) toolbox' developed by the international GRADE working group http://www.gradeworkinggroup.org/ If the studies are found to be too heterogeneous to be pooled statistically, a narrative approach will be conducted. A meta-regression looking at components of interventions will be undertaken if there are a sufficient number of studies identified for each variable (at least n=10), Quantitative (survey) Where appropriate, the quality or certainty across all available evidence will be evaluated for each outcome using the GRADE approach. Qualitative (views and experiences)

Field	Content
	The key themes and supporting statements from the studies will be categorised into themes relevant to the review across all studies using a thematic analysis. Where appropriate, the quality or certainty across all available evidence will be evaluated for each outcome using the GRADE CERQual approach. Integration of data As we have included different types of data from different sources as follows: Quantitative effectiveness data from intervention studies (RQ 5.1a and 5.1b) cross-sectional data from surveys on barriers and facilitators (RQ 5.3) Qualitative acceptability data related to interventions (RQ 5.2) barriers and facilitators (RQ 5.3) An inductive convergent segregated approach will be undertaken to combine findings from each review. Where possible qualitative and quantitative data will be integrated using tables. Where quantitative and qualitative data comes from the same study, the technical team will present the qualitative analytical themes next to quantitative effectiveness data for the committee to discuss. For different studies, the committee will be asked to interpret both sets of findings using a matrix approach for the committee discussion section.
Analysis of sub-groups (250 words)	Quantitative (effectiveness) Where evidence allows subgroup analyses and/or meta-regression may be conducted. as follows: UK key stage socioeconomic status ethnicity geographical area children with special educational needs and disabilities (SEND) other groups for consideration listed in EIA type of school setting e.g. mainstream, alternative provision, secure settings reason for selection Quantitative (survey) Not applicable

Field	Content
	Qualitative (views and experiences) Not applicable
Type of method of review	Intervention
Language	English
Country	England
Named contact	5a. Named contact Public Health Guideline Development Team 5b Named contact e-mail PHAC@nice.org.uk 5c Named contact address National Institute for Health and Care Excellence Level 1A City Tower Piccadilly Plaza Manchester M1 4BD 5d Named contact phone number +44 (0)300 323 0148 5e Organisational affiliation of the review National Institute for Health and Care Excellence (NICE) and NICE Public Health Guideline Development Team.
Review team members	From the Centre for Guidelines: Hugh McGuire, Technical Adviser Sarah Boyce, Technical Analyst Lesley Owen, Health economist Rachel Adams, Information Specialist Chris Carmona, Technical Adviser Giacomo De Guisa, Technical Analyst Adam O'Keefe, Project Manager
Funding sources/sponsor	This systematic review is being completed by the Centre for Guidelines which receives funding from NICE.
Conflicts of interest	All guideline committee members and anyone who has direct input into NICE guidelines (including the evidence review team and expert witnesses) must declare any potential conflicts of interest in line with NICE's code of practice for declaring and dealing with conflicts of interest. Any relevant interests, or changes to interests, will also be declared publicly at the start of each guideline committee meeting. Before each meeting, any potential conflicts of

Field	Content	
	interest will be considered by the guideline committee Chair and a senior member of the development team. Any decisions to exclude a person from all or part of a meeting will be documented. Any changes to a member's declaration of interests will be recorded in the minutes of the meeting. Declarations of interests will be published with the final guideline.	
Collaborators NB: This section within PROSPERO does not have free text option. Names of committee members to be inserted individually by the project manager and any additional collaborators	Development of this systematic review will be overseen by an advisory committee who will use the review to inform the development of evidence-based recommendations in line with section 3 of Developing NICE guidelines: the manual. Members of the guideline committee are available on the NICE website.	
Other registration details (50 words)	None	
Reference/URL for published protocol	None	
Dissemination plans	NICE may use a range of different methods to raise awareness of the guideline. These include standard approaches such as: notifying registered stakeholders of publication publicising the guideline through NICE's newsletter and alerts issuing a press release or briefing as appropriate, posting news articles on the NICE website, using social media channels, and publicising the guideline within NICE.	
Keywords	Social, emotional and mental wellbeing, targeted mental health support, children and young people	
Details of existing review of same topic by same authors (50 words)	None	
Current review status	☒	Ongoing
	☐	Completed but not published
	☐	Completed and published
	☐	Completed, published and being updated
	☐	Discontinued
Additional information	None	
Details of final publication	https://www.nice.org.uk/	

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Appendix B: Literature search strategies

Please see below for Medline strategy. For full search strategies refer to the searches document on the guideline webpage. Database name: Medline

Database: Ovid MEDLINE(R) <1946 to September 22, 2019>

Search Strategy:

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1 ((Social or emotional or social-emotional or socio or socio-emotional or pro-social or prosocial) and (wellbeing or well-being or wellness or learn* or competenc* or skills)).ti,ab. (70714)

2 ((SEL or SEAL or SEBS or EWB or EMHWB) and (school* or class* or curricul* or intervention* or program*)).ti,ab. (1517)

3 ("social learner*" or "social learning").ti,ab. (2298)

4 (resilien* or coping).ti,ab. (62350)

5 Adaptation, Psychological/ or Resilience, Psychological/ (94777)

6 (self-control or "emotional regulation" or self-aware* or self-efficacy or self-regulat* or self-confiden* or self-management or self-esteem or self-concept or "emotional intelligence" or mindful*).ti,ab. (76417)

7 Emotional Intelligence/ (1909)

8 exp Self Concept/ (105384)

9 Emotional Adjustment/ or Social Adjustment/ (23549)

10 ((social or interpersonal or communication or relationship*) adj2 (skill* or competence* or attribute*)).ti,ab. (18474)

11 (friendship* or friends).ti,ab. (24474)

12 ((social or peer or peers) adj2 (group* or network*)).ti,ab. (23799)

13 empathy.ti,ab. (8945)

14 ("social awareness" or socialisation or socialization or "social interaction*" or "social inclusion").ti,ab. (21692)

15 Social Skills/ or Social Behavior/ or Social Values/ (70243)

16 ("personal development" or "youth development").ti,ab. (2043)

17 ("decision making" or "problem solv*" or problem-solv*).ti,ab. (112957)

18 Decision Making/ (90526)

19 Problem Solving/ (24255)

20 (bully* or bullies or anti-bully* or "anti bully*" or antibully* or cyber-bully* or "cyber bully*" or cyberbully* or victimis* or victimiz* or stigma or anti-stigma or "anti stigma" or antistigma or prejudice*).ti,ab. (30754)

21 (delinquen* or anti-social or "anti social" or antisocial or "conduct disorder*" or "risky behavio*" or "problem behavio*" or (behavio* adj problem*)).ti,ab. (34445)

22 (((substance or drug* or alcohol) adj3 ("use" or abuse or misuse)) and (prevent* or reduc*)).ti,ab. (46764)

23 ((exclu* or expulsion or expel* or absent* or truant* or truancy or conflict or violent or violence or disengage*) and school*).ti,ab. (12142)

24 bullying/ or cyberbullying/ or problem behavior/ (5249)

25 ((school* or academic) adj2 (achieve* or attain* or engage* or progress* or motivat* or connectedness or belonging)).ti,ab. (7370)

26 Mental Health/ (34943)

27 (mental adj2 (health or wellbeing or well-being or "well being" or wellness)).ti,ab. (109607)

28 ((psychological or "psycho social" or psycho-social or psychosocial) adj2 (wellbeing or "well being" or well-being)).ti,ab. (9525)

29 (anxiety or anxious or depression or depressed or depressive or stress).ti,ab. (978914)

30 or/1-29 (1654021)

31 ("Aban Aya" or "Academic and Behavioural Competency Program*" or "Active Citizens in Schools" or ACIS or "Adolescent Decision Making Program*" or "ALERT plus" or "Alcohol Education Package" or "Alcohol Education Program*" or "Alcohol Screening and Brief Intervention" or "All Stars" or "Al's Pals" or "Alternatives to Trouble" or "Amazing Alternatives" or "Anti-bullying Program*" or "Attention Academy" or "Aussie Optimism" or BARR or "BBBS Ireland" or "Be the Best You can Be" or "Beat Bullying" or Beatbullying or "Befriending Intervention" or BeyondBlue or "Big Brothers Big Sisters" or "Bounce Back" or "Boys and Girls Club" or "Breathing Awareness Meditation" or "Building Assets Reducing Risks" or "Building Resiliency and Vocational Excellence" or "Bully Proofing" or Bullyproofing or "Bullying Eliminated from Schools Together").ti,ab. (30633)

32 (CAPSLE or CASEL or "Caring School Community" or CharacterPlus or "Child Development Initiative" or "Circle Time" or "Classroom Centred Intervention" or "Classroom Centred Program*" or "Class-wide Function-based Intervention" or "Climate Schools" or Climb-UP or CMCD or "Coalition for Youth Quality of Life" or "Comer School Development Program*" or "Communities that Care" or "Community of Caring" or "Competence Support Program*" or "Competent Kids Caring Communities" or "Conscious Coping" or "Consistency Management and Cooperative Discipline" or "Coping Koala" or "Coping Power" or "Counsellor Peers" or "Creating a Peaceful School Learning Environment" or Cues-ed or CSRP or "Cultivating Awareness and Resilience in Education").ti,ab. (466)

33 ("Early Risers" or "EiE-L" or "Empathic Discipline" or "Empower Youth" or "Engage in Education" or "Expect Respect" or "Expeditionary Learning" or "Facing History and Ourselves" or "Families and Schools Together" or "Family Check-up" or "Family School Partnership" or "Family SEAL" or "Fast Track" or "FearNot*" or "First Steps to Success" or "Formalised Peer Mentoring" or "Foundations of Learning" or "Fourth R-Skills" or "Fourth Step" or "Friendly Schools" or "FRIENDS program*" or FSP or "Gang Resistance Education and Training" or Gatehouse or GBG or "Get Wise" or "Girls First" or "Going for Goals" or

"Going Places" or "Good Behaviour Game" or "Grades Attendance and Behaviour" or "Guided Self-change" or HASSP or "Head Start" or "healthy active peaceful playgrounds" or "Healthy for Life" or "Healthy Futures" or "Healthy Lifestyles" or "Healthy Minds in Teenagers" or "Healthy Relationships Training Program*" or "Healthy Schools and Drugs" or "Here's Looking at You" or HighScope or "Home and School Support Program*" or "How to Thrive" or "I Can Problem Solve" or ICPS or "ICAN Kids" or "Improving Social Awareness" or "Incredible Years" or "Inner Explorer" or InnerKids or "Inspiring Futures" or "Interpersonal Cognitive Problem Solving Skills" or "In:tuition" or "ISA-SPS" or Jigsaw).ti,ab. (12904)

34 ("Keepin* It REAL" or "Kia Kaha" or KiVa or "klar bleiben" or "Knightly Virtues" or "Know Your Body" or "Learning for Life" or "Learning to BREATHE" or "Lessons for Living" or "Lessons in Character" or "Life Skills Program*" or "Life Skills Training" or Lift or "Linking the Interests of Families and Teachers" or "Lions Quest" or "Living with a Purpose" or "Love in a Big World" or LST or "Master Mind" or "Match Model" or "Michigan Model for Health" or "Middle School Success" or "Midwest* Prevention Project" or "Millennium Volunteers" or "Million Dollar Machine" or "Mind Up" or MindUP or MindfulKids or "Mindfulness in Schools" or MISP or "Mood Gym" or "My Character" or "My Teaching Partner" or "New Beginnings" or Narconon or OBPP or Olweus or "Open Circle" or "Op Volle Kracht" or "Over to You").ti,ab. (10509)

35 (Paths or PATHstoPAX or "Paws B" or "Peace Builders" or "Peace Works" or "Peacemaking Skills for Little Kids" or "Peer Mentoring" or "Peer Acceleration Social Network" or "Penn Resiliency Program*" or "Personality Risk Factors" or PESSOA or Playworks or Ploughshares or "Positive Action" or "Positive Alternative Learning Support" or "Positive Adolescent Life Skills" or "Positive Youth Development Program*" or "Preparation through Responsive Education" or "Primary SEAL" or "Prime for Life" or "Proactive Classroom" or Pro-ACT or "Problem Solving Program*" or Progetto or "Project A.T.T.E.N.D." or "project ALERT" or "project CHARLIE" or "Project Northland" or "Project Pride" or "project SMART" or "Project Based Learning" or "Project STAR" or "Promoting Alternative Thinking Strategies" or "Puppets for Peace" or "Pyramid Project" or "Raising Healthy Children" or RCCP or ReachOut or "Reaching Adolescents for Prevention" or "Reading Apprenticeship" or "Reading, Writing, Repect and Resolution" or "Recognizing, Understanding, Labeling, Expressing and Regulating Emotions" or "Reconnecting Youth" or REDI or "Resilience Program*" or "Resilient Families" or "Resolving Conflict Creatively" or "Respect Program*" or "Responsive Classroom" or "Risk Training Skills" or "Rochester Resilience Program*" or "Resourceful Adolescent Program*" or "Roots of Empathy" or Rtime or Ruler).ti,ab. (18072)

36 ("Safe and Civil Schools" or "Safe Dates" or "SafERteens" or "Say Yes First" or SBIRT or "School-based Resilience Intervention" or "School Health and Alcohol Harm Reduction Project" or "School-wide Positive Behavioural Interventions and Support" or "Second Step" or SS-SSTP or "Secondary SEAL" or "Seattle Social Development Project" or "SEED Scotland" or "Self-determination Program*" or "Self-management and Resistance Training" or "Service Learning" or "SFP10-14" or SHAHRP or "Siblings are Special" or SIBS or "Skills for Adolescence" or "Skills for Change" or "Skills for Success" or SingUp or "Social Competence Training" or "Social Decision Making" or "Social Norms" or "Social Problem Solving Skills" or "Social Skills Group Intervention*" or "Social Skills Training" or "South Carolina Program*" or "Smart Moves" or "S.S.GRIN" or SST or "Steg fur Steg" or STAMPP or "STARS for Families" or "Start Taking Alcohol Risks Seriously" or "Staying Calm" or "Step II" or "Steps towards Alcohol Misuse Prevention" or "Talk about Alcohol" or "Step-by-Step" or "Steps to Respect" or "Stop Breathe Be" or "Strengthening Families Program*" or "Strengths Gym" or "Stress Inoculation Training" or "Stress Management Intervention" or "Student Success Skills" or "Student Success through Prevention" or "Student Threat Assessment" or "Success for Kids" or SWPBIS or SWPBS or "Teach Team" or "Teen Outreach Program*" or "Teen Talk" or "Theatre in Education" or "The GOOD life" or "The Incredible Years" or "Think Feel Do" or "Think Well, Do Well" or "Too Good for Violence" or "Tools for Getting Along" or "Tools of the Mind" or "Towards no drug abuse" or "Transition Mentoring" or "Tribes

Learning Communities" or "UK Resilience Program*" or "Unique Minds" or ViSC or "Wise Mind" or Woodrock or YogaKid* or "Yo Puedo" or "You Can Do It!" or "Youth Development Project" or "Youth Matters" or "Zippy's Friends" or "21st Century Community Learning" or "4Rs").ti,ab. (30473)

37 (PSHE or "personal social health" or PSE or "personal and social education" or SMSC or "spiritual moral social and cultural").ti,ab. (2145)

38 ("positive behavio* intervention*" or "positive behavio* support" or PBIS).ti,ab. (165)

39 ("school-wide positive behavio* support*" or SWPBS).ti,ab. (3)

40 "relationships and sex education".ti,ab. (4)

41 or/31-40 (104761)

42 30 and 41 (13501)

43 (mindful* or meditat* or yoga).ti,ab. (11384)

44 Mindfulness/ or Meditation/ or Yoga/ (6881)

45 "life skills".ti,ab. (849)

46 "motivational interview*".ti,ab. (3043)

47 Motivational Interviewing/ (1591)

48 ((brief or opportunist* or concise or short or direct) adj3 (counsel* or advice* or advise* or advisor* or therap* or support* or guide* or guidance* or intervention*)).ti,ab. (29852)

49 ((behaviour* or behavior* or cognitive) adj3 (technique* or therap* or chang* or modify or modifies or modifying or support* or intervention* or session* or program* or workshop*)).ti,ab. (110815)

50 counseling/ or directive counseling/ or child guidance/ or psychology, adolescent/ (50585)

51 Behavior Therapy/ or Cognitive Behavioral Therapy/ (50088)

52 (skills adj1 (train* or teach* or educat* or develop*)).ti,ab. (8859)

53 ((peer or pastoral or teacher*) adj2 (educat* or support* or group* or led)).ti,ab. (10670)

54 (prevent* and (intervention* or program*)).ti,ab. (194684)

55 "intervention program*".ti,ab. (12935)

56 "social and emotional learning program*".ti,ab. (17)

57 "play therap*".ti,ab. (365)

58 ("mental health" adj3 (intervention* or program*)).ti,ab. (4974)

59 ((Wellbeing or "well being" or well-being) adj3 (intervention* or therap*)).ti,ab. (906)

60 ((HIIT or fitness or "physical activity") adj2 (intervention or program*)).ti,ab. (4337)

61 ((questionnaire* or survey* or self-report* or "self report*" or assessment*) adj3 (school* or class or classroom* or pupil* or student* or teach*)).ti,ab. (23046)

62 or/43-61 (451022)

63 (classroom* or "whole class*" or whole-class*).ti,ab. (13301)

64 ((multi*-component or multicomponent or "multi* component" or universal or brief or "group based" or group-based or groupbased or "group work*" or group-work* or groupwork* or "small group*" or small-group* or targeted) and (intervention* or program* or project* or pilot* or initiative* or approach* or activit* or lesson* or curricul*)).ti,ab. (190743)

65 ("whole school*" or whole-school* or wholeschool* or "school wide" or school-wide or schoolwide or "school based" or school-based or schoolbased).ti,ab. (10802)

66 (school* adj3 (ethos or culture or life or environment or governance or policy or policies or leadership or SLT)).ti,ab. (5547)

67 (school* and (intervention* or program*)).ti,ab. (62493)

68 or/63-67 (264354)

69 62 and 68 (57035)

70 30 and 69 (24013)

71 (school* or pupil* or student* or teach* or curricul* or lesson* or learner* or learning or syllabus).ti,ab. (744877)

72 (((city or technical) and (academy or academies or college*)) or sixth-form* or "sixth form*" or "6th form*" or "lower six*" or "upper six*" or "post 16" or post-16 or "further education").ti,ab. (4591)

73 ("secure children* home*" or "young offender* institution*" or "secure training cent*" or "secure school*").ti,ab. (50)

74 ("year one" or "year 1" or "year two" or "year 2" or "year three" or "year 3" or "year four" or "year 4" or "year five" or "year 5" or "year six" or "year 6" or "year seven" or "year 7" or "year eight" or "year 8" or "year nine" or "year 9" or "year ten" or "year 10" or "year eleven" or "year 11" or "year twelve" or "year 12" or "year thirteen" or "year 13" or "key stage one" or "key stage 1" or "key stage two" or "key stage 2" or "key stage three" or "key stage 3" or "key stage four" or "key stage 4" or "key stage five" or "key stage 5" or KS1 or KS2 or KS3 of KS4 or KS5 or "grade one" or "grade 1" or "grade two" or "grade 2" or "grade three" or "grade 3" or "grade four" or "grade 4" or "grade five" or "grade 5" or "grade six" or "grade 6" or "grade seven" or "grade 7" or "grade eight" or "grade 8" or "grade nine" or "grade 9" or "grade ten" or "grade 10" or "grade eleven" or "grade 11" or "grade twelve" or "grade 12" or "first grade" or "1st grade*" or "second grade*" or "2nd grade*" or "third grade*" or "3rd grade*" or "fourth grade*" or "4th grade*" or "fifth grade*" or "5th grade*" or "sixth grade*" or "6th grade*" or "seventh grade*" or "7th grade*" or "eighth grade*" or "8th grade*" or "ninth grade*" or "9th grade*" or "tenth grade*" or "10th grade*" or "eleventh grade*" or "11th grade*" or "twelfth grade*" or "12th grade*").ti,ab. (98924)

75 curriculum/ or schools/ or teaching/ or school health services/ or school nursing/ or school teachers/ (161359)

76 or/71-75 (874883)

77 (medical or medicine or dental or dentist* or doctor* or physician* or nursing or "teaching hospital*" or undergraduate* or graduate* or postgraduate* or preschool* or pre-school* or nursery or "higher education" or university or universities).ti,ab. (2136781)

78 76 not 77 (561635)

79 exp Child/ or exp Child Behavior/ or Child Health/ or Child Welfare/ or Child Development/ (1866009)

80 Adolescent Behavior/ or Adolescent/ or Adolescent Health/ or Adolescent Development/ (1957161)

81 (child* or adolescen* or kid or kids or youth* or youngster* or minor or minors or underage* or under-age* or "under age*" or "young person*" or "young people" or pre-adolescen* or preadolescen* or pre-teen* or preteen* or teen or teens or teenager* or juvenile* or boy or boys or boyhood or girl or girls or girlhood or schoolchild* or student* or pupil* or "school age*" or school-age* or schoolage*).ti,ab. (1870299)

82 or/79-81 (3597925)

83 78 and 82 (273336)

84 42 or 70 (35928)

85 83 and 84 (11518)

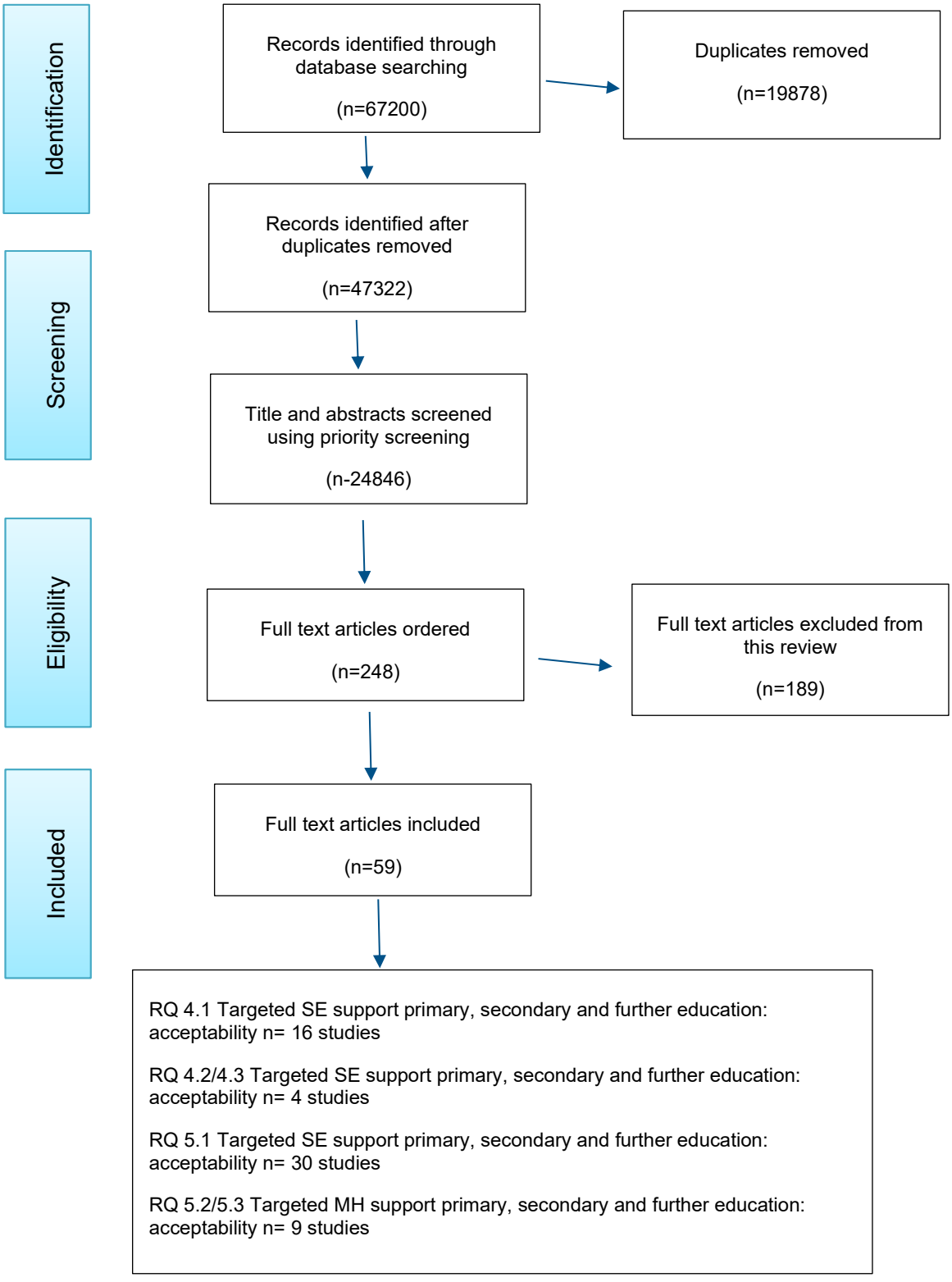
86 limit 85 to english language (10979)

87 limit 86 to (letter or historical article or comment or editorial or news or case reports) (174)

88 86 not 87 (10805)

89 limit 88 to yr="2007 -Current" (7243)

Appendix C: Study selection



Appendix D: Evidence tables

D.1 Effectiveness studies

D.1.1 Arnarson, 2009

Bibliographic Reference	Arnarson, Eirikur Orn; Craighead, W Edward; Prevention of depression among Icelandic adolescents.; Behaviour research and therapy; 2009; vol. 47 (no. 7); 577-85
Secondary publication(s)	Arnarson, Eirikur Orn and Craighead, W Edward (2011) Prevention of depression among Icelandic adolescents: a 12-month follow-up. Behaviour research and therapy 49(3): 170-4

Study details

Study design	Randomised controlled trial (RCT)
Trial registration number	Not reported
Aim	To test the hypothesis that when compared to an assessment only control condition, participation in the prevention program would decrease the number of subsequent initial episodes of depressive disorders among 14–15-year-old students who were ‘‘at risk’’ for development of these disorders
Country/geographical location	Iceland
Setting	School
Type of school	Secondary school
UK key stage	Key stage 3
Inclusion criteria	• Students considered at risk based on scoring between the 75th and 90th percentile on the Children's Depression Inventory (CDI) or

	• higher on the negative composite of the Child Assessment Scale (CASQ)
Exclusion criteria	Diagnosed with current MDD, dysthymia, Bipolar Disorder I and II, cyclothymia, ADHD, Conduct disorder, current substance abuse or dependence, psychotic symptoms, ODD, anorexia, bulimia, or reported serious suicidal ideation or plans
Method of randomisation	Not reported
Method of allocation concealment	Not reported
Unit of allocation	Individual
Unit of analysis	Individual
Statistical method(s) used to analyse the data	• Descriptive statistics • Last observation carried forward for missing data • Cox proportional hazard models for survival curves and new diagnoses of depressive disorders
Attrition	**Number of participants completing assessments** **6 months** intervention 61/81 (75.3%) control 75/90 (83.3%) **12 months** intervention 51/81 (63%) control 62/90 (68.9%)
Study limitations (author)	• Conducted in a small country with a homogenous population • Limitations using a clinical diagnostic interview as this only considers clinical information

	• Unable to obtain permission for video recordings for adherence to treatment
Study limitations (reviewer)	None to add
Source of funding	• Icelandic Science Fund (RANNIS), • University of Iceland Research Fund • Landspitali-University Hospital Research Fund • Arnór Björnsson Memorial Fund. • National Institute of Mental Health Grant

Study arms

Prevention program (N = 81)

TAU (N = 90)

Characteristics

Study-level characteristics

Characteristic	**Study (N = 171)**
Age (years) Range	14 to 15

Arm-level characteristics

Characteristic	Prevention program (N = 81)	TAU (N = 90)
Male Imputed from female data reported Sample size	n = 36 ; % = 44.4	n = 46 ; % = 51.1
Female Sample size	n = 45 ; % = 55.6	n = 44 ; % = 48.9

Outcomes

Study timepoints

- 6 month
- 12 month

Emotional distress

Outcome	Prevention program , 6 month, N = 61	Prevention program , 12 month, N = 51	TAU, 6 month, N = 75	TAU, 12 month, N = 62
Initial episode of depressive disorder No of events	n = 1 ; % = 16.4	n = 2 ; % = 39.2	n = 10 ; % = 13.3	n = 13 ; % = 21

Initial episode of depressive disorder - Polarity - Lower values are better

Study details

Brief name	**Arnason 2009 page 580** Prevention program
Rationale/theory/Goal	**Arnason 2009 page 579** To prevent the development of initial depressive disorder
Materials used	**Arnason 2009 page 580** • Manual for group leaders • Student/homework manuals for participants
Procedures used	**Arnason 2009 page 581** The focus of the group leaders' and students' manuals was on the development of adaptive coping skills to enhance self-esteem and well-being.
Provider	**Arnason 2009 page 580** Group leaders who were school psychologists
Method of delivery	**Arnason 2009 page 580** Groups, face to face
Setting/location of intervention	**Arnason 2009 page 580** School setting but outside of the regular classroom
Intensity/duration of the intervention	**Arnason 2009 page 580**

	14 sessions (twice per week for the first 3 weeks and then once per week for 8 weeks)
Tailoring/adaptation	None reported
Unforeseen modifications	None reported
Planned treatment fidelity	**Arnason 2009 page 580** Could not be done
Actual treatment fidelity	Not applicable
Other details	None

Study details

Brief name	**Arnason 2009 page 580** Treatment as usual
Rationale/theory/Goal	Not applicable
Materials used	Not applicable
Procedures used	Not applicable
Provider	Not applicable
Method of delivery	Not applicable
Setting/location of intervention	Not applicable
Intensity/duration of the intervention	Not applicable

Tailoring/adaptation	Not applicable
Unforeseen modifications	Not applicable
Planned treatment fidelity	Not applicable
Actual treatment fidelity	Not applicable
Other details	Not applicable

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Individual RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	Some concerns *(High attrition with no information as to why there were dropouts. LOCF used where the outcome was initial diagnosis of depressive disorder)*
Overall bias	Risk of bias judgement (objective outcomes)	Not applicable

D.1.2 Balle, 2010

Bibliographic Reference	Balle, Maria; Tortella-Feliu, Miquel; Efficacy of a brief school-based program for selective prevention of childhood anxiety.; Anxiety, stress, and coping; 2010; vol. 23 (no. 1); 71-85

Study details

Study design	Randomised controlled trial (RCT)
Trial registration number	Not reported
Aim	To evaluate whether a brief school-based selective prevention program reduces anxiety sensitivity and anxious and depressive symptoms in children and youth.
Country/geographical location	Spain
Setting	4 schools
Type of school	Secondary school
UK key stage	Key stage 3 Key stage 4 Post-16
Inclusion criteria	• Children scoring high on the Children AS Index (over the 80th percentile) • Reported no current mental disorder and not receiving any mental health treatment
Exclusion criteria	Any psychopathological disorder
Method of randomisation	Not reported
Method of allocation concealment	Not reported
Unit of allocation	Individual
Unit of analysis	Individual
Statistical method(s) used to analyse the data	• Mixed model ANOVAs for outcome measures

	• For each self-report outcome measure, symptom reduction was calculated. To test whether the outcome results were clinically meaningful, Jacobson and Truax's (1991) criteria were used (recovered, improved, no change or worsened).
Attrition	Intervention 43/47 (92%) completed more than 4 treatment sessions Control 100% attended follow-up
Study limitations (author)	• Limited to 6 months follow up • Relied on child self-reporting • No data on whether clinical disorders were diagnosed
Study limitations (reviewer)	None to add
Source of funding	Not reported

Study arms

Prevention group (N = 47)

Control (N = 45)

Characteristics

Study-level characteristics

Characteristic	Study (N = 613)
Age (years) Range	11 to 17
Age (years) Mean (SD)	13.63 (1.34)
Male Sample size	n = 239 ; % = 39
Female Sample size	n = 374 ; % = 61

Outcomes

Study timepoints

- Baseline
- 6 month

Emotional distress

Outcome	Prevention group, Baseline, N = 41	Prevention group, 6 month, N = 41	Control, Baseline, N = 36	Control, 6 month, N = 36
Anxiety sensitivity CASI (Catalan version) 18 item (range 18-54) No of events	n = NA ; % = NA	n = NA ; % = NA	n = NA ; % = NA	n = NA ; % = NA
Anxiety sensitivity CASI (Catalan version) 18 item (range 18-54) Mean (SD)	36.73 (4.25)	27.61 (5.22)	37.55 (4.25)	30.89 (6.41)
Clinically meaningful improvement No of events	n = NA ; % = NA	n = 24 ; % = 58.5	n = NA ; % = NA	n = 16 ; % = 44.4
Clinically meaningful improvement Mean (SD)	NA (NA)	NA (NA)	NA (NA)	NA (NA)
Anxiety symptomatology Catalan version of Spence Children's Anxiety Scale (SCAS), No of events	n = NA ; % = NA	n = NA ; % = NA	n = NA	n = NA ; % = NA
Anxiety symptomatology Catalan version of Spence Children's Anxiety Scale (SCAS), Mean (SD)	41.9 (10.55)	27.66 (9.54)	39.08 (13.15)	30.36 (15.32)
Clinically meaningful improvement No of events	n = NA ; % = NA	n = 15 ; % = 36.6	n = NA ; % = NA	n = 9 ; % = 25

Outcome	Prevention group, Baseline, N = 41	Prevention group, 6 month, N = 41	Control, Baseline, N = 36	Control, 6 month, N = 36
Clinically meaningful improvement Mean (SD)	NA (NA)	NA (NA)	NA (NA)	NA (NA)
Depression symptomatology Catalan version of Children's Depression Inventory (CDI), 27 item scale (0-54) No of events	n = NA ; % = NA	n = NA ; % = NA	n = NA ; % = NA	n = NA ; % = NA
Depression symptomatology Catalan version of Children's Depression Inventory (CDI), 27 item scale (0-54) Mean (SD)	14.39 (6.73)	11.76 (7.87)	13.36 (5.87)	10.22 (7.49)
Clinically meaningful improvement No of events	n = NA ; % = NA	n = 4 ; % = 9.8	n = NA ; % = NA	n = 3 ; % = 8.3
Clinically meaningful improvement Mean (SD)	NA (NA)	NA (NA)	NA (NA)	NA (NA)

Anxiety sensitivity - Polarity - Lower values are better
Anxiety symptomatology - Polarity - Lower values are better
Depression symptomatology - Polarity - Lower values are better

Study details

Brief name	Brief anxiety prevention program (page 76)
Rationale/theory/Goal	Based on psycho-educational and cognitive-behavioural procedures and grounded on FRIENDS child in-session contents. The program includes education about anxiety, the basics of some emotional regulation techniques and gradual exposure to feared situations (page 76)
Materials used	A treatment manual and a student booklet (page 76)
Procedures used	All sessions incorporate direct instruction, pen and pencil exercises, and behavioural experiments. A student booklet was also available (page 76)
Provider	A final-year psychology degree student and one PhD level student supervised by a senior PhD psychologist (page 76)
Method of delivery	Group face to face intervention (page 76)
Setting/location of intervention	School-based interventions (page 76)
Intensity/duration of the intervention	Six twice weekly 45-minute group sessions (page 76)
Tailoring/adaptation	None reported (page 76)
Unforeseen modifications	Not reported
Planned treatment fidelity	Supervision
Actual treatment fidelity	Not reported

Study details

Brief name	Waiting list control (page 74)
Rationale/theory/Goal	Not applicable
Materials used	Not applicable
Procedures used	Not applicable
Provider	Not applicable
Method of delivery	Not applicable
Setting/location of intervention	School
Intensity/duration of the intervention	Not applicable
Tailoring/adaptation	Not applicable
Unforeseen modifications	Not applicable
Planned treatment fidelity	Not applicable
Actual treatment fidelity	Not applicable

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Individual RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	Some concerns
Overall bias	Risk of bias judgement (objective outcomes)	Not applicable

D.1.3 Bazzano, 2018

Bibliographic Reference	Bazzano, Alessandra N.; Anderson, Christopher E.; Hylton, Chelsea; Gustat, Jeanette; Effect of mindfulness and yoga on quality of life for elementary school students and teachers: results of a randomized controlled school-based study; Psychology research and behavior management; 2018; vol. 11; 81-89

Study details

Study design	Randomised controlled trial (RCT)
Trial registration number	Not reported
Aim	To improve the well-being of students and staff through partnering an elementary school with a local social enterprise to introduce yoga and mindfulness into the school's existing SEL program, focusing in particular on students who may be experiencing stress.
Country/geographical location	Louisiana, USA
Setting	One elementary school (publicly funded)
Type of school	Primary school
UK key stage	Key stage 2
Inclusion criteria	Third grade students who screened positively for symptoms of anxiety, using the validated Screen for Child Anxiety Related Emotional Disorders (SCARED) scale at the outset of the 2016 academic year. Parental consent Student assent
Exclusion criteria	None reported

Method of randomisation	Randomisation was undertaken by school staff using instructions and tools provided on the open source website randomizer.org. Randomisation was to 3 groups consisting of 1 control group and 2 intervention groups. The first intervention group received the intervention in the autumn term and the second in the spring term.
Method of allocation concealment	Study authors carried out secondary data analysis on de-identified data collected by the school during a pilot of their curricular programming.
Unit of allocation	Students
Unit of analysis	Students
Statistical method(s) used to analyse the data	Intention to treat analysis was carried out with all students who were randomised and analysed according to their group allocation regardless of their adherence to the intervention. Change in Paediatric Quality of Life Inventory Score (PedsQL) and the Brief Multidimensional Students Life Satisfaction Scale -Peabody Treatment Progress Battery version (BMSLSS-PTPB) scores were computed at the midline survey (after the first group of students had completed the intervention) and the endline surveys (when both intervention groups had completed the intervention). T-tests were performed to test for difference in mean change between intervention and control groups. Generalised estimating equations (GEEs) were used to model the repeated measurement of the continuous scores. to accommodate correlation between repeated measurements within individual students. Results with a p-value of <0.05 were considered statistically significant. SAS version 9.3 was used for all analyses.
Attrition	Not reported. ITT analysis was carried out.
Study limitations (author)	Small sample size with significant differences between intervention and control groups. The two intervention groups received the intervention at different times of year (autumn and spring). Perceptions of quality of life may vary according to time of the school year so students in the different groups may be starting from a different baseline. The intervention combined both mindfulness and yoga and so it is not possible to ascertain if improvements in psychological and emotional wellbeing were due the mindfulness and /or the yoga component.
Study limitations (reviewer)	None to add

Source of funding	Not reported

Study arms

Intervention (N = 20)
Small group yoga and mindfulness sessions

Control (N = 32)
Care as usual

Characteristics

Arm-level characteristics

Characteristic	Intervention (N = 20)	Control (N = 32)
Male No of events	n = 10 ; % = 50	n = 17 ; % = 53
Female No of events	n = 10 ; % = 50	n = 15 ; % = 46.9
White No of events	n = 12 ; % = 63.2	n = 13 ; % = 46.4

Outcomes

Study timepoints

- Baseline
- 8 week (Post-intervention)

Quality of Life

Outcome	Intervention , 8 week vs Baseline, N = 20	Control , 8 week vs Baseline, N = 32
PedsQL: overall 23 questions; scores range from 0 to 100 Mean (SD)	7.13 (20.37)	0.82 (13.44)

PedsQL: overall - Polarity - Higher values are better

Study details

Brief name	Small group yoga and mindfulness sessions
Rationale/theory/Goal	School-aged children report various day-to-day stressors e.g. concerns about academic performance, peer exclusion, social pressure and bullying. These may cause anxiety which may impact on their future health. There is a need to equip children with coping strategies to help them deal with such stressors. There is evidence to support the use of yoga and mindfulness interventions in adults to reduce stress and anxiety and to promote mental wellbeing. School-based yoga and mindfulness programmes have become widely used in the USA. The study aimed to assess whether a combined mindfulness and yoga intervention improved quality of life for students identified as having the symptoms of anxiety, more than the usual care provided by the school. (Introduction 81)

Materials used	'Yoga Ed' validated curriculum and materials - An evidence based curriculum designed for delivering yoga in the classroom, which met US national physical education and health standards. The content included: breathing exercises; guided relaxation; Vinyasa and Ashtanga poses suitable for students of 3rd grade age. (Student intervention p 82)
Procedures used	A baseline survey was carried out with all study participants to collect demographic data and to assess prior experience of, and views about, yoga and mindfulness. A midpoint survey was conducted after the first group received the intervention and an endpoint survey when all randomised to the intervention had completed their sessions. (Measurements - students p 83)
Provider	An experienced children's yoga instructor provided through a local social enterprise organisation (Methods p 82 and Student intervention p 83).
Method of delivery	Small group sessions delivered to 10 students in the autumn and to a further 10 students in the spring. (Randomisation p 83)
Setting/location of intervention	An empty classroom before the beginning of the school day. (Student intervention p 83)
Intensity/duration of the intervention	10 x 40 minute sessions delivered over an 8 week period. (Student intervention p83)
Tailoring/adaptation	The intervention was adapted to the needs of individual students, their age group and environment, but no further details are given (Discussion p 88).
Unforeseen modifications	None reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported
Other details	The study also aimed to equip teachers with additional skills in mindfulness and yoga, that they could use on an ongoing universal basis with all students in the classroom. Not data extracted. (Introduction 81)

Study arms

Intervention (N = 20)
Small group yoga and mindfulness sessions (Methods p 82)

Control (N = 32)
Care as usual (Study population p 83)

Study details

Brief name	Care as usual (Study population p 83)
Rationale/theory/Goal	Not reported
Materials used	Not reported
Procedures used	Care as usual including counselling and other activities (no further detail given) (Study population p 83)
Provider	School social worker (Study population p 83)
Method of delivery	Not reported
Setting/location of intervention	Not reported
Intensity/duration of the intervention	Not reported
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported

Actual treatment fidelity	Not reported
Other details	None reported

Study arms

Control (N = 32)
Care as usual

D.1.4 Berry, 2009

Bibliographic Reference	Berry K; Hunt CJ; Evaluation of an intervention program for anxious adolescent boys who are bullied at school.; The Journal of adolescent health : official publication of the Society for Adolescent Medicine; 2009; vol. 45 (no. 4); 376-382

Study details

Study design	Randomised controlled trial (RCT)
Trial registration number	Not reported
Aim	To test the efficacy of an intervention for anxious adolescent boys experiencing bullying at school
Country/geographical location	Australia
Setting	7 secondary Catholic schools
Type of school	Secondary school
UK key stage	Key stage 3

Inclusion criteria	• being male • an anxiety score of at least one standard deviation above the population mean on any subscale of the Screen for Child Anxiety Related Emotional Disorders (SCARED) • an experience of being bullied within the last month, rated as definitely disabling and disturbing, on the Bullying Incidence Scale (BIS) • an adequate command of English.
Exclusion criteria	• a serious mental disorder requiring treatment (such as depression or psychosis) • intellectual disability
Method of randomisation	Not reported
Method of allocation concealment	Not reported
Unit of allocation	Individual
Unit of analysis	Individual
Statistical method(s) used to analyse the data	Mixed model ANOVAs
Attrition	46/46 (100%) participants completed the study
Study limitations (author)	• Participants were all male • Short term follow up • Limited number of schools • Child self-report outcomes only
Study limitations (reviewer)	None to add
Source of funding	University of Sydney School of Psychology Student Research

Study arms

Intervention (N = 22)

Control (N = 24)

Characteristics

Study-level characteristics

Characteristic	**Study (N = 46)**
Age (years) Mean (SD)	13.04 (0.79)
Male Sample size	n = 46 ; % = 100
Anglo-Saxon Sample size	n = 34 ; % = 74
Middle Eastern Sample size	n = 8 ; % = 17
Asian Sample size	n = 4 ; % = 9

Characteristic	Study (N = 46)
Lower to middle class background Sample size	n = 35 ; % = 76
SEND Sample size	n = 0 ; % = 0

Outcomes

Study timepoints

- Baseline
- 8 week (From baseline)

Emotional distress

Outcome	Intervention, Baseline, N = 22	Intervention, 8 week, N = 22	Control, Baseline, N = 24	Control, 8 week, N = 24
Child rated Mean (SD)	29.59 (7.1)	17.45 (10.19)	27.92 (11.06)	27 (11.14)
Parent rated Mean (SD)	23.73 (10.69)	16.54 (9.58)	18.59 (8.76)	20.58 (8.65)

Outcome	Intervention, Baseline, N = 22	Intervention, 8 week, N = 22	Control, Baseline, N = 24	Control, 8 week, N = 24
Depression Center for Epidemiologic Studies Depression Scale for Children (CES-DC) Mean (SD)	22.14 (8.98)	15.27 (8.05)	15.42 (10.79)	17.33 (11.06)

Anxiety - Polarity - Lower values are better
Depression - Polarity - Lower values are better

Study details

Brief name	**Berry 2009 page 378** Confident Kids program
Rationale/theory/Goal	**Berry 2009 page 377** To target emotional regulation, internalizing behaviours, self-esteem, social skills, and coping behaviours and reduce the incidence and impact of bullying experiences. Cognitive behavioural manualised programme
Materials used	Not reported
Procedures used	**Berry 2009 page 378** • The intervention cognitive–behavioural-based anxiety management strategies • Anxiety management included one session of psychoeducation, two sessions of cognitive restructuring and one session on graded exposure.

	• The intervention also included education about bullying, one session on the use of adaptive coping strategies in bullying situations, and a session on enhancement of social skills. • Self-esteem was targeted in another session using cognitive strategies. • The final session provided an overview of all the skills learnt and relapse prevention. • The program used skill demonstration, role plays, and group discussion. • Weekly homework was set and included practice of strategies in real-life situations. The parents program comprised discussion of these strategies aimed at supporting further generalization of skills and also addressed potential parental maintaining factors, such as parental anxiety
Provider	**Berry 2009 page 378** Clinical psychologists
Method of delivery	**Berry 2009 page 378** Groups, face to face
Setting/location of intervention	**Berry 2009 page 378** School
Intensity/duration of the intervention	**Berry 2009 page 378** 8 weekly 1 hour sessions
Tailoring/adaptation	None
Unforeseen modifications	None
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported
Other details	None

Study details

Brief name	**Berry 2009 page 377** Wait list
Rationale/theory/Goal	Not applicable
Materials used	Not applicable
Procedures used	Not applicable
Provider	Not applicable
Method of delivery	Not applicable
Setting/location of intervention	Not applicable
Intensity/duration of the intervention	Not applicable
Tailoring/adaptation	Not applicable
Unforeseen modifications	Not applicable
Planned treatment fidelity	Not applicable
Actual treatment fidelity	Not applicable
Other details	Not applicable

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Individual RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	Some concerns
Overall bias	Risk of bias judgement (objective outcomes)	Not applicable

D.1.5 Brown 2019

Bibliographic Reference	Brown, J.S.L.; Blackshaw, E.; Stahl, D.; Fennelly, L.; McKeague, L.; Sclare, I.; Michelson, D.; School-based early intervention for anxiety and depression in older adolescents: A feasibility randomised controlled trial of a self-referral stress management workshop programme ("DISCOVER"); Journal of Adolescence; 2019; vol. 71; 150-161

Study details

Study design	Cluster randomised controlled trial
Trial registration number	ISRCTN88636606
Aim	To build on a previous pilot study by determining the feasibilitty of implementing and evaluating the DISCOVER programme among older adolescents recruited through self-referral in a greater number of London inner-city secondary schools .
Country/geographical location	UK
Setting	Inner London secondary schools
Type of school	Secondary school
UK key stage	Post-16

Inclusion criteria	16–19 year olds recruited from Sixth forms (Years 12 and 13) . Fluent in English, with no severe learning difficulties Available to attend the one-day workshop. Participants needed to refer themselves to the workshop (no clinical criteria were used). Written informed consent of the participants
Exclusion criteria	Students considered as being at acute risk (in need of immediate mental health care) on risk assessment
Method of randomisation	Schools were allocated randomly in a 1:1 ratio to the trial arms on completion of baseline assessments. Block randomisation took place using an online system managed by an independent clinical trials unit and was implemented by the Chief Investigator.. If the maximum number of workhop partcipants was exceeded, additional workshops were run in the schools and a random number generator was used to allocate students to 2 groups.
Method of allocation concealment	Schools were advised of their allocation by workshop leaders. Researchers were blinded to the particpants allocation as minimal contact was needed with workshop leaders and standardised scripts were used at follow-up.
Unit of allocation	Schools
Unit of analysis	Students
Statistical method(s) used to analyse the data	Power calculations were not carried out as this was a feasibility trial. 10 schools (a minimum of 5 clusters per arm) were required to estimate between-group variance and intraclass correlation within each arm. A total sample size of 150 was considered sufficient to obtain stable estimates of population variances for future power calculations. Outcomes were analysed on an intention-to-treat basis using multi-level models with school as a random factor. Data was collected from all participants whether or not they attended the intervention. Cohen's d was used to assess effect size. To measure the likely range of effects at 3 months follow up, ANCOVA was used.

	Intraclass correlations (ICCs) were used to to assess the clustering effect of treatment response within schools and to inform future power calculations
Attrition	Intervention - of 72 participants randomised to this condition, 62 were included in the analyses. Control - of 83 participants ranodmised to this condition, 80 were included in the analyses..
Study limitations (author)	Some baseline imbalances e.g. in gender and school year were noted. Males were substantailly under-represented in the study sample (18.7%). Males of this age are reluctant to seek help and authors suggest involvement of male staff in recruitment assemblies may be beneficial. Some students only attended part of the day long workshop due to competing academic demands and there was lower attendance by students in Year 13 compared to students in Year 12, due to the pressure of forthcoming national exams. The study was conducted in inner-city London schools. A trial covering a broader geograpical area would increase the study's generalisability. Wait list controls as a comparator may inflate effect sizes and future studies could use: treatment as usual; an attention control; or a minimal intervention. Longer term follow-up would be useful. The study used self-reported measures and there would be benefit from independent assessment. of anxiety and depression in future studies. .
Study limitations (reviewer)	None to add
Source of funding	Funded by the National Institute for Health Research (NIHR) under its Research for Patient Benefit (RfPB) Programme.

	One author was also funded by the National Institute for Health Research (NIHR) Biomedical Research Centre at South London and Maudsley NHS Foundation Trust and King's College London.

Study arms

Intervention (N = 72)

Aim	To build on a previous pilot study by determining the feasibility of implementing and evaluating the DISCOVER programme among older adolescents recruited through self-referral in a greater number of inner London secondary schools
Inclusion criteria	16–19 year olds recruited from Sixth forms (Years 12 and 13) . Fluent in English, with no severe learning difficulties Available to attend the one-day workshop. Participants needed to refer themselves to the workshop (no clinical criteria were used). Written informed consent of the participants was needed
Method of randomisation	Schools were allocated randomly in a 1:1 ratio to the trial arms on completeion of baseline assessments. Block randomisation took place using an online system managed by an independent clinical trials unit and was implemented by the Chief Investigator.. If the maximum number of workhop partcipants was exceeded, additional workshops were run in the schools and a random number generator was used to allocate students to 2 groups.
Method of allocation concealment	Schools were advised of thier allocation by workshop leaders Researchers were blinded to particpants allocation as minimal contact was neeeded with workshop leaders and standardised scripts were used at follow-up.
Statistical method(s) used to analyse the data	Power calculations were not carried out as this was a feasibility trial. 10 schools (a minimum of 5 clusters per arm) were required to estimate between-group variance and intraclass correlation within each arm. A total sample size of 150 was considered sufficient to obtain stable estimates of population variances for future power calculations. Outcomes were

	analysed on an intention-to-treat basis using multi-level models with school as a random factor. Data was collected from all participants whether or not they attended the intervention. Cohen's d was used to assess effect size. To measure the likely range of effects at 3 months follow up, ANCOVA was used. Intraclass correlations (ICCs) were used to to assess the clustering effect of treatment response within schools and to inform future power calculations
Attrition	Intervention - of 72 participants randomised to this condition, 62 were included in the analyses Control - of 83 participants randomised to this condition, 80 were included in the analyses.
Study limitations (author)	Some baseline imbalances e.g. in gender and school year were noted. Males were substantailly under-represented in the study sample (18.7%). Males of this age are reluctant to seek help and authors suggest involvement of male staff in recruitment assemblies may be beneficial. Some students only attended part of the day long workshop due to competing academic demands and there was lower attendance by students in Year 13 compared to students in Year 12 due to the pressure of forthcoming national exams. The study was conducted in inner-city London schools. A trial covering a broader geograpical area would increase the study's generalisability. Wait list controls as a comparator may inflate effect sizes and future studies could use treatment as usual, an attention control, or a minimal intervention. Longer term follow up would be useful. The study used self-reported measures and there would be benefit from independent assessment. of anxiety and depression in future studies. .

Source of funding	Funded by the National Institute for Health Research (NIHR) under its Research for Patient Benefit (RfPB) Programme One author was also funded by the National Institute for Health Research (NIHR) Biomedical Research Centre at South London and Maudsley NHS Foundation Trust and King's College London.

DISCOVER workshop - Self referral one day CBT stress management programme, with telephone follow-up

Control (N = 83)
Wait list condition

Characteristics

Arm-level characteristics

Characteristic	Intervention (N = 72)	Control (N = 83)
Intervention Mean (SD)	17.1 (0.73)	17.5 (0.76)
Male Sample size	n = 7 ; % = 9.7	n = 22 ; % = 26.5
Female Sample size	n = 65 ; % = 90.3	n = 61 ; % = 73.5
White British No of events	n = 14 ; % = 19.4	n = 20 ; % = 24.1

Characteristic	Intervention (N = 72)	Control (N = 83)
White other (inc Irish) No of events	n = 6 ; % = 8.3	n = 9 ; % = 10.8
Asian or British Asian No of events	n = 6 ; % = 8.3	n = 5 ; % = 6
Black or Black British No of events	n = 38 ; % = 52.8	n = 31 ; % = 37.3
Mixed Background No of events	n = 2 ; % = 2.8	n = 6 ; % = 7.2
Chinese No of events	n = 1 ; % = 1.4	n = 0 ; % = 0
Other No of events	n = 5 ; % = 6.9	n = 11 ; % = 13.3
Prefer not to say No of events	n = 1 ; % = 1.2	n = 0 ; % = 0

Outcomes

Study timepoints

- Baseline
- 3 month (Follow-up)

Emotional distress

Outcome	Intervention , Baseline, N = 72	Intervention , 3 month, N = 62	Control , Baseline, N = 83	Control , 3 month, N = 80
MFQ total 33 item self report measure of youth depression Mean (SD)	20.3 (11.9)	14.8 (8.9)	20.8 (10.9)	18.1 (10.4)
RCADS Anxiety subscale 37 item self report sub-scale of the Revised Child Anxiety and Depression Sub-scale Mean (SD)	51.1 (12.9)	45.2 (10.8)	50.6 (12.1)	48 (12.1)
RCADS total Full 47 item Revised Child Anxiety and Depression Scale, used to generate an aggregate emotional symptoms score Mean (SD)	51.7 (12.9)	45.4 (10.9)	51.3 (12.2)	48.8 (11.9)

MFQ total - Polarity - Lower values are better
RCADS Anxiety subscale - Polarity - Lower values are better
RCADS total - Polarity - Lower values are better

Quality of Life

Outcome	Intervention , Baseline, N = 72	Intervention , 3 month, N = 62	Control , Baseline, N = 83	Control , 3 month, N = 80
PQLESQ Paediatric Quality of Life Enjoyment and Satisfaction form; 15 self reported items	0.6 (0.1)	0.7 (0.1)	0.6 (0.1)	0.6 (0.1)

Outcome	Intervention , Baseline, N = 72	Intervention , 3 month, N = 62	Control , Baseline, N = 83	Control , 3 month, N = 80
Mean (SD)				
WEMWBS Warwick-Edinburgh Mental Well-being scale Mean (SD)	42.9 (8.1)	47.5 (8.3)	41.2 (7.5)	43 (7.1)

PQLESQ - Polarity - Higher values are better

WEMWBS - Polarity - Higher values are better

D.1.6 Cooper, 2010

Bibliographic Reference	Cooper, M.; Rowland, N.; McArthur, K.; Pattison, S.; Cromarty, K.; Richards, K.; Randomised controlled trial of school-based humanistic counselling for emotional distress in young people: Feasibility study and preliminary indications of efficacy; Child and Adolescent Psychiatry and Mental Health; 2010; vol. 4; 12

Study details

Study design	Randomised controlled trial (RCT)
Trial registration number	ISRCTN68290510

Aim	• To assess the feasibility of a randomised controlled trial to evaluate humanistic counselling in a secondary school in the UK, determining:
	  ○ Likely recruitment rates
	  ○ Likely follow-up rates
	  ○ Any ethical or practical difficulties which may arise from trial procedures (including screening, assessment, randomisation, and allocation to waiting list)
	• To gain a preliminary indication of the effectiveness of the intervention

	• To explore possible interaction effects between level of mental distress and effectiveness of the intervention.
Country/geographical location	England and Scotland UK
Setting	5 secondary schools - 3 in Scotland and 2 in England
Type of school	Secondary school
UK key stage	Key stage 3 Key stage 4
Inclusion criteria	• aged 13-18 • experiencing moderately high levels of emotional distress (assessed as a score of 4 or more on the emotional symptoms subscale of the Strengths and Difficulties Questionnaire) • motivated to attend counselling (assessed as having responded 'somewhat true' or 'certainly true' on the Attitudes to Counselling Questionnaire (AQC). • considered capable of giving informed consent to participate in the trial (as assessed by pastoral care staff) • greater than 85% attendance (as assessed by pastoral care staff)
Exclusion criteria	• considered at risk of serious harm to self or others (by pastoral care staff and researcher at assessment) • existing involvement with other mental health agencies for children and young people, including the existing school counselling service (as indicated by pastoral care staff) • planning or likely to move schools during the study period (as indicated by pastoral care staff)
Method of randomisation	Generated by an independent trial unit in blocks of four, stratified by school
Method of allocation concealment	• The research team accessed the allocation of participants via a dedicated website • Researchers who were collecting data at the 6 weeks end point were blinded to the allocation
Unit of allocation	Individual
Unit of analysis	Individual

Statistical method(s) used to analyse the data	all analyses were carried out with SPSS 17.0 • descriptive methods were used to determine potential recruitment and attrition rates • qualitative analysis of interview data was used to determine any ethical or procedural problems • missing outcome data were not imputed (as this was a pilot study) • only participants completing the follow up assessments were included in the analysis.
Attrition	• In the intervention group 2 (12.5%) participants withdrew consent shortly after randomisation and further 1 (6.3%) participant received 2 sessions before parental consent was withdrawn. • In the control group, 1 (6.3%) participant withdrew consent shortly after randomisation and 1 further (6.3%) participant was found to have been wrongly randomised, as they did not meet the inclusion criteria and so were excluded from the analysis
Study limitations (author)	• Small sample size (as this was a pilot study) means the findings need to be interpreted with extreme caution • In particular, findings from the Adapted Change Interview should be treated with caution as the unstructured response format may have given rise to participants giving more socially desirable responses • There are wide confidence intervals for all outcomes and it is possible that participants may not have been distributed equivalently across the intervention and control groups • A lack of formal procedures with which to assess adherence and inter-rater reliability means the nature of the intervention being delivered cannot be exactly verified • There was no extended follow-up • Humanistic counselling generally has a negligible overall effect but there is significant interaction between amount of improvement and the level of distress. Relatively small effect sizes in this trial may be related to the inclusion of participants with only moderate levels of distress. • The intervention lasted for 6 weeks (in order to safeguard the wellbeing of those in the control group) and about a quarter of the participants in the intervention group felt there was more work to be done. The authors recommended that for future research the intervention be conducted over a term (10-12 weeks) • The small effect size may also be related to the fact the control group appeared to do well, compared to participants in similar studies. Findings of the Adapted Change Interview suggest that participants found the assessment interview itself to be helpful. In addition, the control condition was to be put on a waiting list for counselling in six weeks' time. Authors suggest this gave participants reassurance that they would be receiving help within a relatively short period of time.

Study limitations (reviewer)	None to add
Source of funding	University of Strathclyde and British Association for Counselling and Psychotherapy

Study arms

Intervention (N = 13)
School-based humanistic counselling

Control (N = 14)
Waiting list

Characteristics

Arm-level characteristics

Characteristic	Intervention (N = 13)	Control (N = 14)
Age (years) Mean (SD)	14.15 (0.56)	14.29 (0.47)
Male Sample size	n = 3 ; % = 23.1	n = 3 ; % = 21.4
Female Sample size	n = 10 ; % = 76.9	n = 11 ; % = 78.6

Characteristic	Intervention (N = 13)	Control (N = 14)
White British Sample size	n = 13 ; % = 100	n = 13 ; % = 92.9
Mixed backgrounds Sample size	n = 0 ; % = 0	n = 1 ; % = 7.1
SEND Disabled Sample size	n = 0 ; % = 0	n = 1 ; % = 7.1
Less than 1 month Sample size	n = 1 ; % = 10	n = 0 ; % = 0
1-5 months Sample size	n = 1 ; % = 10	n = 3 ; % = 25
6-12 months Sample size	n = 3 ; % = 30	n = 1 ; % = 8.3
Over 1 year Sample size	n = 5 ; % = 50	n = 8 ; % = 66.7

Outcomes

Study timepoints

- Baseline

- 6 week (from baseline)

Emotional distress

Outcome	Intervention , Baseline, N = 13	Intervention , 6 week, N = 13	Control, Baseline, N = 14	Control, 6 week, N = 14
Young person's CORE Mean (SD)	17.31 (6.14)	10.46 (7.45)	16.63 (8.2)	12.29 (6.17)

Young person's CORE - Polarity - Lower values are better

Behavioural outcomes

Outcome	Intervention , Baseline, N = 13	Intervention , 6 week, N = 13	Control, Baseline, N = 14	Control, 6 week, N = 14
SDQ (emotional symptoms, conduct problems, hyperactivity, peer problems) total Mean (SD)	16.08 (6.45)	12.46 (5.53)	16.07 (6.44)	13.86 (5.41)
SDQ (Prosocial subscale) Mean (SD)	8 (1.73)	9.15 (0.69)	8.21 (1.42)	7.86 (1.83)

SDQ (emotional symptoms, conduct problems, hyperactivity, peer problems) total - Polarity - Lower values are better
SDQ (Prosocial subscale) - Polarity - Higher values are better

Study details

Brief name	Humanistic counselling in a secondary school

Rationale/theory/Goal	Based on the assumption that when people are estranged from their true feelings and preferences they experience emotional and psychological distress. Humanistic counselling is non-directive and allows clients to explore their authentic feelings and needs by the counsellor listening and reflecting back their understanding of these, so the client can find ways of being more suited to their genuine needs and preferences.
Materials used	Counsellors were given copies of the University College London's humanistic competencies, to use as a manual on which to base their practice.
Procedures used	Counsellors delivered humanistic counselling according to the competencies manual provided.
Provider	• 5 female counsellors (one per school) delivered the intervention • All were experienced and had completed diploma level training in humanistic counselling of approximately 450 hours duration • Counsellors had an average of 9 years' experience delivering humanistic counselling • All had experience of working with young people.
Method of delivery	Individual face to face
Setting/location of intervention	School (no further detail provided)
Intensity/duration of the intervention	Approximately 45 minutes delivered during school periods, generally on a weekly basis for 6 weeks. This was defined as 6 school weeks from baseline rather than calendar weeks and so due to holidays may be consecutive or non-consecutive weeks. Note the summer holidays were not included within this.
Tailoring/adaptation	None reported
Unforeseen modifications	None reported
Planned treatment fidelity	• A selection of session recordings was checked by the research team to monitor adherence to competencies using the Humanistic Competencies Compliance checklist version 3 (specifically developed for this purpose and based on NICE (R) record sheet) • As this was a pilot study, there was no formal procedure to rate adherence or assess inter-rater reliability
Actual treatment fidelity	The research team considered all recordings to comply with humanistic competencies
Other details	None

Study details

Brief name	Waiting list
Rationale/theory/Goal	Not reported
Materials used	Not reported
Procedures used	• Participants were not offered formal counselling but were advised they had access to the school's pastoral care provision at any time during the study. • This included the school's existing counselling service. • At the end point assessment, they were offered direct entry to counselling.
Provider	School's pastoral care team
Method of delivery	Not reported
Setting/location of intervention	School
Intensity/duration of the intervention	Not reported
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported
Other details	None of the participants self-referred to the school's existing counselling service during the study.

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Individual RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	Some concerns
Overall bias	Risk of bias judgement (objective outcomes)	Not applicable

D.1.7 Do, 2021

Bibliographic Reference	Do, Ryemi; Lee, Songyi; Kim, Jee-Soo; Cho, Minji; Shin, Hanbyul; Jang, Mirae; Shin, Min-Sup; Effectiveness and dissemination of computer-based cognitive behavioral therapy for depressed adolescents: Effective and accessible to whom?.; Journal of affective disorders; 2021; vol. 282; 885-893

Study details

Study design	Randomised controlled trial (RCT)
Trial registration number	Not reported
Study start date	25-Jul-2019
Study end date	10-Feb-2022
Aim	To investigate the effectiveness of CCBT for depressed adolescents and identify the characteristics of the adolescents that participated in CCBT program.
Country/geographical location	South Korea

Setting	Two high schools, three private academies, and one adolescent centre from the communities of Seoul
Type of school	Secondary school
UK key stage	Key stage 4
Inclusion criteria	Adolescents from two high schools, three private academies and one adolescent centre that scored above the threshold for mild depression (PHQ-9, CES-D)
Exclusion criteria	Participants already receiving medication or counselling
Method of randomisation	An independent researcher generated the randomised allocation sequence using an Excel by block sizes of 2 or 4, at a 1:1 ratio of the treatment and control groups.
Method of allocation concealment	In addition, the assessments, administered by researchers, were not blinded.
Unit of allocation	Individual
Unit of analysis	Individual
Statistical method(s) used to analyse the data	• t-tests and Chi-square tests were conducted to investigate help-seeking related variables affecting the participation in the CCBT and to verify differences between two groups in pre-tests. • A two-way mixed design ANOVA was carried out to examine the interaction effects between time and group. • Cohen's d between effect sizes were calculated from pooled SD values to identify the within-group treatment effect over time. • Mann-Whitney U-tests were used to analyse the difference in depression scores between the high and low task compliance groups.
Attrition	Computer-based Cognitive Behavioural Therapy: 25/28 = 10.7% attrition Control: 25/27 = 7.4% attrition
Study limitations (author)	• The population of subjects was restricted to Seoul, the capital of South Korea, which limits generalisability. • The study had a small sample size. • The study design included only pre- and post-tests, without follow-up tests.

Study limitations (reviewer)	None to add
Source of funding	This work was supported by National Research Foundation of Korea (NRF) grant funded by the Korea government (MSIT) (No. 2017R1A2B4011725).

Study arms

Computer-based Cognitive Behavioural Therapy (N = 28)

Control (N = 27)

Characteristics

Study-level characteristics

Characteristic	**Study (N = 376)**
Age Mean (SD)	15.71 (0.65)
Male Sample size	n = 174 ; % = 46.3
Female Sample size	n = 202 ; % = 53.7

Outcomes

Study timepoints

- 5 week (Endpoint (Pre- and post-assessments were conducted within a 5-week interval in both groups))

Outcomes

Outcome	Computer-based Cognitive Behavioural Therapy, 5 week, N = 28	Control, 5 week, N = 27
Emotional distress - depression Measured by the Center for Epidemiological studies depression scale (CES-D) (self-reported) Sample size	n = 25 ; % = 89	n = 25 ; % = 93
Emotional distress - depression Measured by the Center for Epidemiological studies depression scale (CES-D) (self-reported) Mean (SD)	13.4 (8.43)	22.48 (14.21)
Social and emotional skills - Self-esteem Measured by the Rosenberg Self-esteem scale (self-reported) Sample size	n = 25 ; % = 89	n = 25 ; % = 93
Social and emotional skills - Self-esteem Measured by the Rosenberg Self-esteem scale (self-reported) Mean (SD)	34.2 (4.5)	30.96 (5.53)

Outcome	Computer-based Cognitive Behavioural Therapy, 5 week, N = 28	Control, 5 week, N = 27
Quality of life Measured by the Paediatric Quality of Life Inventory: Emotional sub-scale (self-reported) Sample size	n = 25 ; % = 89	n = 25 ; % = 93
Quality of life Measured by the Paediatric Quality of Life Inventory: Emotional sub-scale (self-reported) Mean (SD)	71.8 (19.94)	54.6 (26.96)

Emotional distress - depression - Polarity - Lower values are better
Social and emotional skills - Self-esteem - Polarity - Higher values are better
Quality of life - Polarity - Higher values are better

Study details

Brief name	Computer-based Cognitive Behavioural Therapy (CCBT). p. 885
Rationale/theory/Goal	CBT-based p. 885
Materials used	Laptop, treatment manual. p. 888
Procedures used	The program consisted of depression cognitive behavioural therapy, interpersonal skills, and learning ability training. p. 887

	Each adolescent received 10 minutes of therapeutic support during each session, for a total of 100 minutes. Adolescents performed CCBT program next to a researcher through a researcher's laptop. p. 888
Provider	Laptop-based. p 888
Method of delivery	Individual (on laptop). p. 888
Setting/location of intervention	Schools or centres which the participants belonged. p. 887
Intensity/duration of the intervention	Ten 30-minute sessions, twice a week, over 5 weeks. p. 887
Tailoring/adaptation	None reported
Unforeseen modifications	None reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported

Study details

Brief name	Waitlist control group. p. 886
Rationale/theory/Goal	Not reported
Materials used	Not reported
Procedures used	Not reported
Provider	Not reported
Method of delivery	Not reported

Setting/location of intervention	Not reported
Intensity/duration of the intervention	Not reported
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Individual RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	High *(Concerns with lack of information on blinding, adherence, and concerns around subjective outcomes)*
Overall bias	Risk of bias judgement (objective outcomes)	Not applicable

D.1.8 Fernandez-Martinez, 2020

Bibliographic Reference	Fernandez-Martinez, I.; Orgiles, M.; Morales, A.; Espada, J.P.; Essau, C.A.; One-Year follow-up effects of a cognitive behavior therapy-based transdiagnostic program for emotional problems in young children: A school-based cluster-randomized controlled trial; Journal of Affective Disorders; 2020; vol. 262; 258-266
Associated Reference	Fernandez-Martinez, Ivan; Morales, Alexandra; Espada, Jose P; Essau, Cecilia A; Orgiles, Mireia; Effectiveness of the program Super Skills For Life in reducing symptoms of anxiety and depression in young Spanish children.; Psicothema; 2019; vol. 31 (no. 3); 298-304

Study details

Study design	Cluster randomised controlled trial
Trial registration number	Not reported
Aim	To examine the long-term effects of the Spanish adaptation of the SSL
Country/geographical location	Spain
Setting	Ten primary schools located in the southeast region of Spain
Type of school	Primary school
UK key stage	Key stage 1 Key stage 2
Inclusion criteria	Parents reported their child's emotional symptoms were invited to participate in this study. Specifically, these children were required to have a high score (cut-off score of 4) on the Emotional Symptoms sub-scale of the parent-report Strengths and Difficulties Questionnaire
Exclusion criteria	Having learning or developmental problems, and receiving any psychiatric/psychological intervention.
Method of randomisation	Not reported

Method of allocation concealment	Not reported
Unit of allocation	Cluster (school)
Unit of analysis	Individual (student)
Statistical method(s) used to analyse the data	• ICC not reported • An intent-to-treat perspective was used. • Differences between children who dropped out of the study and those who did not were explored using attrition analysis. • Cross-tabulation for categorical variables and Student's t-test for quantitative variables were used to analyse baseline equivalence of the two study arms. • The authors calculated Cohen's (1988) effect size for the differences that were statistically significant. • Long-term effects of SSL were explored using generalized estimating equations (GEE).
Attrition	A total of 107 students (13% dropout rate) completed the 12-month follow-up survey in June 2018. Six participants (9%) from the IG and 10 children (17.9%) from the WLC dropped out of the study.
Study limitations (author)	• The sample size was small. • Due to lack of adequate self-reports, assessment relied on the parents' reports. • The assessment relied only on one parent. The results of this study might be different if responses had been collected from both parents. • The waitlist control group (WLC) was used in order to establish whether or not an intervention (SSL) was superior to no intervention However, the WLC group did not receive an intervention equivalent to that of the intervention. Therefore, positive effects related to the attention that children in the IG received from researchers (Hawthorne effect) may have inflated effect size of the program.
Study limitations (reviewer)	Lack of information on methods of randomisation and concealment.
Source of funding	This work was supported by the Ministry of Economy and Competitiveness (MINECO) of Spain [grant number PSI2014-56446-P]; and the Ministry of Education, Culture and Sport of Spain [grant number FPU14/03900].

Study arms

Super Skills for Life (N = 61)
5 schools consisting of 61 pupils

Control (N = 46)
5 schools consisting of 46 pupils

Characteristics

Arm-level characteristics

Characteristic	Super Skills for Life (N = 61)	Control (N = 46)
Age Mean (SD)	7 (0.77)	6.8 (0.79)
Male Sample size	n = 30 ; % = 49.2	n = 27 ; % = 58.7
Female Sample size	n = 31 ; % = 50.8	n = 19 ; % = 41.3
Spanish Sample size	n = 59 ; % = 96.7	n = 46 ; % = 100
Other Sample size	n = 2 ; % = 3.3	n = 0 ; % = 0

Characteristic	Super Skills for Life (N = 61)	Control (N = 46)
≤€450 Sample size	n = 2 ; % = 3.4	n = 0 ; % = 0
€500 - €999 Sample size	n = 4 ; % = 6.8	n = 3 ; % = 6.7
€1000 - €1999 Sample size	n = 15 ; % = 25.4	n = 16 ; % = 35.6
€2000 - €2999 Sample size	n = 18 ; % = 30.5	n = 15 ; % = 33.3
€3000 - €4999 Sample size	n = 15 ; % = 25.4	n = 5 ; % = 11.1
≥€5000 Sample size	n = 5 ; % = 8.5	n = 6 ; % = 13.3

Outcomes

Study timepoints

- 12 month (Follow-up)

Outcomes

Outcome	Super Skills for Life, 12 month, N = 67	Control, 12 month, N = 56
Emotional distress - depression Measured by the Moods and Feelings Questionnaire (MFQ) (parent-reported) Sample size	n = 61 ; % = 91	n = 46 ; % = 82.1
Emotional distress - depression Measured by the Moods and Feelings Questionnaire (MFQ) (parent-reported) Mean (SD)	7 (1.15)	11.2 (1.1)
Emotional distress - anxiety Measured by the Spence Children's Anxiety Scale (SCAS) (parent-reported) Sample size	n = 61 ; % = 91	n = 46 ; % = 82.1
Emotional distress - anxiety Measured by the Spence Children's Anxiety Scale (SCAS) (parent-reported) Mean (SD)	19.96 (1.44)	26.96 (2.43)
SDQ (emotional symptoms, conduct problems, hyperactivity, peer problems) total (0-40) Parent-reported Sample size	n = 61 ; % = 91	n = 46 ; % = 82.1
SDQ (emotional symptoms, conduct problems, hyperactivity, peer problems) total (0-40) Parent-reported Mean (SD)	11.81 (0.71)	14.98 (0.81)

Outcome	Super Skills for Life, 12 month, N = 67	Control, 12 month, N = 56
Behavioural outcomes Measured by the Strengths and Difficulties Questionnaire (SDQ): Prosocial behaviour sub-scale Sample size	n = 61 ; % = 91	n = 46 ; % = 82.1
Behavioural outcomes Measured by the Strengths and Difficulties Questionnaire (SDQ): Prosocial behaviour sub-scale Mean (SD)	7.72 (0.23)	7.65 (0.24)

Emotional distress - depression - Polarity - Lower values are better
Emotional distress - anxiety - Polarity - Lower values are better
SDQ (emotional symptoms, conduct problems, hyperactivity, peer problems) total - Polarity - Lower values are better
Behavioural outcomes - Polarity - Higher values are better

Study details

Brief name	Super Skills for Life (SSL). p. 8
Rationale/theory/Goal	Based on the principles of CBT. p. 8
Materials used	The program comprises two resource materials: the facilitators' manual and a workbook for the children which contains all the activities and homework. p. 8
Procedures used	SSL uses a transdiagnostic approach by targeting the core common risk factors of anxiety and depression such as low self-esteem, cognitive bias, and deficits in social skills. p. 8

	The SSL weekly sessions were delivered to groups of 4-6 children at their school. p. 9
Provider	Seven psychologists with a Psychology Masters' degree. All had received a one-day training course on SSL and subsequent supervision by the principal researcher. p. 9
Method of delivery	Small groups. p. 8
Setting/location of intervention	School setting. p. 8
Intensity/duration of the intervention	Eight 45-minute sessions which can be delivered once a week. p. 8
Tailoring/adaptation	The present study used the European-Spanish adaptation of SSL. p. 8
Unforeseen modifications	None reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported

Study details

Brief name	Waitlist control (WLC). p. 7
Rationale/theory/Goal	Not reported
Materials used	Not reported
Procedures used	WLC group received the program after the 12-month follow-up. p. 9
Provider	Not reported
Method of delivery	Not reported

Setting/location of intervention	Not reported
Intensity/duration of the intervention	Not reported
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported
Other details	

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Cluster RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	Low
Overall bias	Risk of bias judgement (Objective outcomes)	Not applicable

D.1.9 Fleming, 2012

Bibliographic Reference	Fleming, Theresa; Dixon, Robyn; Frampton, Christopher; Merry, Sally; A pragmatic randomized controlled trial of computerized CBT (SPARX) for symptoms of depression among adolescents excluded from mainstream education.; Behavioural and cognitive psychotherapy; 2012; vol. 40 (no. 5); 529-41

Study details

Study design	Randomised controlled trial (RCT)
Trial registration number	ACTRN1261000074099
Study start date	Jul-2009
Study end date	Jun-2010
Aim	To test the efficacy of SPARX for students in alternative schooling programmes for adolescents excluded, or at risk of being excluded, from mainstream education before 16
Country/geographical location	New Zealand
Setting	Alternative education school
Type of school	Secondary school
UK key stage	Key stage 3 Key stage 4
Inclusion criteria	Excluded or alienated from mainstream education
Exclusion criteria	• Severe depression, • high suicide risk or other mental health issues that may have meant that they were not safe on the computer programme; • disability,

	• insufficient proficiency in English that may have resulted in them not being able to use the programme or not being able to comprehend the functioning scales; • they were not intending to remain enrolled in the participating schooling programme for at least 10 weeks.
Method of randomisation	Computer generated randomization sequence.
Method of allocation concealment	Allocating with a unique study number in sequence. A sealed envelope for each study number containing treatment allocation had been prepared in advance by an independent research assistant. Following baseline assessment the young person opened this envelope with the researcher, and access to immediate or delayed treatment was arranged.
Unit of allocation	Individual
Unit of analysis	Individual
Statistical method(s) used to analyse the data	Imputed for missing data the total scores by calculating from the available data and weighted to compensate for the missing items. For primary and secondary outcome measures the changes from baseline to 5 weeks were compared between SPARX and wait groups using ANCOVA, with the baseline level as the covariate. Differences between groups at 5 weeks in remission and in clinically significant reductions in symptoms were tested using Fishers Exact Test.
Attrition	One from SPARX group as they moved away. No drop outs in control group.
Study limitations (author)	• Small size • Short follow up period. • researcher was not blinded when conducting postintervention and follow-up assessments • Outcome measures have not been validated for use with this specific group.
Study limitations (reviewer)	None extra
Source of funding	New Zealand Ministry of Health

Study arms

SPARX (N = 20)

Waiting list (N = 12)

Characteristics

Study-level characteristics

Characteristic	**Study (N = 32)**
Age (years) Range	13 to 16
Age (years) Mean (SD)	14.9 (0.79)
Male Sample size	n = 18 ; % = 56
Female Sample size	n = 14 ; % = 44
Maori	n = 11 ; % = 34

Characteristic	Study (N = 32)
Sample size	
Pacific islands Sample size	n = 12 ; % = 38
New Zealand European Sample size	n = 8 ; % = 25
Other Sample size	n = 1 ; % = 3

Outcomes

Study timepoints

- Baseline
- 5 week (Baseline to 5 week data)

Emotional distress

Outcome	SPARX, Baseline, N = 19	SPARX, 5 week, N = 19	Waiting list, Baseline, N = 12	Waiting list, 5 week, N = 12
CDRS-R (Mean change for 5 week data) Child Depression Rating Scale Revised; SDs imputed by reviewer Mean (95% CI)	39.6 (35.3 to 43.9)	-14.7 (-18.6 to -10.7)	39.5 (33.9 to 45.2)	-1.1 (-6.3 to 4.1)

Outcome	SPARX, Baseline, N = 19	SPARX, 5 week, N = 19	Waiting list, Baseline, N = 12	Waiting list, 5 week, N = 12
CDRS-R (Mean change for 5 week data) Child Depression Rating Scale Revised; SDs imputed by reviewer Mean (SD)	39.6 (8.92)	-14.7 (8.2)	39.5 (8.89)	-1.1 (8.18)
Anxiety (Mean change for 5 week data) Spence Anxiety Scale; SDs imputed by reviewer Mean (95% CI)	29.1 (22.8 to 35.3)	-0.97 (-6.6 to 4.5)	26.4 (18.3 to 34.4)	-5.83 (-13 to 1.3)
Anxiety (Mean change for 5 week data) Spence Anxiety Scale; SDs imputed by reviewer Mean (SD)	29.1 (12.97)	-0.97 (11.51)	26.4 (12.67)	-5.83 (9.21)
Remission Score less than 30 on CDRS-R No of events	n = NA ; % = NA	n = 15 ; % = 78.9	n = NA ; % = NA	n = 4 ; % = 46.4

CDRS-R - Polarity - Lower values are better
Anxiety - Polarity - Lower values are better
Remission - Polarity - Higher values are better

Quality of life

Outcome	SPARX, Baseline, N = 19	SPARX, 5 week, N = 19	Waiting list, Baseline, N = 12	Waiting list, 5 week, N = 12
Quality of life (Mean change for 5 week data) Paediatric Quality of Life Enjoyment and Satisfaction Questionnaire (PQ-LES-Q); SD imputed by reviewer Mean (95% CI)	36.6 (32.7 to 40.4)	1.3 (-2.3 to 4.9)	33.7 (28.7 to 38.8)	1.74 (-3 to 6.5)
Quality of life (Mean change for 5 week data) Paediatric Quality of Life Enjoyment and Satisfaction Questionnaire (PQ-LES-Q); SD imputed by reviewer Mean (SD)	36.6 (7.99)	1.3 (7.47)	33.7 (7.95)	1.74 (7.48)

Quality of life - Polarity - Higher values are better

Study details

Brief name	SPARX (page 532)
Rationale/theory/Goal	To reduce depression, anxiety and hopelessness symptoms and improved quality of life and locus of control scores, (page 530 - 531) Content was based on CBT and included psycho-education, relaxation skills, problem solving, activity scheduling, challenging and replacing negative thinking and social skills.(page 532)
Materials used	Computerised program consisting of seven 30 minute modules (page 532)
Procedures used	The programme includes direct instructional content as well as narrative and experiential learning components. Voice over, written text and music were also used. Images from the programme can be viewed at www.sparx.org.nz.(page 532)

Provider	Minimal supervision from school staff. Each site was visited or telephoned weekly by a PhD candidate with experience working as a clinician in adolescent health and mental health services to address any safety concerns or problems that may have arisen or to support students in the use of the programme.(page 532)
Method of delivery	Online (page 532)
Setting/location of intervention	School (page 532)
Intensity/duration of the intervention	Seven sessions over 5 weeks (page 532)
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	None
Actual treatment fidelity	None

Study details

Brief name	Waiting list control (page 529)
Rationale/theory/Goal	Not applicable
Materials used	Not applicable
Procedures used	Not applicable
Provider	Not applicable
Method of delivery	Not applicable
Setting/location of intervention	School

Intensity/duration of the intervention	Not applicable
Tailoring/adaptation	Not applicable
Unforeseen modifications	Not applicable
Planned treatment fidelity	Not applicable
Actual treatment fidelity	Not applicable

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Individual RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	High *(Participants not meeting eligibility criteria were excluded after randomisation leading to unbalanced groups. Participants and research staff were aware of allocation to interventions. Randomisation happened within schools)*
Overall bias	Risk of bias judgement (objective outcomes)	Not applicable

D.1.10 Fung, 2019

Bibliographic Reference	Fung, J; Kim, JJ; Jin, J; Chen, G; Bear, L; Lau, AS; A Randomized Trial Evaluating School-Based Mindfulness Intervention for Ethnic Minority Youth: exploring Mediators and Moderators of Intervention Effects; Journal of abnormal child psychology; 2019; vol. 47 (no. 1); 1-19

Study details

Study design	Randomised controlled trial (RCT)
Trial registration number	Not reported
Aim	To examine the efficacy of a school-based mindfulness intervention on mental health and emotion regulation outcomes among adolescents in a wait-list controlled trial
Country/geographical location	USA
Setting	Urban public school district
Type of school	Secondary school
UK key stage	Key stage 3
Inclusion criteria	• Scored in the top 20% of the SMFQ in each school
Exclusion criteria	• Active suicidal ideation • Received a probable diagnosis of major depressive disorder
Method of randomisation	Not reported
Method of allocation concealment	Sealed envelope
Unit of allocation	Cohorts within schools
Unit of analysis	Individual
Statistical method(s) used to analyse the data	• ANCOVA analyses • Intention to treat analyses • Missing data handled using the last observation carried forward method

	• Adjusted for clustering (school level <0.01; within school level <0.05)
Attrition	Intervention 68/79 (86.1%) completed 6 month follow up Control 46/66 (69.7%) completed 6 month follow up
Study limitations (author)	• Outcomes were self-reported solely from youth • Study sample was relatively homogenous • Small sample size
Study limitations (reviewer)	Non to add
Source of funding	Spencer Foundation

Study arms

Intervention (N = 79)

Control (N = 66)

Characteristics

Arm-level characteristics

Characteristic	Intervention (N = 79)	Control (N = 66)
Age (year) Mean (SD)	14 (0.34)	14 (0.37)
Male Sample size	n = 27 ; % = 34.2	n = 20 ; % = 30.3
Female Sample size	n = 52 ; % = 65.8	n = 46 ; % = 69.7
Hispanic No of events	n = 39 ; % = 49.4	n = 25 ; % = 37.9
Asian No of events	n = 34 ; % = 43	n = 31 ; % = 47
Caucasian No of events	n = 3 ; % = 3.8	n = 2 ; % = 3
African American No of events	n = 1 ; % = 1.3	n = 2 ; % = 3
Mixed No of events	n = 2 ; % = 2.5	n = 6 ; % = 9

Outcomes

Study timepoints

- Baseline
- 12 week

Emotional distress

Outcome	Intervention, Baseline, N = 79	Intervention, 12 week, N = 68	Control, Baseline, N = 66	Control, 12 week, N = 46
Internalizing problems CBL; Youth self report, 3 point Likert type scale Mean (SD)	66.96 (9.07)	62.6 (17.31)	67.58 (10.45)	68 (15.12)
Stress CBL; Youth self report, 3 point Likert type scale Mean (SD)	2.39 (0.55)	1.94 (0.56)	2.29 (0.55)	2.18 (0.64)

Internalizing problems - Polarity - Lower values are better
Stress - Polarity - Lower values are better

Behavioural outcomes

Outcome	Intervention, Baseline, N = 79	Intervention, 12 week, N = 68	Control, Baseline, N = 66	Control, 12 week, N = 46
Externalizing problems CBL; Youth self report, 3 point Likert type scale Mean (SD)	55.22 (9.33)	52.53 (10.04)	59.67 (14.37)	57.34 (13.33)

Externalizing problems - Polarity - Lower values are better

Study details

Brief name	Learning to BREATHE (page 6)
Rationale/theory/Goal	That mindfulness training enhances the use of cognitive reappraisal, emotional processing and expression and reduces expressive suppression, avoidance fusion, and rumination. This in turn improves symptoms of perceived stress, attention and internalizing and externalizing problems (page 4).
Materials used	Short didactic presentations. Audio recording were provided to support home based practice. (page 6)
Procedures used	In each school, 4 mindfulness groups were held, each consisting of no more than 10 students. 2 were held in the autumn term and a further 2 in the spring term (delayed treatment group). (page 5)
Provider	2 advanced doctoral psychology students led each group. Each had between 1 to 4 years of clinical experience. (page 5)
Method of delivery	Students received a mindfulness-based stress reduction (MBSR) program based on the Learning to BREATHE curriculum (L2B). 2 sessions each were devoted to 6 core themes and included activities such as mindful breathing; a short didactic presentation on the topic of the week; followed by discussion and illustrative activities, and mindfulness meditation. Homework was also set and reviewed (page 6)
Setting/location of intervention	3 US high schools (page 5)

Intensity/duration of the intervention	12 weekly sessions of approximately 50 minutes. (page 5)
Tailoring/adaptation	None
Unforeseen modifications	None
Actual treatment fidelity	The average adherence score was 89.6% (range 70.6%–100%), indicating good adherence to the Learning to Breathe curriculum. (page 6)
Other details	None

Study details

Brief name	Wait list control (abstract)
Rationale/theory/Goal	Not applicable
Materials used	Not applicable
Procedures used	Not applicable
Provider	Not applicable
Method of delivery	Not applicable
Setting/location of intervention	Not applicable
Intensity/duration of the intervention	Not applicable
Tailoring/adaptation	Not applicable
Unforeseen modifications	Not applicable

Planned treatment fidelity	Not applicable
Actual treatment fidelity	Not applicable
Other details	None

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Individual RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	High *(Randomisation happened within schools at two different times so it is possible there was a risk of contamination. Unclear if participants were aware of the intervention allocation but it is likely)*
Overall bias	Risk of bias judgement (objective outcomes)	Not applicable

D.1.11 Fung, 2016

Bibliographic Reference	Fung, Joey; Guo, Sisi; Jin, Joel; Bear, Laurel; Lau, Anna; A pilot randomized trial evaluating a school-based mindfulness intervention for ethnic minority youth.; Mindfulness; 2016; vol. 7 (no. 4); 819-828

Study details

Study design	Randomised controlled trial (RCT)
Trial registration number	Not reported

Study start date	Oct-2013
Study end date	May-2014
Aim	To evaluate the efficacy of a mindfulness-based program in reducing internalizing and externalizing behaviour problems and enhancing emotion regulation among ethnic minority youth
Country/geographical location	United States
Setting	K-8 Elementary schools (combination of elementary and junior high school)
Type of school	Secondary school
UK key stage	Key stage 3
Inclusion criteria	Score in top 20% of PHQ-9 for depression in participating schools
Exclusion criteria	None reported
Method of randomisation	Coin toss
Method of allocation concealment	Not reported
Unit of allocation	Individual
Unit of analysis	Individual
Statistical method(s) used to analyse the data	Intention-to-treat (ITT) analyses were conducted, and the missing data of two students at 3-month follow-up were handled using the last-observation-carried-forward method
Attrition	No dropouts
Study limitations (author)	• Small sample size • heterogeneity • one measure had low internal consistency in this study • no training provided

	• included only child- and parent-report of child behaviour problems and child-report of emotion regulation.
Study limitations (reviewer)	None extra
Source of funding	The research described in this paper was supported by the AAPA-APF Okura Mental Health Leadership Foundation Fellowship from the American Psychological Foundation.

Study arms

Mindfulness (N = 9)

Waiting list (N = 10)

Characteristics

Study-level characteristics

Characteristic	**Study (N = 19)**
Male Sample size	n = 8 ; % = 42
Female Sample size	n = 11 ; % = 58
Latino	n = 11 ; % = 58

Characteristic	Study (N = 19)
Sample size	
Asian Sample size	n = 8 ; % = 42

Outcomes

Study timepoints

- Baseline
- 12 week

Emotional distress

Outcome	Mindfulness, Baseline, N = 9	Mindfulness, 12 week, N = 9	Waiting list, Baseline, N = 10	Waiting list, 12 week, N = 10
CBL Child Behaviour Checklist - Parent - Internalising Mean (SD)	56 (7.75)	50.22 (7.34)	51.44 (9.1)	53.89 (8.49)

CBL - Polarity - Lower values are better

Behavioural outcomes

Outcome	Mindfulness, Baseline, N = 9	Mindfulness, 12 week, N = 9	Waiting list, Baseline, N = 10	Waiting list, 12 week, N = 10
CBL Child Behaviour Checklist - Parent - Externalising Mean (SD)	53.44 (11.88)	49.22 (11.48)	53 (7.45)	51 (4.5)

CBL - Polarity - Lower values are better

Study details

Brief name	Learning to BREATHE (L2B) curriculum (PAGE 821)
Rationale/theory/Goal	To help students understand their thoughts and feelings, to learn how to use mindfulness-based skills to manage emotions, and to provide opportunities for guided group practice. (page 821)
Materials used	Materials used included a short didactic presentation and student workbooks. Audio recordings were also provided to support home based practice. (page 822)
Procedures used	The intervention included twelve 60-minute group sessions, with two sessions on each of six core themes. (page 822)
Provider	Each group was led by two advanced doctoral clinical psychology students. (821)
Method of delivery	Each session consisted of an opening mindful movement, a short didactic presentation on the topic or theme for the week, group activities to illustrate the theme, guided discussion about the activity, and group mindfulness meditation practice. (page 822)
Setting/location of intervention	2 K-8 elementary schools (page 821)
Intensity/duration of the intervention	Weekly sessions of 60 minutes for 12 weeks (abstract and page 822)

Tailoring/adaptation	None
Unforeseen modifications	None
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported
Other details	None

Study details

Brief name	Waiting list (page 821)
Rationale/theory/Goal	Not applicable
Materials used	Not applicable
Procedures used	Not applicable
Provider	Not applicable
Method of delivery	Not applicable
Setting/location of intervention	Not applicable
Intensity/duration of the intervention	Not applicable
Tailoring/adaptation	Not applicable
Unforeseen modifications	Not applicable

Planned treatment fidelity	Not applicable
Actual treatment fidelity	Not applicable
Other details	None

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Individual RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	Some concerns *(Participants were told when they would receive treatment so it is likely that they were aware of treatment allocation.)*
Overall bias	Risk of bias judgement (objective outcomes)	Not applicable

D.1.12 Gaete, 2016

Bibliographic Reference	Gaete, J.; Martinez, V.; Fritsch, R.; Rojas, G.; Montgomery, A. A.; Araya, R.; Indicated school-based intervention to improve depressive symptoms among at risk Chilean adolescents: A randomized controlled trial; BMC Psychiatry; 2016; vol. 16 (no. 1); 276

Study details

Study design	Randomised controlled trial (RCT)

Trial registration number	ISRCTN33871591
Aim	To test the effectiveness of an indicated school-based intervention to reduce depressive symptoms among at-risk adolescents from low-income families
Country/geographical location	Santiago, Chile
Setting	"2 Medio" grade (equivalent to 10 years of education) from eleven municipal schools
Type of school	Secondary school
UK key stage	Key stage 4
Inclusion criteria	• Adolescents attending 2 Medio in a municipal school participating as control schools in the previous study • BDI score ≥10 (among boys) and ≥15 (among girls).
Exclusion criteria	Not reported
Method of randomisation	• Stratified by school • Computer randomisation in a 2:1 ratio
Method of allocation concealment	• Allocation to groups was concealed and took place after all students were recruited in each school. • After individuals were randomly allocated to arms, an independent person formed the intervention groups within the active arm trying to maintain a reasonable balance by sex.
Unit of allocation	Individual
Unit of analysis	Individual
Statistical method(s) used to analyse the data	• Descriptive statistics for baseline data • intention-to-treat analysis for 3-month BDI-II scores representing proportions of students recovered using logistic regression analysis, unadjusted and adjusting for baseline BDI-II score, age and sex

Attrition	Intervention: 187/229 (81.7%) Control: 92/113 (81.4%)
Study limitations (author)	• Lower than expected attendance to sessions • Content of the intervention did not cover the wide range of needs of the participants • The procedures used to deliver the interventions may not have been appealing to the students
Study limitations (reviewer)	None to add
Source of funding	Wellcome Trust

Study arms

Intervention (N = 229)

Control (N = 113)

Characteristics

Arm-level characteristics

Characteristic	**Intervention (N = 229)**	**Control (N = 113)**
Age (years) Mean (SD)	15.92 (0.9)	15.9 (0.9)

Characteristic	Intervention (N = 229)	Control (N = 113)
Male Sample size	n = 108 ; % = 47.2	n = 62 ; % = 54.9
Female Sample size	n = 121 ; % = 52.8	n = 51 ; % = 45.1

Outcomes

Study timepoints

- Baseline
- 3 month

Emotional distress

Outcome	Intervention, Baseline, N = 229	Intervention, 3 month, N = 187	Control, Baseline, N = 113	Control, 3 month, N = 92
Recovery rate (depression) scored <10 (among boys) and <15 (among girls) in the BDI-II at 3 months after completing the intervention No of events	n = NA ; % = NA	n = 94 ; % = 50.3	n = NA ; % = NA	n = 37 ; % = 40.2
BDI-II Beck Depression Inventory II (3 month SDs calculated from 95% CI reported)	22.53 (9.3)	15.1 (10.4)	21.9 (8.5)	15.2 (10.14)

Outcome	Intervention, Baseline, N = 229	Intervention, 3 month, N = 187	Control, Baseline, N = 113	Control, 3 month, N = 92
Mean (SD)				
BDI-II Beck Depression Inventory II (3 month SDs calculated from 95% CI reported) Mean (95% CI)	NR (NR to NR)	15.1 (13.6 to 16.6)	NR (NR to NR)	15.2 (13.1 to 17.3)
RCADS Revised Child Anxiety and Depression Scale (3 month SDs calculated from 95% CIs reported) Mean (SD)	24.07 (8.8)	20.3 (9.36)	24 (8.8)	20.9 (7.73)
RCADS Revised Child Anxiety and Depression Scale (3 month SDs calculated from 95% CIs reported) Mean (95% CI)	NR (NR to NR)	20.3 (19 to 21.7)	NR (NR to NR)	20.9 (19.3 to 22.5)

Recovery rate (depression) - Polarity - Higher values are better
BDI-II - Polarity - Lower values are better
RCADS - Polarity - Lower values are better

Study details

Brief name	**Gaete 2016 page 3** Yo Pienso Siento Actuo (YPSA) [I Think Feel Act]

Rationale/theory/Goal	**Gaete 2016 page 3** CBT-based programme
Materials used	**Gaete 2016 page 3** Facilitators had a detailed manual specifying key learning points and objectives for each session
Procedures used	**Gaete 2016 page 3** • An introductory session • Three sessions dealing with thought restructuring, • Three sessions on problem solving • one closing session with a revision of the previous learning and planning for the future. • Students were contacted prior to the first session to explain the procedure to follow for conducting the sessions.
Provider	**Gaete 2016 page 3** • Two trained psychologists (facilitators) for each group delivered the intervention. (If more than one group took place in a given school, the same facilitators delivered the intervention for all groups in that school, for practical and logistical reasons.) • Facilitators received 2 days of training that covered the identification and management of mental health problems, group management techniques as well as training to deliver the specific intervention.
Method of delivery	**Gaete 2016 page 3** • small groups (8 to 15 students), face to face
Setting/location of intervention	**Gaete 2016 page 3** • Students were told the time and place where the sessions would be delivered. • Head teachers were informed of this so that students were given permission to be absent from some classes if this was needed.

	• No explanation was given to other students for this absence. • Whenever possible, sessions were delivered after school time.
Intensity/duration of the intervention	**Gaete 2016 page 3** 8 weekly sessions lasting 45mins
Tailoring/adaptation	None reported
Unforeseen modifications	None reported
Planned treatment fidelity	**Gaete 2016 page 3** • Weekly supervision groups were provided to perform fidelity checks. • A supervisor met with facilitators and checked if content and methods were used and delivered as intended. • One of the lead authors was available to offer support and advice to the supervisor in logistical issues when needed.
Actual treatment fidelity	Not reported
Other details	None

Study details

Brief name	**Gaete 2016 page 3** Control
Rationale/theory/Goal	Not applicable
Materials used	Not applicable

Procedures used	**Gaete 2016 page 3** • Normal teaching activities and assessments
Provider	Not applicable
Method of delivery	Not applicable
Setting/location of intervention	Not applicable
Intensity/duration of the intervention	Not applicable
Tailoring/adaptation	Not applicable
Unforeseen modifications	Not applicable
Planned treatment fidelity	Not applicable
Actual treatment fidelity	Not applicable
Other details	Not applicable

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Individual RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	Some concerns *(Randomisation was within schools where the headteacher was most likely aware of allocation. Risk of contamination amongst groups)*

Section	Question	Answer
Overall bias	Risk of bias judgement (objective outcomes)	Not applicable

D.1.13 Goossens, 2016

Bibliographic Reference	Goossens, F. X.; Lammers, J.; Onrust, S. A.; Conrod, P. J.; de Castro, B. O.; Monshouwer, K.; Effectiveness of a brief school-based intervention on depression, anxiety, hyperactivity, and delinquency: a cluster randomized controlled trial; European Child and Adolescent Psychiatry; 2016; vol. 25 (no. 6); 639-648

Study details

Study design	Cluster randomised controlled trial
Trial registration number	NTR1920
Aim	To test the effectiveness of Preventure in the Netherlands on a range of mental health outcomes at 2, 6, and 12 months post intervention.
Country/geographical location	Netherlands
Setting	15 schools
Type of school	Secondary school
UK key stage	Key stage 3 NL grades 8-9
Inclusion criteria	• lifetime use of at least one glass of alcohol

	• scoring at least one standard deviation above the sample mean on one of the four personality risk scales (AS, SS, NT, or IMP) of the Substance Use Risk Profile Scale (SURPS) • attending a school where at least five students per personality risk group were eligible and willing to be included in the intervention condition
Exclusion criteria	Not reported
Method of randomisation	Stratified randomisation by level of education provided by the school (only lower secondary education; only higher secondary education; both lower and higher secondary education) and stratified further by school size (50 % largest schools; 50 % smallest schools).
Method of allocation concealment	Not reported
Unit of allocation	Cluster (school)
Unit of analysis	Individual
Statistical method(s) used to analyse the data	• Multivariate regression analysis • Adjusted for clustering • missing data imputed
Attrition	**2 months** intervention: 283/343 (83%) control: 297/356 (84%) **6 months** intervention: 263/343 (78%) control: 289/356 (81%) **12 months**

	intervention: 246/343 (72%) control: 284/356 (80%)
Study limitations (author)	• Intervention is brief and single domain • The fidelity of the implementation was not monitored by means of thorough measurements. • It cannot not be ruled out that the implementation quality was not as high as during the other Preventure studies. • The use of self-reports might have led to measurement errors, due to situational and cognitive influences.
Study limitations (reviewer)	None to add
Source of funding	Not reported

Study arms

Intervention (N = 343)
Cluster n =7

Control (N = 356)
Cluster n = 8

Characteristics

Arm-level characteristics

Characteristic	**Intervention (N = 343)**	**Control (N = 356)**
Age (years)	13.9 (0.98)	14.1 (0.77)

Characteristic	Intervention (N = 343)	Control (N = 356)
Mean (SD)		
Male n calculated by % reported Sample size	n = 161 ; % = 47	n = 203 ; % = 57
Female imputed by reviewer Sample size	n = 182 ; % = 53	n = 153 ; % = 43
Dutch Sample size	n = 298 ; % = 87	n = 310 ; % = 87
Low level of education Sample size	n = 147 ; % = 43	n = 93 ; % = 26

Outcomes

Study timepoints

- Baseline
- 2 month
- 6 month
- 12 month

Emotional distress

Outcome	Intervention, Baseline, N = 343	Intervention, 2 month, N = 283	Intervention, 6 month, N = 263	Intervention, 12 month, N = 246	Control, Baseline, N = 356	Control, 2 month, N = 297	Control, 6 month, N = 289	Control, 12 month, N = 284
Depression [score range 0-60], 20-item Centre for Epidemiological Studies Depression Scale (CES-D) Mean (SD)	16.55 (7.84)	14.76 (6.7)	14.79 (7.55)	15.98 (8.71)	16.44 (7.9)	14.91 (6.68)	14.46 (6.66)	14.94 (6.66)
Anxiety [score range 0-36], Childhood Anxiety Sensitivity Index (CASI) Mean (SD)	7.83 (6.29)	6.88 (6.19)	6.5 (6.07)	6.54 (6.4)	7.85 (5.81)	6.62 (5.67)	6.62 (5.67)	6.84 (5.96)

Depression - Polarity - Lower values are better
Anxiety - Polarity - Lower values are better

Behavioural outcomes

Outcome	Intervention, Baseline, N = 343	Intervention, 2 month, N = 283	Intervention, 6 month, N = 263	Intervention, 12 month, N = 246	Control, Baseline, N = 356	Control, 2 month, N = 297	Control, 6 month, N = 289	Control, 12 month, N = 284
Hyperactivity [score range 0-10] Hyperactivity subscale of strengths and difficulties questionnaire	5.56 (2.32)	NR (NR)	5.36 (2.29)	5.3 (2.44)	5.31 (2.21)	NR (NR)	5.12 (2.34)	5.15 (2.36)

Outcome	Intervention, Baseline, N = 343	Intervention, 2 month, N = 283	Intervention, 6 month, N = 263	Intervention, 12 month, N = 246	Control, Baseline, N = 356	Control, 2 month, N = 297	Control, 6 month, N = 289	Control, 12 month, N = 284
Mean (SD)								

Hyperactivity - Polarity - Lower values are better

Study details

Brief name	**Goosens 2016 page 639** Preventure
Rationale/theory/Goal	**Goosens 2016 page 639** Personality targeted approach
Materials used	**Goosens 2016 page 642** • Student manuals
Procedures used	**Goosens 2016 page 642** Sessions were tailored to one of the four personality profiles, so there were four different groups of two sessions each.
Provider	**Goosens 2016 page 642** • Qualified counsellors and co-facilitators • All counsellors had practiced the two group sessions at a pilot school with supervision and feedback.

Method of delivery	**Goosens 2016 page 642** • Group, face to face
Setting/location of intervention	**Goosens 2016 page 642** • Schools, not further described
Intensity/duration of the intervention	**Goosens 2016 page 642** • 2 sessions lasting 90 mins each
Tailoring/adaptation	**Goosens 2016 page 642** • The original student manuals, developed in Canada, were translated and adapted to the Dutch cultural and school context
Unforeseen modifications	Not reported
Planned treatment fidelity	**Goosens 2016 page 642** • Each counsellor's first two group sessions were observed by a supervisor. • Feedback was provided during four peer reviewing meetings under the guidance of the same supervisor.
Actual treatment fidelity	**Goosens 2016 page 647** • Reported as not being able to rule out that implementation was not as high as other Preventure trials
Other details	None

Study details

Brief name	**Goosens 2016 page 642** Control
Rationale/theory/Goal	Not applicable
Materials used	Not applicable
Procedures used	**Goosens 2016 page 642** • No further intervention received
Provider	Not applicable
Method of delivery	Not applicable
Setting/location of intervention	Not applicable
Intensity/duration of the intervention	Not applicable
Tailoring/adaptation	Not applicable
Unforeseen modifications	Not applicable
Planned treatment fidelity	Not applicable
Actual treatment fidelity	Not applicable
Other details	None

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Cluster RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	Some concerns *(Unclear if intervention allocation was known, subjective outcomes)*
Overall bias	Risk of bias judgement (Objective outcomes)	Not applicable

D.1.14 Humphrey, 2020

Bibliographic Reference	Humphrey, N.; Panayiotou, M.; Bounce Back: randomised trial of a brief, school-based group intervention for children with emergent mental health difficulties; European Child and Adolescent Psychiatry; 2020

Study details

Study design	Cluster randomised controlled trial
Trial registration number	ISRCTN11162672
Aim	• To examine its efficacy in reducing emotional symptoms (primary outcome) and behavioural difficulties, and improving problem-solving and self-esteem (secondary outcomes), among children with emergent MHDs. • To determine the extent to which the presence and/or magnitude of intervention effects varied as a function of intervention compliance.
Country/geographical location	England

Setting	24 mainstream, state-funded primary schools in Newham, England
Type of school	Primary school
UK key stage	Key stage 2
Inclusion criteria	Participants that reported at least one indicator of an emerging mental health disorder as assessed by the teacher referring them on the basis of target population criteria guidance used in the HeadStart programme.
Exclusion criteria	Suicidal thoughts (reported as an example)
Method of randomisation	Schools were randomly allocated by an independent research associate at the authors' host institution.
Method of allocation concealment	Not reported
Unit of allocation	Cluster (school)
Unit of analysis	Individual (student)
Statistical method(s) used to analyse the data	• Chi-squared and Cramer's V were used to measure the statistical significance of differences between the intervention and control groups. • Protocol-stage power calculations were based on 24 clusters (average cluster size = 14), power and alpha thresholds of 0.80 and 0.05, respectively, and estimated intracluster correlation coefficient (ICC) of 0.03 and pre–post correlation of 0.50 for the primary outcome (emotional symptoms). • Administrative data pertaining to participants' ethnicity, FSM eligibility, sex, SEN status, and year group (5 vs. 6) were used as covariates and compliance predictors in intention to treat (ITT) and complier average causal effect estimation (CACE) analyses.
Attrition	Bounce Back: 140/160 = 12.5% attrition Control: 141/166 = 15/1% attrition
Study limitations (author)	The study took place in a single London borough (Newham), meaning that the results reported here may not be generalisable to other settings.
Study limitations (reviewer)	Lack of information on method of allocation concealment. Lack of detail on author limitations.

Source of funding	The data used in this study were collected as part of the Head- Start learning program and supported by funding from the National Lottery Community Fund, grant R118420

Study arms

Bounce Back (N = 160)
12 schools consisting of 160 pupils (Delivered in groups by trained youth practitioner)

Control (N = 166)
12 schools consisting of 166 pupils

Characteristics

Study-level characteristics

Characteristic	**Study (N = 326)**
Age (years) Range	9 to 11

Arm-level characteristics

Characteristic	**Bounce Back (N = 160)**	**Control (N = 166)**
Male Sample size	n = 71 ; % = 44.4	n = 89 ; % = 53.6

Characteristic	Bounce Back (N = 160)	Control (N = 166)
Female Sample size	n = 89 ; % = 55.6	n = 77 ; % = 46.4
White or White-British Sample size	n = 28 ; % = 16.9	n = 31 ; % = 18.7
Eligible for free school meals Sample size	n = 48 ; % = 30	n = 56 ; % = 33.7
SEND Sample size	n = 26 ; % = 16.4	n = 37 ; % = 22.3

Outcomes

Study timepoints

- 0 week (Endpoint (classified as immediate post-intervention follow-up (T2) in the publication))

Outcomes

Outcome	Bounce Back, 0 week, N = 160	Control, 0 week, N = 166
Behavioural outcomes - Behavioural Problems Measured using Me and My Feelings Measure (self-reported) Sample size	n = 140 ; % = 87.5	n = 141 ; % = 84.9

Outcome	Bounce Back, 0 week, N = 160	Control, 0 week, N = 166
Behavioural outcomes - Behavioural Problems Measured using Me and My Feelings Measure (self-reported) Mean (SD)	2.76 (2.52)	3.02 (2.19)
Social and emotional skills - Self-esteem Measured using the Student Resilience Survey (self-reported) Sample size	n = 140 ; % = 87.5	n = 141 ; % = 84.9
Social and emotional skills - Self-esteem Measured using the Student Resilience Survey (self-reported) Mean (SD)	11.98 (2.51)	11.51 (2.77)

Behavioural outcomes - Behavioural Problems - Polarity - Lower values are better
Social and emotional skills - Self-esteem - Polarity - Higher values are better

Study details

Brief name	Bounce Back (BB). p. 2
Rationale/theory/Goal	The theoretical underpinning of BB is the academic resilience framework. p. 2
Materials used	Session plans, step-by-step participant guidance to support their learning, prompt cards, inspirational and motivational case studies, and intervention workbook/journals. p. 2
Procedures used	• Participants learn about ten different aspects of their lives corresponding to the academic resilience framework needs (e.g. sleep hygiene, friendships, responsibilities, obligations and consequences, problems and solutions) and how these link to maintaining well-being and emotional resilience. • Using an action learning approach, each participant sets a weekly personal behaviour challenge and rates their progress towards achieving it.

	• Participants are provided with an intervention workbook to guide their learning. p. 2
Provider	Trained youth practitioner (YP). p. 2
Method of delivery	In groups of up to 15. p. 2
Setting/location of intervention	Delivered during the school day. p. 2
Intensity/duration of the intervention	Ten weekly sessions that are up to an hour. p. 2
Tailoring/adaptation	None reported
Unforeseen modifications	None reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported

Study details

Brief name	Practice-as-usual. p. 2
Rationale/theory/Goal	Not reported
Materials used	Not reported
Procedures used	Not reported
Provider	Not reported
Method of delivery	Not reported

Setting/location of intervention	Not reported
Intensity/duration of the intervention	Not reported
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Cluster RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	Some concerns *(Some concerns over lack of information on blinding)*
Overall bias	Risk of bias judgement (Objective outcomes)	Not applicable

D.1.15 Hunt, 2009

Bibliographic Reference	Hunt, Caroline; Andrews, Gavin; Crino, Rocco; Erskine, Alicia; Sakashita, Chika; Randomized controlled trial of an early intervention programme for adolescent anxiety disorders.; The Australian and New Zealand journal of psychiatry; 2009; vol. 43 (no. 4); 300-4

Study details

Study design	Cluster randomised controlled trial
Trial registration number	ACTRN012607000254493
Study start date	2001
Aim	To assess the effectiveness of an indicated early intervention and prevention programme for anxiety disorders when conducted by school staff
Country/geographical location	Sydney, Australia
Setting	19 Catholic secondary schools in the metropolitan area
Type of school	Secondary school
UK key stage	Key stage 3
Inclusion criteria	Children at risk for the development of an anxiety disorder using a cut-off score of 11, 1 SD above the average score based on an age-related normative sample
Exclusion criteria	• Did not speak English at home. • Had substantial learning problems, disability or developmental delay. • Clearly had no anxiety problems.
Method of randomisation	Not reported
Method of allocation concealment	Clinical assessors were blinded to allocation
Unit of allocation	School
Unit of analysis	Individual

Statistical method(s) used to analyse the data	• Adjusted for clustering. (ICCs reported for outcome measures: SCAS 0.079, CDI 0.048, RCMA 0.083) • Intention to treat analysis • Missing data handled by using last observation carried forward measures
Attrition	**2 year follow up** 111 students in the intervention sample (81.6% of the initial intervention sample) 117 students in the monitoring sample (94.4% of the initial monitoring sample) **4 year follow up** 103 students in the intervention sample (75.7% of the initial intervention sample) 86 students in the monitoring sample (69.4% of the initial sample)
Study limitations (author)	None reported
Study limitations (reviewer)	None
Source of funding	Grant from the National Health and Medical Research Council of Australia

Study arms

Intervention (N = 259)
Cluster = 10

Control (N = 137)
Cluster = 9

Characteristics

Study-level characteristics

Characteristic	**Study (N = 1120)**
Age (years) Range	11 to 13
Age (years) Mean (SD)	12.05 (0.4)
Male Sample size	n = 638 ; % = 57
Female Sample size	n = 482 ; % = 43
SEND Excluded from population Sample size	n = 0 ; % = 0

Outcomes

Study timepoints

- Baseline
- 2 year
- 4 year

Emotional distress

Outcome	Intervention, Baseline, N = 136	Intervention, 2 year, N = 136	Intervention, 4 year, N = 136	Control, Baseline, N = 124	Control, 2 year, N = 124	Control, 4 year, N = 124
Anxiety Spence Childhood Anxiety Scale Mean (SD)	38.1 (15.3)	27.2 (16)	23.7 (14.5)	32 (18.1)	24.7 (14)	23.9 (15.3)
Depression Children's Depression Inventory (CDI) Mean (SD)	14.3 (8.2)	11.6 (8.3)	10.2 (8)	12.6 (8.5)	11.4 (8.3)	10.8 (8.5)

Anxiety - Polarity - Lower values are better
Depression - Polarity - Lower values are better

Study details

Brief name	FRIENDS (page 301)
Rationale/theory/Goal	Reference provided to detail of intervention but none reported (page 301)
Materials used	None reported
Procedures used	Strategies taught within the programme included learning to be aware of symptoms of anxiety, to relax, to challenge unhelpful thoughts, to use graded exposure to overcome avoidance, and problem solving (page 301)
Provider	school counsellors assisted by support teachers, who had attended a 2 day training workshop. (page 302)

Method of delivery	Group face to face session (page 302)
Setting/location of intervention	School (page 301)
Intensity/duration of the intervention	10 weekly 50 minutes group sessions with two booster sessions (conducted 1 and 3 months following the completion of treatment), The intervention also included two parent sessions as well. (page 301)
Tailoring/adaptation	None reported
Unforeseen modifications	None reported
Planned treatment fidelity	School counsellors completed a measure after each group session of how well they believed that the aims of each session had been met, and were asked to audio-tape group sessions. (page 302)
Actual treatment fidelity	Less than half schools provided rateable audiotapes, which showed that 55% of session aims were rated as having been met either moderately or extremely well. In contrast to the core activities for each session, the setting and review of self-practice tasks were rated as being poorly implemented or were not conducted at all.(page 302)

Study details

Brief name	Monitoring control
Rationale/theory/Goal	Not applicable
Materials used	Not applicable
Procedures used	Not applicable
Provider	Not applicable
Method of delivery	Not applicable
Setting/location of intervention	School
Intensity/duration of the intervention	Not applicable

Tailoring/adaptation	Not applicable
Unforeseen modifications	Not applicable
Planned treatment fidelity	Not applicable
Actual treatment fidelity	Not applicable

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Cluster RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	Low
Overall bias	Risk of bias judgement (Objective outcomes)	Not applicable

D.1.16 Livheim, 2015

Bibliographic Reference	Livheim, Fredrik; Hayes, Louise; Ghaderi, Ata; Magnusdottir, Thora; Hogfeldt, Anna; Rowse, Julie; Turner, Simone; Hayes, Steven C.; Tengstrom, Anders; The effectiveness of Acceptance and Commitment Therapy for adolescent mental health: Swedish and Australian pilot outcomes *AUSTRALIA*; Journal of Child and Family Studies; 2015; vol. 24 (no. 4); 1016-1030

Study details

Study design	Randomised controlled trial (RCT)
Trial registration number	Not reported
Aim	To test the hypothesis that a targeted ACT group intervention for adolescents would be more effective than a treatment as usual (TAU) control condition on the primary outcome variable of depression
Country/geographical location	Australia
Setting	5 Australian high schools (1 providing alternative provision) (4 in largely populated area and 1 in a small town.)
Type of school	Secondary school
UK key stage	Key stage 3 Key stage 4 Post-16
Inclusion criteria	Nominated by school counsellor/welfare coordinators if they were experiencing mild to moderate depressive symptoms including: • anxious thoughts • change in appetite or weight • depressed mood • feelings of worthlessness • irritability • loss of interest • reduced ability at school • social withdrawal Also included on the basic of a brief clinical interview

Exclusion criteria	• Experiencing severe symptoms, suicidal or complete withdrawal from school
Method of randomisation	Random number table
Method of allocation concealment	Names were concealed from the researchers and school personnel
Unit of allocation	Individual
Unit of analysis	Individual
Statistical method(s) used to analyse the data	• Mixed Model Repeated Measures (MMRM) was used to investigate effects for data collected at pre and post • Adjusted for missing data • Intention to treat analysis
Attrition	Completed post data: Intervention: 29/32 (90.1%) Control: 19/20 (95%)
Study limitations (author)	• No long term follow up • Relatively small sample size • Participants were all girls • Participation was voluntary • Difference in baseline depression levels between intervention and control group
Study limitations (reviewer)	In 2 schools the school counsellor delivered the intervention but were also responsible for providing treatment as usual in the control group with may have lead to contamination.
Source of funding	Not reported

Study arms

ACT (N = 32)

TAU (N = 26)

Characteristics

Study-level characteristics

Characteristic	**Study (N = 58)**
Age (years) Range	14 to 15
Female Sample size	n = 58 ; % = 100
Male Sample size	n = 0 ; % = 0
Ethnicity Australian born Sample size	n = 58 ; % = 10
Socioeconomic status Living with mother and father Sample size	n = 46 ; % = 80

Outcomes

Study timepoints

- Baseline
- 8 week (The post-intervention was at 8 weeks for the intervention. The control group was at 12 weeks which is the standard care provide by the school for students identified as at risk)

Emotional distress

Outcome	ACT, Baseline, N = 32	ACT, 8 week, N = 32	TAU, Baseline, N = 32	TAU, 8 week, N = 32
RADS-2 Reynolds adolescent depression scale. SD imputed by reviewer Mean (SE)	69.95 (2.72)	64.95 (4.17)	59.38 (3.37)	66.17 (5.05)
RADS-2 Reynolds adolescent depression scale. SD imputed by reviewer Mean (SD)	66.95 (15.4)	64.95 (23.6)	59.38 (19.06)	66.17 (28.6)

RADS-2 - Polarity - Lower values are better

Study details

Brief name	**Livheim 2015 page 1018** ACT Experiential Adolescent Group
Rationale/theory/Goal	**Livheim 2015 page 1017** The goal of ACT is to: • increase psychological flexibility • to change or persist in behaviour in accordance with one's values ACT uses a unified model through six core processes: defusion, acceptance, flexible attention to the present moment, self-as-context, values, and committed action. When present, these six core processes together make up the construct psychological flexibility
Materials used	Not reported
Procedures used	**Livheim 2015 page 1018** The program uses experiential mediums, for example painting and role-play, to facilitate adolescents' experience of the six ACT processes.
Provider	**Livheim 2015 page 1018** Registered psychologists and clinical psychology graduates (3 schools) or the school's own counsellor (2 schools) All staff received a minimum2 days training in ACT and were supervised by the authors of the program.
Method of delivery	**Livheim 2015 page 1018** Group face to face
Setting/location of intervention	**Livheim 2015 page 1018**

	Schools
Intensity/duration of the intervention	**Livheim 2015 page 1018** 8 weeks
Tailoring/adaptation	None
Unforeseen modifications	None
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported
Other details	None

Study details

Brief name	**Liveheim 2015 page 1018** Treatment as usual
Rationale/theory/Goal	Not applicable
Materials used	Not applicable
Procedures used	**Livheim 2015 page 1018** Monitoring support from the school counsellor, which is the standard care provide by the school for students identified as at risk
Provider	**Livheim 2015 page 1018** School counsellor

Method of delivery	Not applicable
Setting/location of intervention	**Livheim 2015 page 1018** School
Intensity/duration of the intervention	**Livheim 2015 page 1018** 12 weeks
Tailoring/adaptation	None
Unforeseen modifications	None
Planned treatment fidelity	None
Actual treatment fidelity	None
Other details	None

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Individual RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	Some concerns *(Randomisation occurred within schools so it is likely that treatment allocation was known. There is a risk of contamination especially in the schools where the school counsellors might have delivered both intervention and control conditions)*
Overall bias	Risk of bias judgement (objective outcomes)	Not applicable

D.1.17 Loevaas, 2020

Bibliographic Reference	Loevaas, M.E.S.; Lydersen, S.; Sund, A.M.; Neumer, S.-P.; Martinsen, K.D.; Holen, S.; Patras, J.; Adolfsen, F.; Rasmussen, L.-M.P.; Reinfjell, T.; A 12-month follow-up of a transdiagnostic indicated prevention of internalizing symptoms in school-aged children: The results from the EMOTION study; Child and Adolescent Psychiatry and Mental Health; 2020; vol. 14 (no. 1); 15
Associated Reference	Martinsen, Kristin D; Rasmussen, Lene Mari P; Wentzel-Larsen, Tore; Holen, Solveig; Sund, Anne Mari; Lovaas, Mona Elisabeth S; Patras, Joshua; Kendall, Philip C; Waaktaar, Trine; Neumer, Simon-Peter; Prevention of anxiety and depression in school children: Effectiveness of the transdiagnostic EMOTION program.; Journal of consulting and clinical psychology; 2019; vol. 87 (no. 2); 212-219

Study details

Study design	Cluster randomised controlled trial
Trial registration number	2013/1909
Study start date	2014
Study end date	2017
Aim	To investigate whether the differences between the groups- (EMOTION and control) continued to increase from postintervention to the 12-month follow up for both child and parental reported symptoms
Country/geographical location	Norway
Setting	36 public schools, covering both rural and urban areas in Norway
Type of school	Primary school
UK key stage	Key stage 2

Inclusion criteria	Children aged 8-12 years who scored above a predetermined cut-off on either anxious (The Multidimensional Anxiety Scale for Children, child version or depressive symptoms (The Mood and Feelings Questionnaire—short form, child version (SMFQ-C) ≥ 7 points regardless of gender
Exclusion criteria	Mental retardation, autism, or being potentially unable to benefit from a group intervention
Method of randomisation	Prior to randomization the schools were matched on geographic location, size and demographic factors. Schools were then randomized into 18 intervention schools and 18 control schools.
Method of allocation concealment	Not reported
Unit of allocation	Cluster (school)
Unit of analysis	Individual (student)
Statistical method(s) used to analyse the data	• ICC not reported • The data were analysed using linear mixed models (LMM), with the Multidimensional Anxiety Scale for Children (MASC) and Mood and Feelings Questionnaire-short form (SMFQ) symptom measures for child and parent reports as dependent variables. • Intention to treat analyses (ITT) was used. • All mixed models were repeated with the child nested within school and school as a second random effect. • The authors compared the intervention and control groups at baseline in terms of the child and parent versions of the MASC and SMFQ, child age, child gender and sociodemographic factors (t test for scale variables and Pearson's Chi squared test for dichotomous variables). • Completers (those who had data for at least one follow-up point) and dropouts were compared using Student's t-test. • P-values < .05 were considered statistically significant and 95% confidence intervals (CIs) are reported where relevant.
Attrition	EMOTION program: 269/434 = 38.0% attrition Control: 406/439 = 7.5% attrition
Study limitations (author)	• The sample appeared to be skewed toward parents with more education and average or above-average income levels. Therefore, the authors could not rule out the possibility that the sample was only representative of those children in higher socioeconomic classes. • No demographic information was available for 22% of children.

	• Coping Kids study schools were matched on demographic factors prior to randomisation, but no additional steps were taken to ensure inclusion of children from diverse socioeconomic backgrounds. • Inclusion in the present study was based on child self-report only.
Study limitations (reviewer)	Lack of information on method of allocation concealment
Source of funding	The project was founded by the Norwegian Research Council, award number 228846/H10

Study arms

EMOTION program (N = 434)
18 schools consisting of 434 students

Control (N = 439)
18 schools consisting of 439 students

Characteristics

Arm-level characteristics

Characteristic	**EMOTION program (N = 434)**	**Control (N = 439)**
Age (years) Mean (SD)	10.2 (0.95)	10.01 (0.86)
Male Sample size	n = 137 ; % = 38.3	n = 197 ; % = 45.1

Characteristic	EMOTION program (N = 434)	Control (N = 439)
Female Sample size	n = 221 ; % = 61.7	n = 240 ; % = 54.9
Family income Mean (SD)	4.66 (1.23)	4.67 (1.26)

Outcomes

Study timepoints

- 12 month (Follow-up)

Outcomes

Outcome	EMOTION program, 12 month, N = 434	Control, 12 month, N = 439
Multidimensional Anxiety Scale for Children (MASC) Multidimensional Anxiety Scale for Children. 39 point child self report assessing anxiety in previous 2 weeks Sample size	n = 269 ; % = 62	n = 406 ; % = 92.5
Multidimensional Anxiety Scale for Children (MASC) Multidimensional Anxiety Scale for Children. 39 point child self report assessing anxiety in previous 2 weeks Mean (SE)	49.13 (0.99)	51.76 (0.9)

Outcome	EMOTION program, 12 month, N = 434	Control, 12 month, N = 439
Mood and Feelings Questionnaire-short form Mood and Feelings Questionnaire Short version. 13 questions assessing cognitive, affective and behavioural-related depressive symptoms in the previous 2 weeks Sample size	n = 269 ; % = 62	n = 406 ; % = 92.5
Mood and Feelings Questionnaire-short form Mood and Feelings Questionnaire Short version. 13 questions assessing cognitive, affective and behavioural-related depressive symptoms in the previous 2 weeks Mean (SE)	6.75 (0.33)	6.48 (0.3)

Multidimensional Anxiety Scale for Children (MASC) - Polarity - Lower values are better
Mood and Feelings Questionnaire-short form - Polarity - Lower values are better

Study details

Brief name	EMOTION. p. 5
Rationale/theory/Goal	CBT-based. p. 5
Materials used	The EMOTION manual. p. 3
Procedures used	Both the control and intervention schools were given a half-day seminar focusing on increasing knowledge about internalising symptoms in children and how schools can support these children. p. 3 **Child group**

	1. Introduction 2. Recognising emotions, coping and goal setting 3. Problem solving 4. Exposure, cognitive restructuring 5. Exposure, positive self-schema, cognitive restructuring 6. Integration of skills, exposure and Closure **Parental group** 1. Introduction 2. Positive parenting 3. Positive reinforcement and psychoeducation 4. Exposure and behavioural activation 5. Problem solving, exposure, behavioural activation 6. Exposure, behavioural activation, cognitive restructuring 7. Cognitions, and closure. p. 5
Provider	Group leaders, with different professional background (e.g. health nurses, educational and psychological counsellors and psychologists). p. 3
Method of delivery	Groups of three to seven children. p. 3
Setting/location of intervention	Child group: At the schools, during school hours or immediately after. Parent group: In the afternoon at the school premises. p. 3
Intensity/duration of the intervention	Child group: Two times a week for 10 weeks. Parent group: Seven times over the 10-week period. p. 3
Tailoring/adaptation	None reported
Unforeseen modifications	None reported

Planned treatment fidelity	To ensure fidelity to the program 17% of the sessions were videotaped and rated (from 0 = None to 6 = Thorough) using the Competence and Adherence for Cognitive Behavioural Therapy (CAS-CBT). p. 3
Actual treatment fidelity	The fidelity were supported (M = 3.55, SD = 1.24). p. 3

Study details

Brief name	Control. p. 3
Rationale/theory/Goal	Not reported
Procedures used	Both the control and intervention schools were given a half-day seminar focusing on increasing knowledge about internalising symptoms in children and how schools can support these children. Control schools the existing structure for identifying and helping children with internalising symptoms, p. 3
Provider	Not reported
Method of delivery	Not reported
Setting/location of intervention	Not reported
Intensity/duration of the intervention	Not reported
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported

Actual treatment fidelity	Not reported

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Cluster RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	High *(Concerns due to large loss to follow-up in the intervention arm and lack of information on blinding)*
Overall bias	Risk of bias judgement (Objective outcomes)	Not applicable

D.1.18 Matos, 2019

Bibliographic Reference	Matos, A.P.; Pinheiro, M.D.R.; Costa, J.J.; do Ceu Salvador, M.; Arnarson, E.O.; Craighead, W.E.; Prevention of Initial Depressive Disorders Among at-Risk Portuguese Adolescents; Behavior Therapy; 2019; vol. 50 (no. 4); 743-754

Study details

Study design	Non-randomised controlled trial (NRCT)
Trial registration number	Not reported
Aim	To evaluate whether a developmentally based behavioural and cognitive program that prevented the initial episode of depressive disorders among Icelandic adolescents could be adapted to prevent depressive disorders among at risk Portuguese adolescents.

Country/geographical location	Within 110km Coimbra, Portugal
Setting	27 schools
Type of school	Secondary school
UK key stage	Key stage 3 Key stage 4
Inclusion criteria	• Experiencing subsyndromal depressive symptoms • Never met clinical criteria for a depressive disorder
Exclusion criteria	None reported
Method of randomisation	Not applicable
Method of allocation concealment	Not reported
Unit of allocation	Individual
Unit of analysis	Individual
Statistical method(s) used to analyse the data	• Baseline comparisons were evaluated with t-tests or chi-squared analyses • Diagnosed depressive disorders were evaluated by estimating survival curves of new episodes of depressive disorders and rates of disorders for the 24 month data using the Cox proportional hazards model
Attrition	119/168 (70.8%) students participated at 24 month follow up 56 (80%) intervention and 63 (64.3%) control
Study limitations (author)	• Not an RCT so the results can be open to alternative interpretations • It is possible that those who chose to participate in the program were those who were less likely to develop depressive disorders • Small sample size

Study limitations (reviewer)	• High attrition • Self-selective intervention
Source of funding	• One author (WEC) received royalties from John Wiley & Sons • His research is also supported by the NIH, the Mary and John Brock Foundation and the Fuqua family foundations

Study arms

Intervention (N = 70)

Control (N = 98)

Characteristics

Arm-level characteristics

Characteristic	Intervention (N = 70)	Control (N = 98)
Age years Mean (SD)	14.06 (0.88)	14.14 (0.87)
Male Sample size	n = 17 ; % = 24.3	n = 29 ; % = 29.6

Characteristic	Intervention (N = 70)	Control (N = 98)
Female Sample size	n = 53 ; % = 75.7	n = 69 ; % = 70.4
Low Sample size	n = 39 ; % = 55.7	n = 62 ; % = 63.3
Medium Sample size	n = 30 ; % = 42.9	n = 22 ; % = 22.4
High Sample size	n = 1 ; % = 1.4	n = 14 ; % = 14.3
Children's Depression Inventory (CDI) 27-item self-report Mean (SD)	14.69 (5.11)	15.16 (5.64)

Outcomes

Study timepoints

- 24 month

Emotional distress

Outcome	Intervention, 24 month, N = 56	Control, 24 month, N = 63
Depressive disorder diagnosis No of events	n = 2 ; % = 3.6	n = 12 ; % = 19

Depressive disorder diagnosis - Polarity - Lower values are better

Study details

Brief name	**Matos 2019 page 5** Prevention Program
Rationale/theory/Goal	**Matos 2019 page 5** • Based on the Icelandic "Thoughts and Feelings" Program
Materials used	**Matos 2019 page 5** • group leader and student manuals (Translated from Icelandic to English then to Portuguese)
Procedures used	**Matos 2019 page 6** • Introduction to the group • Presentation of the programme and the topics to be covered during the programme • implementation of behavioural interventions (e.g. relaxation training and monitoring changes of activity levels) • Cognitive interventions including thoughts and feelings monitoring, correcting cognitive processing errors, and explanation of relationships of thoughts, and fundamental self-beliefs • problem solving

	• review and use of programmes coping strategies to prevent depression.
Provider	**Matos 2019 page 5** • Consulting psychologists
Method of delivery	**Matos 2019 page 5** • Group, face to face
Setting/location of intervention	**Matos 2019 page 5** • School setting (not further described)
Intensity/duration of the intervention	**Matos 2019 page 5** 14 x 90 minute session delivered weekly
Tailoring/adaptation	**Matos 2019 page 6** • Programme was adapted for use with Portuguese students
Unforeseen modifications	None reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported
Other details	**Matos 2019 page 3**

	Students chose whether to have the intervention or control

Study details

Brief name	**Matos 2019 page 6** Assessment only
Rationale/theory/Goal	Not applicable
Materials used	Not applicable
Procedures used	Not applicable
Provider	Not applicable
Method of delivery	Not applicable
Setting/location of intervention	Not applicable
Tailoring/adaptation	Not applicable
Unforeseen modifications	Not applicable
Planned treatment fidelity	Not applicable
Other details	**Matos 2019 page 6** Participants in the control group chose not to receive the intervention

Critical appraisal - ROBINS-I: a tool for assessing risk of bias in non-randomised studies of interventions

Section	Question	Answer
Overall bias	Risk of bias judgement	Moderate *(Objective outcome)*

D.1.19 McArthur, 2013

Bibliographic Reference	McArthur K; Cooper M; Berdondini L; School-based humanistic counseling for psychological distress in young people: pilot randomized controlled trial.; Psychotherapy research : journal of the Society for Psychotherapy Research; 2013; vol. 23 (no. 3)
Secondary publication(s)	Rupani, Pooja, Cooper, Mick, McArthur, Katherine et al. (2014) The goals of young people in school-based counselling and their achievement of these goals. Counselling & Psychotherapy Research 14(4): 306-314

Study details

Study design	Randomised controlled trial (RCT)
Trial registration number	Not reported
Aim	To pilot a set of procedures for evaluating school-based humanistic counselling (SBHC) and obtaining indications of effect.
Country/geographical location	Scotland, UK
Setting	3 secondary schools in the Glasgow region
Type of school	Secondary school
UK key stage	Key stage 3

	Key stage 4 Post-16
Inclusion criteria	• aged at least 13 at baseline assessment • experiencing moderate or high levels of psychological distress (assessed as a score of 5 or more on the emotional symptoms subscale of the Strengths and Difficulties questionnaire) • Considered capable of giving informed consent for participation in the trial • greater than 80% attendance at school (assessed by teaching staff) • not at serious risk of harm to self or other • not planning to leave school within the current academic year
Exclusion criteria	Not reported
Method of randomisation	• Computer randomisation using an online program
Method of allocation concealment	• Allocation details were transferred to a series of sequentially sealed envelopes by an independent researcher • Once young people were accepted into the study the first author (who conducted the baseline assessments and was blind to allocation order) opened the envelopes and informed the young people of their allocation.
Unit of allocation	Individual
Unit of analysis	Individual
Statistical method(s) used to analyse the data	• Per protocol analysis (only one participant dropped out so missing data was not imputed). • Group means were compared using ANCOVA
Attrition	Intervention: 16/16 (100%) completed the study Control: 17/18 (94%) completed the study
Study limitations (author)	• SBHC was compared to an inert control condition so non-specific effects cannot be ruled out as a possible cause of psychological changes • Small sample size means that there were considerable variations across the two conditions at baseline and effect size estimates are less precise.

	• Humanistic affiliation of the research team means that allegiance effects must be taken into account although data collection was carried out by researchers who were blind to allocation. • Generalisability is limited by the lack of diversity in the sample which was mostly composed of young people with a white background. • Randomisation was individual and not cluster-based which may lead to contamination effects • Short follow up time and no economic evaluation
Study limitations (reviewer)	None to add
Source of funding	Not reported

Study arms

School-based humanistic counselling (N = 16)

Waiting list (N = 17)

Characteristics

Arm-level characteristics

Characteristic	**School-based humanistic counselling (N = 16)**	**Waiting list (N = 17)**
Age (years) Mean (SD)	14.13 (1.2)	14.12 (0.6)
Male	n = 10 ; % = 62.5	n = 6 ; % = 35.3

Characteristic	School-based humanistic counselling (N = 16)	Waiting list (N = 17)
Sample size		
Female Sample size	n = 6 ; % = 37.5	n = 11 ; % = 64.7
Scottish Sample size	n = 14 ; % = 87.5	n = 13 ; % = 76.5
Irish Sample size	n = 1 ; % = 6.3	n = 1 ; % = 5.9
British Other Sample size	n = 1 ; % = 6.3	n = 2 ; % = 11.8
Mixed Background Sample size	n = 0 ; % = 0	n = 1 ; % = 5.9
Disabled Sample size	n = 2 ; % = 12.5	n = 1 ; % = 5.9
Less than a month Sample size	n = 1 ; % = 6.3	n = 1 ; % = 5.9
1 to 5 months Sample size	n = 4 ; % = 25	n = 4 ; % = 23.5
6-12 months Sample size	n = 1 ; % = 6.3	n = 4 ; % = 23.5

Characteristic	School-based humanistic counselling (N = 16)	Waiting list (N = 17)
Over a year Sample size	n = 10 ; % = 62.5	n = 8 ; % = 47.1

Outcomes

Study timepoints

- Baseline
- 12 week

Emotional distress

Outcome	School-based humanistic counselling, Baseline, N = 16	School-based humanistic counselling, 12 week, N = 16	Waiting list, Baseline, N = 18	Waiting list, 12 week, N = 17
Young Person's CORE (YP-CORE) 10 items on a 5 point scale (0-4) Mean (SD)	19.44 (6.24)	9.25 (7.26)	19.76 (5.38)	17.47 (6.83)

Young Person's CORE (YP-CORE) - Polarity - Lower values are better

Behavioural outcomes

Outcome	School-based humanistic counselling, Baseline, N = 16	School-based humanistic counselling, 12 week, N = 18	Waiting list, Baseline, N = 16	Waiting list, 12 week, N = 17
SDQ (emotional symptoms, conduct problems, hyperactivity, peer problems) total Mean (SD)	17.99 (5.15)	11.44 (4.98)	18.31 (4.95)	15.47 (5.23)
SDQ (Prosocial subscale) Mean (SD)	7.25 (1.81)	7.81 (1.83)	7.78 (1.65)	7.82 (1.74)

SDQ (emotional symptoms, conduct problems, hyperactivity, peer problems) total - Polarity - Lower values are better
SDQ (Prosocial subscale) - Polarity - Higher values are better

Social and emotional skills, knowledge and attitudes

Outcome	School-based humanistic counselling, Baseline, N = 16	School-based humanistic counselling, 12 week, N = 16	Waiting list, Baseline, N = 18	Waiting list, 12 week, N = 17
RSES Rosenberg Self Esteem Scale Mean (SD)	14.56 (5.3)	20.31 (6.27)	13.92 (4.47)	15.29 (4.62)

RSES - Polarity - Higher values are better

Study details

Brief name	**McArthur 2013 page 359** School-based humanistic counselling
Rationale/theory/Goal	**McArthur 2013 page 356** • A non-directive therapeutic approach • SBHC is founded on the humanistic principle that psychological distress associated with acting in ways that are driven by extrinsic demands and expectations as opposed to intrinsic authentic needs and wants. • Aims to provide young people with an opportunity to reflect on their genuine feelings and experiences such that they can come to find ways of being that are more self-concordant and more attuned to their actual wants and needs.
Materials used	Not reported
Procedures used	**McArthur 2013 page 359** • Counsellors delivered therapy in accordance with a framework which includes basic humanistic competences such as ‘‘Ability to experience and communicate empathy’’ and ‘‘Ability to experience and communicate a fundamentally accepting attitude to clients’’ as well as more specific humanistic competences such as ‘‘Ability to help clients to articulate emotions.’’
Provider	**McArthur 2013 page 359** • 3 practitioners (female) qualified in humanistic therapy to at least postgraduate Diploma level which requires at least 100 hours of supervised practice.
Method of delivery	**McArthur 2013 page 359** • Individual, face to face (not further described)

Setting/location of intervention	**McArthur 2013 page 359** • School (not further described)
Intensity/duration of the intervention	**McArthur 2013 page 359** • One school period (approx 40mins) per week for a school term (up to 9 sessions)
Tailoring/adaptation	None reported
Unforeseen modifications	None reported
Planned treatment fidelity	**McArthur 2013 page 359** • Counselling sessions were audio-recorded to encrypted data files using password-protected digital voice recorders, except when the participant explicitly stated that they preferred not to be recorded. • Ten-minute segments of recorded sessions were randomly selected and independently audited by the first two authors to assess adherence to these competences using the Person-Centred & Experiential Psychotherapy Scale (asks raters to score segments from therapy sessions on dimensions of person-centred and experiential theory consistent with the humanistic competences)
Actual treatment fidelity	**McArthur 2013 page 359** • All segments were deemed to adhere to humanistic competences (mean rating of over 4 out of a maximum possible 6)
Other details	None reported

Study details

Brief name	**McArthur 2013 page 359** Waiting list
Rationale/theory/Goal	Not reported
Materials used	Not reported
Procedures used	**McArthur 2013 page 359-360** • Not offered any formal counselling • informed that they had access to the full psychological support provisions within their school and could access these at any point during the trial
Provider	**McArthur 2013 page 360** • School staff (where applicable)
Method of delivery	Not reported
Setting/location of intervention	**McArthur 2013 page 360** • School (not further described)
Intensity/duration of the intervention	Not reported
Tailoring/adaptation	None reported
Unforeseen modifications	None reported
Planned treatment fidelity	Not reported

Actual treatment fidelity	Not reported
Other details	**McArthur 2013 page 360** • Only one participant accessed additional support and was included in the analysis

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Individual RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	Some concerns *(Outcomes were self-reported and participants were not blinded to allocation. However, control participants had access to existing counselling if they wanted it.)*
Overall bias	Risk of bias judgement (objective outcomes)	Not applicable

D.1.20 McCarty, 2011

Bibliographic Reference	McCarty, Carolyn A; Violette, Heather D; McCauley, Elizabeth; Feasibility of the positive thoughts and actions prevention program for middle schoolers at risk for depression.; Depression research and treatment; 2011; vol. 2011; 241386

Study details

Study design	Randomised controlled trial (RCT)

Trial registration number	Not reported
Aim	The acceptability and changes in targeted outcomes for a new preventative program
Country/geographical location	Seattle, USA
Setting	4 Public Middle schools
Type of school	Secondary school
UK key stage	Key stage 3
Inclusion criteria	Scored higher than 14 (top 25%) on the Mood and Feelings Questionnaire
Exclusion criteria	• clinically elevated externalizing problems • the presence of suicidal ideation • probable diagnoses of Major Depressive Episode on the Patient Health Questionnaire—Adolescent Form • plans to move to a non-participating school • parents who did not speak English.
Method of randomisation	Not reported
Method of allocation concealment	Not reported
Unit of allocation	Individual
Unit of analysis	Individual
Statistical method(s) used to analyse the data	• All analyses were conducted controlling for baseline levels depressive symptoms (CDRS). • Descriptive statistics • General linear model (GLM) repeated measures analyses
Attrition	Able to retain 58 of the original 67 students (86.5%) for all follow up assessments, as well as 60 of their parents (89.5%).

Study limitations (author)	Small sample size
Study limitations (reviewer)	Did not report number of people in each arm at each timepoint
Source of funding	National Institute of Mental Health

Study arms

Intervention (N = 36)

Control (N = 31)

Characteristics

Arm-level characteristics

Characteristic	**Intervention (N = 36)**	**Control (N = 31)**
Age (year) Mean (SD)	12.97 (0.36)	13 (0.4)
Male Sample size	n = 16 ; % = 44.4	n = 17 ; % = 54.8
Female Sample size	n = 20 ; % = 55.6	n = 14 ; % = 45.2

Characteristic	Intervention (N = 36)	Control (N = 31)
White Sample size	n = 24 ; % = 66.7	n = 19 ; % = 61.3
African American Sample size	n = 1 ; % = 2.8	n = 3 ; % = 9.7
Asian Sample size	n = 2 ; % = 5.6	n = 3 ; % = 9.7
Native American Sample size	n = 2 ; % = 5.6	n = 0 ; % = 0
Other Sample size	n = 7 ; % = 9.4	n = 6 ; % = 19.4
Parent Education: HS Diploma/GED/Some College Sample size	n = 13 ; % = 36	n = 12 ; % = 39
Parent Education: Associates/Bachelor's Degree Sample size	n = 18 ; % = 50	n = 15 ; % = 48
Parent Education: Masters/Professional/Doctoral Degree Sample size	n = 5 ; % = 14	n = 4 ; % = 13
Family constellation: Single (1 parent family) Sample size	n = 15 ; % = 42	n = 9 ; % = 29

Characteristic	Intervention (N = 36)	Control (N = 31)
Family constellation: Married (or 2 cohabitating parent) Sample size	n = 21 ; % = 58	n = 22 ; % = 71

Outcomes

Study timepoints

- Baseline
- 6 month
- 18 month

Emotional distress

Outcome	Intervention, Baseline, N = 36	Intervention, 6 month, N = NR	Intervention, 18 month, N = NR	Control, Baseline, N = 31	Control, 6 month, N = NR	Control, 18 month, N = NR
MFQ-C Moods and Feelings Questionnaire - child reported Mean (SD)	14.42 (9.85)	10.86 (10.59)	16.17 (10.83)	14.87 (10.41)	11.67 (6.83)	18.1 (10.96)
MFQ-P Moods and Feelings Questionnaire - parent reported	10.51 (10.17)	7.37 (7.64)	9.28 (8.42)	10.67 (7.22)	7.57 (5.65)	6.01 (5.26)

Outcome	Intervention, Baseline, N = 36	Intervention, 6 month, N = NR	Intervention, 18 month, N = NR	Control, Baseline, N = 31	Control, 6 month, N = NR	Control, 18 month, N = NR
Mean (SD)						
CDRS Mean (SD)	26.17 (7.5)	25.67 (7.77)	27.75 (9.04)	23.95 (6.17)	22.96 (4.01)	27.01 (9.61)

MFQ-C - Polarity - Lower values are better
MFQ-P - Polarity - Lower values are better
CDRS - Polarity - Lower values are better

Study details

Brief name	Positive Thoughts and Actions programme (page 4)
Rationale/theory/Goal	This programme included aspects of behavioural, cognitive, interpersonal, and family-systems interventions. It taught three major skills: thinking positively, taking positive action, and problem solving. Students applied these skills to self-identified problems/goals, and parents were given communication and problem-solving tools to help support their children. (page 5)
Materials used	None reported
Procedures used	Outline and content reported in tabular form (Table 2 page 4)
Provider	Intervention specialist (page 7)
Method of delivery	Group face to face (page 4)
Setting/location of intervention	School (page 4)
Intensity/duration of the intervention	12 weekly group-administered sessions, two home visits with parents and student together, and two group based parent workshops, conducted in the evenings at the students' school. (page 4)

Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported

Study details

Brief name	Usual care (page 4
Rationale/theory/Goal	Not applicable
Materials used	Not reported
Procedures used	Not reported
Provider	Not reported
Method of delivery	Not reported
Setting/location of intervention	School (page 4)
Intensity/duration of the intervention	Not applicable
Tailoring/adaptation	Not applicable
Unforeseen modifications	Not applicable
Planned treatment fidelity	Not applicable

Actual treatment fidelity	Not applicable

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Individual RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	Some concerns
Overall bias	Risk of bias judgement (objective outcomes)	Not applicable

D.1.21 McLoone, 2012

Bibliographic Reference	McLoone, Jordana K; Rapee, Ronald M; Comparison of an anxiety management program for children implemented at home and school: Lessons learned.; School Mental Health: A Multidisciplinary Research and Practice Journal; 2012; vol. 4 (no. 4); 231-242

Study details

Study design	Randomised controlled trial (RCT)
Trial registration number	Not reported

Aim	To examine the feasibility of delivering an early intervention program for the management of child anxiety in a school-setting, relative to a waitlist-control condition
Country/geographical location	Australia
Setting	Private and public, coeducational and single-sex schools from high and low socio-economic areas
Type of school	Primary school
UK key stage	Key stage 2
Inclusion criteria	• Identified as 'high anxious' if total SCAS score placed them in the top 10 % of their age appropriate group • Nominated by their teachers if they thought that they were ‘‘far more anxious than their peers’’.
Exclusion criteria	• Have more externalizing behaviours than their peers
Method of randomisation	Computer-generated program
Method of allocation concealment	Not reported
Unit of allocation	Individual
Unit of analysis	Individual
Statistical method(s) used to analyse the data	• Means and standard deviations for the self-report questionnaires at pre-, post- and follow-up assessment • Data were analysed using a General Linear Model (GLM) • Intention to treat analysis
Attrition	24 (36.9%) from the intervention group and 14 (45.2%) from the control group did not complete 12 month follow up
Study limitations (author)	• Over 50 % of children identified as high-anxious declined program participation and a further 25 % failed to return post-treatment information
Study limitations (reviewer)	None to add

Source of funding	Australian Rotary Health

Study arms

Intervention (N = 65)

Control (N = 31)

Characteristics

Arm-level characteristics

Characteristic	Intervention (N = 65)	Control (N = 31)
Age (years) Mean (SD)	9.77 (1.3)	9.63 (1.7)
Male Sample size	n = 27 ; % = 39.6	n = 9 ; % = 29
Female Sample size	n = 39 ; % = 60.4	n = 22 ; % = 71
Mother: Unemployed Sample size	n = 16 ; % = 25	n = 8 ; % = 25.8

Characteristic	Intervention (N = 65)	Control (N = 31)
Mother: Trade/clerical Sample size	n = 20 ; % = 31.3	n = 6 ; % = 19.4
Mother: Professional Sample size	n = 28 ; % = 43.8	n = 17 ; % = 54.8
Father: Unemployed Sample size	n = 1 ; % = 1.6	n = 0 ; % = 0
Father: Trade/clerical Sample size	n = 10 ; % = 14.8	n = 9 ; % = 27.6
Father: Professional Sample size	n = 54 ; % = 83.6	n = 22 ; % = 72.4

Outcomes

Study timepoints

- Baseline
- 12 month

Emotional distress

Outcome	Intervention, Baseline, N = 65	Intervention, 12 month, N = 65	Control, Baseline, N = 31	Control, 12 month, N = 31
Child reported Mean (SD)	38.51 (15.11)	29.92 (15.97)	47.55 (24.46)	34.48 (18.88)
Parent reported Mean (SD)	26.98 (14.29)	14.5 (16.08)	21.94 (11.54)	24.97 (15.14)

Anxiety - Polarity - Lower values are better

Study details

Brief name	Cool Kids program (page 234)
Rationale/theory/Goal	Cognitive-behavioural therapy to manage anxiety (page 234)
Materials used	The program is manualized, and both child and parent receive written summaries, worksheets and guides for home practice. (page 234)
Procedures used	Group face to face session (page 234)
Provider	School counsellors who had attended a one-day training seminar on how to administer the Cool Kids program in a school setting. (page 234)
Method of delivery	Group face to face (page 234)
Setting/location of intervention	School (page 234)
Intensity/duration of the intervention	Ten weekly 1 hour sessions over the course of a school term. (page 234)
Tailoring/adaptation	None

Unforeseen modifications	None
Planned treatment fidelity	Independent measures of fidelity (such as taping of sessions) could not be implemented but a log was kept to record student attendance and the number of sessions held, as well as more specific details such as the length of each session and how many of the exercises were completed. (page 234)
Actual treatment fidelity	80 % of school counsellors completed all sessions (school counsellors completed 9 sessions on average (page 240)

Study details

Brief name	Waiting list
Rationale/theory/Goal	Not applicable
Materials used	Not applicable
Procedures used	Not applicable
Provider	Not applicable
Method of delivery	Not applicable
Setting/location of intervention	School (page 234)
Intensity/duration of the intervention	Not applicable
Tailoring/adaptation	Not applicable
Unforeseen modifications	Not applicable
Planned treatment fidelity	Not applicable

Actual treatment fidelity	Not applicable

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Individual RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	High *(consent was obtained after randomisation once participants were aware of allocation.)*
Overall bias	Risk of bias judgement (objective outcomes)	Not applicable

D.1.22 Miller, 2011

Bibliographic Reference	Miller, L. D.; Laye-Gindhu, A.; Liu, Y.; March, J. S.; Thordarson, D. S.; Garland, E. J.; Evaluation of a preventive intervention for child anxiety in two randomized attention-control school trials; Behaviour research and therapy; 2011; vol. 49 (no. 5); 315-323

Study details

Study design	Cluster randomised controlled trial
Trial registration number	Not reported
Aim	To investigate the effectiveness of a targeted application of a cognitive-behavioural protocol (FRIENDS) for preventing and reducing anxiety symptoms in children within the school setting over a period of 17 months

Country/geographical location	Western Canada
Setting	Elementary schools
Type of school	Primary school
UK key stage	Key stage 2
Inclusion criteria	• Children were invited to participate in the study if their self-reported anxiety total score was elevated (T-score of 56 or higher) • Parental consent
Exclusion criteria	Not reported
Method of randomisation	Randomization occurred at the school-level, rather than classroom level, in order to: 1) reduce spill-over (i.e., contamination effects) and 2) preserve the integrity of the research
Method of allocation concealment	Not reported
Unit of allocation	Cluster (Schools)
Unit of analysis	Individual
Statistical method(s) used to analyse the data	Three level 2-piece linear growth model was conducted using HLM 6.02 program (a) level-1 is intra-individual level; (b) level-2 is inter-individual level; and (c) level-3 is school level
Attrition	Individual 61/65 (93.8%) Control 119/126 (94.4%)
Study limitations (author)	• Self-reported measures that may have been difficult to complete • Small sample sizes • May have been many children without parental consent possibly due to langue difficulties • The one-day training may have been insufficient for competency with the intervention
Study limitations (reviewer)	None

Source of funding	Not reported

Study arms

FRIENDS (N = 65)
Cluster N = NR

Attention control (N = 126)
Cluster N= NR

Characteristics

Study-level characteristics

Characteristic	**Study (N = 191)**
Age (years) Mean (SD)	10.1 (0.93)
Male imputed by reviewer Sample size	n = 92 ; % = 48
Female n calculated from % reported Sample size	n = 99 ; % = 52

Outcomes

Study timepoints

- Baseline
- 2.5 month

Emotional distress

Outcome	Baseline, FRIENDS, N = 64	Baseline, Attention control, N = 125	2.5 month, FRIENDS, N = 61	2.5 month, Attention control, N = 119
Anxiety 39-item, Multidimensional Anxiety Scale for Children (MASC) Mean (SD)	59.5 (16.44)	55.95 (17.57)	53.64 (16.84)	52.17 (17.8)

Anxiety - Polarity - Lower values are better

Behavioural outcomes

Outcome	FRIENDS, Baseline, N = 38	FRIENDS, 2.5 month, N = 50	Attention control, Baseline, N = 117	Attention control, 2.5 month, N = 111
BASC-T 148 items, Teacher rated. Behavioral Assessment System for Children Mean (SD)	55.12 (11.55)	53.92 (10.45)	61.91 (16.39)	61.27 (14.19)

Outcome	FRIENDS, Baseline, N = 38	FRIENDS, 2.5 month, N = 50	Attention control, Baseline, N = 117	Attention control, 2.5 month, N = 111
BASC-P 138 items, Parent rated. Behavioral Assessment System for Children Mean (SD)	55.21 (12.07)	49.43 (11.69)	57.3 (13.04)	55.74 (12.22)

BASC-T - Polarity - Lower values are better
BASC-P - Polarity - Lower values are better

Study details

Brief name	**Miller 2011 page 316** FRIENDS
Rationale/theory/Goal	**Miller 2011 page 318** FRIENDS teaches children to identify and understand anxiety signals, physical/bodily symptoms, worried thoughts, and maladaptive behaviours associated with feeling worried or anxious. FRIENDS is an acronym that helps children to recall the coping and problem solving skills taught. These include: F, feeling worried; R, relax and feel good; I, inner thoughts; E, explore plans of action; N, nice work, reward yourself; D, don’t forget to practice these new skills; and S, smile, stay cool and calm.
Materials used	**Miller 2011 page 318** Manualised-CBT programme

Procedures used	Not reported
Provider	**Miller 2011 page 318** • Trained school person (e.g. teacher) paired with a trained school counsellor
Method of delivery	**Miller 2011 page 318** • Small groups
Setting/location of intervention	**Miller 2011 page 318** • School (not further described)
Intensity/duration of the intervention	**Miller 2011 page 318** • 9 weekly 1hr sessions
Tailoring/adaptation	None reported
Unforeseen modifications	None reported
Planned treatment fidelity	**Miller 2011 page 318** • Random audiotape recordings (N=47, or 25% of total) covering six different sessions were rated for adherence to the protocol by two trained (blinded) graduate students
Actual treatment fidelity	**Miller 2011 page 318** Adherence (Likert-scaled checklist of program objectives) was 79.51%
Other details	None

Study details

Brief name	**Miller 2011 page 318** Attention control
Rationale/theory/Goal	Not reported
Materials used	**Miller 2011 page 318** • Story book (e.g. Harry Potter)
Procedures used	**Miller 2011 page 318** Reading an adventure story to the students in small groups by either a graduate student or a teacher-facilitator, simultaneously to the same time period of FRIENDS.
Provider	**Miller 2011 page 318** • Graduate student or teacher facilitator
Method of delivery	**Miller 2011 page 318** • Group (classroom)
Setting/location of intervention	**Miller 2011 page 318** Classroom
Intensity/duration of the intervention	**Miller 2011 page 318**

	• 9 weekly 1hr sessions
Tailoring/adaptation	None
Unforeseen modifications	None
Planned treatment fidelity	None
Actual treatment fidelity	None
Other details	None

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Cluster RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	Some concerns *(Unclear if intervention allocation was known where parents and teachers assessed outcomes)*
Overall bias	Risk of bias judgement (Objective outcomes)	Not applicable

D.1.23 O'Leary-Barrett, 2013

Bibliographic Reference	O'Leary-Barrett, M.; Topper, L.; Al-Khudhairy, N.; Pihl, R. O.; Castellanos-Ryan, N.; Mackie, C. J.; Conrod, P. J.; Two-year impact of personality-targeted, teacher-delivered interventions on youth internalizing and externalizing problems: A cluster-randomized trial; Journal of the American Academy of Child and Adolescent Psychiatry; 2013; vol. 52 (no. 9); 911-920

Secondary publication(s)	Conrod, PJ, O'Leary-Barrett, M, Newton, N et al. (2013) Effectiveness of a selective, personality-targeted prevention program for adolescent alcohol use and misuse: a cluster randomized controlled trial. JAMA psychiatry 70(3): 334-342 O'Leary-Barrett, M., Castellanos-Ryan, N., Pihl, R.O. et al. (2016) Mechanisms of Personality-Targeted Intervention Effects on Adolescent Alcohol Misuse, Internalizing and Externalizing Symptoms. Journal of Consulting and Clinical Psychology 84(5): 438-452

Study details

Study design	Cluster randomised controlled trial
Trial registration number	NCT00776685
Study start date	Sep-2006
Study end date	May-2010
Aim	To assess the 2 year impact of teacher-delivered brief, personality-targeted interventions on internalizing and externalizing symptoms in an adolescent UK sample
Country/geographical location	London, UK
Setting	19 schools from 9 randomly selected London Boroughs
Type of school	Secondary school
UK key stage	Key stage 3 year 9 students
Inclusion criteria	• Passive consent from parents • Active assent from students • High risk students defined as those scoring 1 standard deviation above the school mean on 1 of 4 subscales of the Substance Use Risk Profile Scale (SURPS)

Exclusion criteria	• Students who provided unreliable data at any follow-up timepoint • Students who responded positively to a sham drug item
Method of randomisation	Not reported
Method of allocation concealment	Not reported
Unit of allocation	Cluster (school)
Unit of analysis	individual
Statistical method(s) used to analyse the data	• Intention to treat analysis • Linear and logistic generalised estimating equations (GEE) for continuous and categorical data respectively • Adjusted for clustering • Intracluster correlations (ICCs) indicated that 1% to 2% of the variance in outcomes in the full high risk sample was explained by school and 1% to 15% of the variance in personality-specific outcomes
Attrition	**24 month follow up** • Intervention: 509/694 (81.4%) • Control: 347/516 (74.8%)
Study limitations (author)	• Higher attrition in the control group • The outcomes were self-reported and youth typically report higher internalizing and externalizing symptoms than other informants
Study limitations (reviewer)	None to add
Source of funding	Action for Addiction [Charity]

Study arms

Intervention (N = 694)
Clusters n = 11

Control (N = 516)
Cluster n = 8

Characteristics

Arm-level characteristics

Characteristic	Intervention (N = 694)	Control (N = 516)
Male n calculated by reviewer from % reported Sample size	n = 378 ; % = 54.5	n = 313 ; % = 60.7
Female Imputed by reviewer Sample size	n = 316 ; % = 45.5	n = 203 ; % = 39.3
White n calculated by reviewer from % reported Sample size	n = 285 ; % = 41.1	n = 233 ; % = 45.2
Other Imputed by reviewer	n = 409 ; % = 58.9	n = 283 ; % = 54.8

Characteristic	Intervention (N = 694)	Control (N = 516)
Sample size		

Outcomes

Study timepoints

- 2 year

Emotional distress

Outcome	Intervention, 2 year, N = 587	Control, 2 year, N = 437
Depression Last 6 months. Depression and Anxiety subscales from the Brief Symptoms Inventory (BSI). Mean (SD)	12.71 (3.85)	13.15 (3.87)
Anxiety Last 6 months. Depression and Anxiety subscales from the Brief Symptoms Inventory (BSI). Mean (SD)	8.22 (2.57)	8.6 (2.57)

Depression - Polarity - Lower values are better
Anxiety - Polarity - Lower values are better

Behavioural outcomes

Outcome	Intervention, 2 year, N = 587	Control, 2 year, N = 437
Conduct problems Conduct scale of the Strengths and Difficulties Questionnaire Mean (SD)	3.07 (1.16)	3.26 (1.17)

Conduct problems - Polarity - Lower values are better

Study details

Brief name	**O'Leary-Barrett 2010 page 955** Adventure; Personality-targeted based on Preventure Programme
Rationale/theory/Goal	**O'Leary-Barrett 2013 page 912** Targeting personality-specific distortions aims to directly improve internalizing and externalizing symptoms in the personality group most at risk for a particular problem
Materials used	**O'Leary-Barrett 2013 page 914** Manuals based on a cognitive-behavioural therapy model incorporating psychoeducational and motivational enhancement therapy components and included real life scenarios.
Procedures used	**O'Leary-Barrett 2013 page 914** • All exercises discussed thoughts, emotions, and behaviours in a personality-specific way. • Participants were encouraged to identify and challenge personality-specific cognitive distortions that lead to problematic behaviours.

Provider	**O'Leary-Barrett 2013 page 914** • Trained facilitator and cofacilitator • Included teachers, school counsellors and pastoral staff • All facilitators and cofacilitators attended a 3 day training workshop followed by a minimum of 4 hours supervision in running a full 2 session intervention with the clinical trainer.
Method of delivery	**O'Leary-Barrett 2013 page 914** • Group, face to face • Average of 6 adolescents with personality-matched profiles according to SURPS per group
Setting/location of intervention	**O'Leary-Barrett 2013 page 914** • School-based (not further described)
Intensity/duration of the intervention	**O'Leary-Barrett 2013 page 914** • Two 90 minute group sessions
Tailoring/adaptation	None
Unforeseen modifications	None
Planned treatment fidelity	**O'Leary-Barrett 2013 page 914** • All facilitators and cofacilitators underwent 4 hours supervision in running a full 2 session intervention with the clinical trainer.

Actual treatment fidelity	Not reported
Other details	**O'Leary-Barrett 2010 page 957** All participants received statutory drug education according to national curriculum requirements. (see comparator)

Study details

Brief name	**O'Leary Barrett 2010 page 957** Statutory drug education according to national curriculum requirements
Rationale/theory/Goal	**O'Leary Barrett 2010 page 957** Alcohol, tobacco, illicit drugs. Information about the detrimental health effects from abuse of alcohol and illicit drugs and the risk of misusing prescribed medication.
Materials used	Not reported
Procedures used	**O'Leary Barrett 2010 page 957** Typically taught throughout the year as part of the Science, Citizenship and Personal, Social, Health and Economic Wellbeing curriculum or as specific drug-education days.
Provider	**O'Leary Barrett 2010 page 957** Not specified but likely teachers
Method of delivery	Not reported
Setting/location of intervention	Not reported
Intensity/duration of the intervention	**O'Leary Barrett 2010 page 957**

	Throughout the year
Tailoring/adaptation	Not reported
Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported
Other details	None

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Individual RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	Some concerns *(Randomisation methods not reported. Unclear if participants were aware of allocation and outcomes were self-reported)*
Overall bias	Risk of bias judgement (objective outcomes)	Not applicable

D.1.24 Pearce, 2017

Bibliographic Reference	Pearce, P.; Sewell, R.; Cooper, M.; Osman, S.; Fugard, A. J. B.; Pybis, J.; Effectiveness of school-based humanistic counselling for psychological distress in young people: Pilot randomized controlled trial with follow-up in an ethnically diverse sample; Psychology and psychotherapy; 2017; vol. 90 (no. 2); 138-155

Study details

Study design	Randomised controlled trial (RCT)
Trial registration number	ISRCTN44253140
Study start date	2013
Aim	To pilot a RCT of school-based humanistic counselling in an ethnically diverse sample
Country/geographical location	UK
Setting	Urban state secondary schools located in deprived areas
Type of school	Secondary school
UK key stage	Key stage 3 aged 11-18 Key stage 4 aged 11-18 Post-16 aged 11-18
Inclusion criteria	• Aged between 11-18 years • experiencing moderate or high levels of emotional distress; • capable of giving informed consent to participate; • had >85% school attendance
Exclusion criteria	• At serious risk of harm to self or other; • planning to leave school within study period; • involvement with other mental health agencies;

	• in years 11 or 13 (due to likelihood of completing their studies and being unavailable for follow-up)
Method of randomisation	Blocked randomisation stratified by school through an automated text based system
Method of allocation concealment	Researchers were blind to allocations
Unit of allocation	Individual
Unit of analysis	Individual
Statistical method(s) used to analyse the data	Log-likelihood ratio tests to test the interactions between time and group on each measure, including with and without correction for multiple testing using the Bonferroni-Hom procedure. Standardised effect sizes calculated by dividing the multilevel model-estimated mean intervention effect at each time point by the pooled pre-intervention standard deviation. Intention to treat analysis used.
Attrition	Intervention 21/34 (61.8%) Control and 24/30 (80%) completed the 9 month follow up.
Study limitations (author)	The authors identify limitations including that measures were not validated; lack of participating blinding to allocation; underpowered sample; the study was only conducted in schools without a pre-existing counselling service unlike the majority of UK schools; ethnicity was not representative of the national composition; high proportion of female participants; lack of data on the usual care intervention.
Study limitations (reviewer)	None to add
Source of funding	British Association for Counselling and Psychotherapy and the Metanoia Institute

Study arms

Humanistic counselling (N = 34)

Usual care (N = 30)

Characteristics

Arm-level characteristics

Characteristic	Humanistic counselling (N = 34)	Usual care (N = 30)
Age Mean (SD)	14.3 (1.8)	14 (1.7)
Female Sample size	n = 27 ; % = 90	n = 28 ; % = 82.4
Male Sample size	n = 3 ; % = 10	n = 6 ; % = 17.6
White British Sample size	n = 7 ; % = 23.3	n = 3 ; % = 8.8
White Other Sample size	n = 1 ; % = 3.3	n = 3 ; % = 8.8

Characteristic	Humanistic counselling (N = 34)	Usual care (N = 30)
Black/Black British Sample size	n = 9 ; % = 30	n = 16 ; % = 47.1
Asian/Asian British Sample size	n = 2 ; % = 6.7	n = 1 ; % = 2.9
Mixed Background Sample size	n = 5 ; % = 16.6	n = 5 ; % = 14.7
Other Sample size	n = 6 ; % = 19.9	n = 6 ; % = 17.5

Outcomes

Study timepoints

- Baseline
- 12 week (end of therapy (from baseline))
- 6 month
- 9 month

Emotional distress

Outcome	Baseline, Humanistic counselling, N = 34	Baseline, Usual care, N = 30	12 week, Humanistic counselling, N = 31	12 week, Usual care, N = 30	6 month, Humanistic counselling, N = 23	6 month, Usual care, N = 23	9 month, Humanistic counselling, N = 21	9 month, Usual care, N = 24
Young Person's CORE (YP-CORE) (Score of 0-4 on 10 items) self-report measure of psychological distress in young people Mean (SD)	18.94 (7.31)	19.07 (5.91)	12.61 (7.57)	19.3 (6.92)	13.48 (6.84)	16.57 (6.69)	16.14 (6.84)	14.92 (7.99)

Young Person's CORE (YP-CORE) - Polarity - Lower values are better

Behavioural outcomes

Outcome	Baseline, Humanistic counselling, N = 34	Baseline, Usual care, N = 30	12 week, Humanistic counselling, N = 31	12 week, Usual care, N = 30	6 month, Humanistic counselling, N = 23	6 month, Usual care, N = 23	9 month, Humanistic counselling, N = 21	9 month, Usual care, N = 24
SDQ (emotional symptoms, conduct problems, hyperactivity, peer problems) total Strengths and difficulties questionnaire Mean (SD)	20.18 (4.08)	20.47 (4.81)	14.45 (5.38)	18.8 (4.63)	14.7 (5.12)	17.65 (5.75)	15.38 (6.17)	16.38 (6.46)

Outcome	Baseline, Humanistic counselling, N = 34	Baseline, Usual care, N = 30	12 week, Humanistic counselling, N = 31	12 week, Usual care, N = 30	6 month, Humanistic counselling, N = 23	6 month, Usual care, N = 23	9 month, Humanistic counselling, N = 21	9 month, Usual care, N = 24
SDQ (Prosocial subscale) Mean (SD)	7.65 (1.79)	7.47 (2.65)	8.29 (1.62)	7.43 (2.56)	7.65 (2.04)	7.96 (2.25)	7.67 (1.65)	7.25 (2.67)

SDQ (emotional symptoms, conduct problems, hyperactivity, peer problems) total - Polarity - Lower values are better
SDQ (Prosocial subscale) - Polarity - Higher values are better

Social emotional skills, knowledge and attitudes

Outcome	Baseline, Humanistic counselling, N = 34	Baseline, Usual care, N = 29	12 week, Humanistic counselling, N = 30	12 week, Usual care, N = 30	6 month, Humanistic counselling, N = 23	6 month, Usual care, N = 23	9 month, Humanistic counselling, N = 21	9 month, Usual care, N = 24
RSES Rosenberg Self Esteem Scale Mean (SD)	16.03 (5.2)	15.72 (5.46)	19.67 (5.29)	14.6 (5.4)	17.91 (6.11)	15.17 (7.14)	17.43 (4.96)	17.21 (6.47)

RSES - Polarity - Higher values are better

Study details

Brief name	Pearce 2017 Page 11

	School-based humanistic counselling
Rationale/theory/Goal	**Pearce 2017 Page 12** School-based counselling is associated with reductions in psychological distress. The intervention is based on competences for humanistic psychological therapy adapted for young people. It assumes that young people have the capacity to address difficulties if they have an opportunity to talk about them with a counsellor.
Materials used	Not applicable
Procedures used	**Pearce 2017 Page 13** Participants received humanistic counselling, where counsellors use a range of techniques including active listening, empathic reflections, and helping clients reflect on emotions and behaviours.
Provider	**Pearce 2017 Page 13** 4 qualified counsellors with a minimum 3 years of person-centred counselling training and additional training in working with young people. Counsellors were asked to study a manual of humanistic competences.
Method of delivery	**Pearce 2017 Page 12** Individual, face to face
Setting/location of intervention	**Pearce 2017 Page 12** School-based, not further described
Intensity/duration of the intervention	12 weekly sessions lasting 45 minutes each
Tailoring/adaptation	Not applicable. Following the principals of humanistic counselling, the intervention was non-directive and counsellors were required to follow the client's lead during the sessions
Unforeseen modifications	Not reported

Planned treatment fidelity	Counsellor adherence to humanistic competences during sessions was assessed. Two 10-minute audio segments of sessions per counsellor were randomly selected and rated by two members of the research team and an independent expert using a validated measure (PCEPs). Feedback was provided to all counsellors and if practice did not meet the required standard this was discussed in detail with the counsellor.
Actual treatment fidelity	The average score on the PCEPs for counsellors indicated counsellor adherence to the intervention. For 1 of 4 counsellors the score indicated that practice did not meet the required standard and this was discussed with them to increase adherence.
Other details	None

Study details

Brief name	**Pearce 2017 Page 12** Usual care
Rationale/theory/Goal	**Pearce 2017 Page 8** Usual care reflected the standard non-counselling alternative available for pupils in the UK
Materials used	Not applicable
Procedures used	**Pearce 2017 Page 12** Usual care consisted of a whole school approach to supporting emotional wellbeing.
Provider	**Pearce 2017 Page 12** Support was available from school nurses, teachers, a special education needs coordinator and their team, peer mentors and pastoral care teams including staff who were trained to support pupils with difficulties.
Method of delivery	Not applicable

Setting/location of intervention	**Pearce 2017 Page 12** School-based, not further described
Intensity/duration of the intervention	Not applicable
Tailoring/adaptation	Pupils were informed that, nine months from assessment, they could receive a standard program of weekly counselling for up to one school term.
Unforeseen modifications	Due to delays in organizing the nine month follow-up interviews not all participants completed the interviews within the 9 months' time-frame. 13 participants (43.3% of all UC participants) began counselling before their 9 month follow up assessment
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported
Other details	None

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Individual RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	Some concerns
Overall bias	Risk of bias judgement (objective outcomes)	Not applicable

D.1.25 Poppelaars, 2016

Bibliographic Reference	Poppelaars, Marlou; Tak, Yuli R; Lichtwarck-Aschoff, Anna; Engels, Rutger C M E; Lobel, Adam; Merry, Sally N; Lucassen, Mathijs F G; Granic, Isabela; A randomized controlled trial comparing two cognitive-behavioral programs for adolescent girls with subclinical depression: A school-based program (Op Volle Kracht) and a computerized program (SPARX).; Behaviour research and therapy; 2016; vol. 80; 33-42

Study details

Study design	Randomised controlled trial (RCT)
Trial registration number	NTR3737
Aim	To test the effectiveness of OVK and SPARX among Dutch female adolescents with elevated depression symptoms
Country/geographical location	The Netherlands
Setting	7 secondary schools
Type of school	Secondary school
UK key stage	Key stage 3
Inclusion criteria	• Adolescent girls in grades 7 and 8 • Score at or above the 70th percentile on depressive symptoms (Reynolds Adolescent Depression Scale; RADS-2 score ≥59)
Exclusion criteria	• Suicidal ideation • Currently receiving mental health care
Method of randomisation	• Independent researcher using random number generation

Method of allocation concealment	Not applicable as participants were informed of group allocation before pre-test
Unit of allocation	Schools
Unit of analysis	Individual
Statistical method(s) used to analyse the data	• Missing data imputed using multiple imputation with auxiliary variables to create more accurate standard errors • Adjusted for clustering. ICCs calculated: depressive symptoms mean 0.01 SD 0.02 • Intention to treat
Attrition	OVK: 36/50 (72%) completed the study • 2 discontinued intervention (too busy; unwilling) • 9 missing at least 1 questionnaire SPARX: 38/51 (75%) completed the study • 3 discontinued intervention (too busy; limited access to computer) • 11 missing at least 1 questionnaire Control: 47/51 (92%) completed the study • 1 declined to participate • 3 missing at least 1 questionnaire
Study limitations (author)	• Schools were not randomly selected to participate • Participation among invited schools was low • Sample size was too small to distinguish subgroups • Focus only on female participants
Study limitations (reviewer)	Participants received €22.50 for their participation up to post-test and €7.50 for each of the three follow-up questionnaires.
Source of funding	Behavioural Science Institute, Radboud University Nijmegen

Study arms

OVK (N = 50)

Control (N = 51)

Characteristics

Arm-level characteristics

Characteristic	OVK (N = 50)	Control (N = 51)
Age Mean (SD)	13.43 (0.74)	13.22 (0.64)
Female Sample size	n = 50 ; % = 100	n = 51 ; % = 100
Born in The Netherlands Sample size	n = 47 ; % = 94	n = 50 ; % = 98
Not born in The Netherlands Sample size	n = 3 ; % = 6	n = 1 ; % = 2
Low educational level	n = 20 ; % = 40	n = 19 ; % = 37.3

Characteristic	OVK (N = 50)	Control (N = 51)
Sample size		
High educational level Sample size	n = 30 ; % = 60	n = 32 ; % = 62.7

Outcomes

Study timepoints

- Baseline
- 3 month
- 6 month
- 12 month

Emotional distress

Outcome	OVK, Baseline, N = 50	OVK, 3 month, N = 50	OVK, 6 month, N = 50	OVK, 12 month, N = 50	Control , Baseline, N = 51	Control , 3 month, N = 51	Control , 6 month, N = 51	Control , 12 month, N = 51
Depressive symptoms (RADS-2) 30 items, 4 point scale Mean (SD)	63.35 (10.39)	57.98 (12.94)	58.98 (13.11)	62.44 (12.77)	61.9 (11.97)	56.06 (13.04)	57.62 (13.33)	61.22 (15.03)

Depressive symptoms (RADS-2) - Polarity - Lower values are better

Study details

Brief name	**Poppelaars 2016 page 13** • Op Volle Kracht
Rationale/theory/Goal	**Poppelaars 2016 page 13** • Depression prevention programme
Materials used	Not reported
Procedures used	**Poppelaars 2016 page 13** • First 8 lessons teach CBT principles (students learn to recognise their own emotions and cognitions and how they relate to each other and to events they may experience) • Includes homework
Provider	**Poppelaars 2016 page 12** • Professional psychologists
Method of delivery	**Poppelaars 2016 page 12** • Groups (lesson-based)
Setting/location of intervention	**Poppelaars 2016 page 12** School

Intensity/duration of the intervention	**Poppelaars 2016 page 12** 8 x 1 hour weekly lessons
Tailoring/adaptation	**Poppelaars 2016 page 12** • OVK is the Dutch adaptation of the Penn Resilience Program • Only the first 8 lessons were given to shorten the length of the programme (usually 16 with the last 8 lessons focused on social problem solving)
Unforeseen modifications	Not reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported
Other details	None

Study details

Brief name	**Poppelaars 2016 page 9** Monitoring control
Rationale/theory/Goal	Not applicable
Materials used	Not applicable
Procedures used	**Poppelaars 2016 page 12** • The control condition did not consist of a formal program

	• Participants could participate in the intervention of their choice after the final follow-up assessment
Provider	Not applicable
Method of delivery	Not applicable
Setting/location of intervention	Not applicable
Intensity/duration of the intervention	Not applicable
Tailoring/adaptation	Not applicable
Unforeseen modifications	Not applicable
Actual treatment fidelity	Not applicable
Other details	Not applicable

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Cluster RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	Some concerns *(Participants and all trial personnel were aware of allocation)*
Overall bias	Risk of bias judgement (Objective outcomes)	Not applicable

D.1.26 Pybis, 2015

Bibliographic Reference	Pybis, Joanne; Cooper, Mick; Hill, Andy; Cromarty, Karen; Levesley, Ruth; Murdoch, Jamie; Turner, Nick; Pilot randomised controlled trial of school-based humanistic counselling for psychological distress in young people: Outcomes and methodological reflections; Counselling & Psychotherapy Research; 2015; vol. 15 (no. 4); 241-250
Secondary publication(s)	Rupani, Pooja, Cooper, Mick, McArthur, Katherine et al. (2014) The goals of young people in school-based counselling and their achievement of these goals. Counselling & Psychotherapy Research 14(4): 306-314

Study details

Study design	Randomised controlled trial (RCT)
Trial registration number	Not reported
Aim	To replicate and extend a pilot evaluation (McArthur 2013) of the effectiveness of school based humanistic counselling for psychological distress
Country/geographical location	England, UK
Setting	Four schools in an urban area with a diverse population. The schools included both private and public sector, single and mixed sex and were located in both affluent and economically deprived areas.
Type of school	Secondary school
UK key stage	Key stage 3 Key stage 4 Post-16
Inclusion criteria	• Aged at least 13 years at baseline assessment • Experiencing moderate or high levels of psychological distress (assessed by a score of 5 or more on the Emotional Symptoms subscale of the strengths and difficulties questionnaire • Considered capable of giving informed consent for participation in the trial

	• greater than 80% attendance at the school • not planning to leave school in the current academic year
Exclusion criteria	Not reported
Method of randomisation	Automated telephone system provided by an academic institution
Method of allocation concealment	None. Participants were advised of their allocation before the end of their assessment interview
Unit of allocation	Individual
Unit of analysis	Individual
Statistical method(s) used to analyse the data	• Missing data was not imputed (per-protocol analysis) • Group means were analysed using analysis of covariance (ANCOVA) with baseline data as the covariate.
Attrition	**12 weeks endpoint** intervention: 16/21 (76.2%) control 16/21 (76.2%) **6 months follow up** intervention 12/21 (63.5%) control 9/21 (42.9%)
Study limitations (author)	• 8 participants were wrongly accepted into the trial (but then excluded) • One of the counsellors was found to be non-adherent to SBHC practice and overall adherence levels were low • large drop out between endpoint assessment and 6 month follow up (due to pupils taking exams and leaving school) • Confusion and misunderstanding among pastoral care teachers regarding eligibility criteria and withdrawal criteria

Study limitations (reviewer)	None to add
Source of funding	Not reported

Study arms

School-based humanistic counselling (N = 21)

Waitlist (N = 21)

Characteristics

Arm-level characteristics

Characteristic	School-based humanistic counselling (N = 21)	Waitlist (N = 21)
Age (years) Mean (SD)	14.14 (1.19)	14.86 (1.42)
Male Sample size	n = 5 ; % = 11.9	n = 7 ; % = 16.7
Female Sample size	n = 16 ; % = 38.1	n = 14 ; % = 33.3
White British	n = 15 ; % = 36.6	n = 14 ; % = 34.2

Characteristic	School-based humanistic counselling (N = 21)	Waitlist (N = 21)
Sample size		
Other Sample size	n = 5 ; % = 12.2	n = 4 ; % = 9.8
Unknown Sample size	n = 1 ; % = 2.44	n = 2 ; % = 4.88

Outcomes

Study timepoints

- Baseline
- 12 week

Emotional distress

Outcome	Baseline, School-based humanistic counselling, N = 16	Baseline, Waitlist, N = 16	12 week, School-based humanistic counselling, N = 16	12 week, Waitlist, N = 16
Young Person's CORE (YP-CORE) 10 items on a 5 point scale (0-4) Mean (SD)	20.44 (7.41)	20.25 (18.25)	15.19 (7.18)	18.25 (7.98)

Young Person's CORE (YP-CORE) - Polarity - Lower values are better

Behavioural outcomes

Outcome	School-based humanistic counselling, Baseline, N = 16	School-based humanistic counselling, 12 week, N = 16	Waitlist, Baseline, N = 16	Waitlist, 12 week, N = 16
SDQ (emotional symptoms, conduct problems, hyperactivity, peer problems) total Strengths and Difficulties questionnaire. Mean (SD)	19.88 (4.46)	16.44 (5.76)	18.31 (6.04)	18.13 (6.04)

SDQ (emotional symptoms, conduct problems, hyperactivity, peer problems) total - Polarity - Lower values are better

Social and emotional skills, knowledge and attitudes

Outcome	School-based humanistic counselling, Baseline, N = 16	School-based humanistic counselling, 12 week, N = 16	Waitlist, Baseline, N = 16	Waitlist, 12 week, N = 16
RSES Rosenberg Self-esteem scale Mean (SD)	12.56 (6.28)	14.92 (5.72)	14.13 (4.91)	15.88 (5.99)

RSES - Polarity - Higher values are better

Study details

Brief name	School-based humanistic counselling
Rationale/theory/Goal	**Pybis 2015 page 245**

	The assumption underlying SBHC is that young people have the capacity to successfully address difficulties in their lives if they have the opportunity to talk through these problems with an empathic, supportive and independent adult.
Materials used	Not reported
Procedures used	**Pybis 2015 page 245** • Active listening • Empathic reflections • Inviting clients to access and express underlying emotions and needs and helping them to reflect on and make sense of their experiences and behaviours. • Clients are encouraged to consider the range of options that they are facing and to make choices that are most likely to be helpful within their given circumstances.
Provider	**Pybis 2015 page 245** • Four counsellors (3 female, 1 male) • All had experience of working with young people • All had a minimum diploma level qualification in counselling • Were asked to study a brief manual of humanistic competences and attended 2 days training in how to deliver the intervention.
Method of delivery	**Pybis 2015 page 245** • Individual, face to face (not further described)
Setting/location of intervention	**Pybis 2015 page 245** • School (not further described)
Intensity/duration of the intervention	**Pybis 2015 page 245**

	• 10 weekly sessions of approximately 45mins
Tailoring/adaptation	None
Unforeseen modifications	None
Planned treatment fidelity	**Pybis 2015 page 246** • 10 minute segments of sessions were randomly selected from audio recordings and audited by two raters to assess adherence to the humanistic competences • Practice was deemed to be adherent where there was a score on the Person-Centred & Experimental Psychology Scale (PCEPS) of over 45.
Actual treatment fidelity	**Pybis 2015 page 246** • One of the counsellors was rated as not being adherent to SBHC competences (average PCEPS score 41.5) • The other three counsellors were rated at adherent (average PCEPS scores 49.5, 51.63 and 57.25).
Other details	None

Study details

Brief name	**Pybis 2015 page 245** Waiting list
Rationale/theory/Goal	None
Materials used	Not reported
Procedures used	**Pybis 2015 page 245**

	• Not offered formal counselling intervention until the following school term • However participants were informed that they could access any other psychological support available in their school • At the endpoint assessment, participants were offered the opportunity to receive a standard programme of weekly counselling for up to one school term.
Provider	Not applicable
Method of delivery	Not applicable
Setting/location of intervention	**Pybis 2015 page 245** • School (not further described)
Intensity/duration of the intervention	Not applicable
Tailoring/adaptation	Not applicable
Unforeseen modifications	Not applicable
Planned treatment fidelity	Not applicable
Actual treatment fidelity	Not applicable
Other details	None

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Individual RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	Some concerns *(Participants were aware of their allocation but control participants could access existing psychological support if they wished.)*
Overall bias	Risk of bias judgement (objective outcomes)	Not applicable

D.1.27 Saelid, 2017

Bibliographic Reference Saelid, Gry Anette; Nordahl, Hans M; Rational emotive behaviour therapy in high schools to educate in mental health and empower youth health. A randomized controlled study of a brief intervention.; Cognitive behaviour therapy; 2017; vol. 46 (no. 3); 196-210

Study details

Study design	Randomised controlled trial (RCT)
Trial registration number	Not reported
Aim	To examine the effects of educating students with subclinical levels of anxiety and depression about the ABC model in rational emotive behaviour therapy (REBT).
Country/geographical location	Norway
Setting	1 high school
Type of school	Secondary school

UK key stage	Post-16
Inclusion criteria	• Scored above 8 on the Hospital Anxiety and Depression Scale (HADS)
Exclusion criteria	Not reported
Method of randomisation	Shuffling of questionnaires
Method of allocation concealment	Not reported
Unit of allocation	Individual
Unit of analysis	Individual
Statistical method(s) used to analyse the data	ANOVA and t-tests Missing data not included in the analysis
Attrition	Completed follow up Intervention: 19/21 (90.5%) Control 20/20 (100%)
Study limitations (author)	• Relatively small sample size • No data on whether participants did their homework assignments • Limited to using HADS for control group • Data limited to reducing emotional distress
Study limitations (reviewer)	• No baseline characteristics reported • Screening criteria not reported clearly
Source of funding	No funding (thesis)

Study arms

REBT (N = 21)

Control (N = 20)

Characteristics

Study-level characteristics

Characteristic	Study (N = 41)
Age Range	16 to 19

Outcomes

Study timepoints

- Baseline
- 6 month

Emotional distress

Outcome	REBT, Baseline, N = 21	REBT, 6 month, N = 19	Control, Baseline, N = 20	Control, 6 month, N = 20
HADS Hospital Anxiety and Depression Scale Mean (SD)	12.47 (3.33)	7.21 (3.53)	11.7 (3.62)	10.6 (5.91)

HADS - Polarity - Lower values are better

Study details

Brief name	ABC model of rational emotive behaviour therapy (page 197)
Rationale/theory/Goal	The intervention attempts to change an irrational and biased perception of reality to a rational and adaptive one. The intervention describes how thoughts, feelings and behaviour are interrelated and a change in irrational thoughts can change feelings and behaviours The goal is to achieve a different behavioural or emotional reaction by modifying the cognitions activated by various events (page 297)
Materials used	Information sheet and homework assignments (page 201)
Procedures used	Face to face sessions followed by homework assignments. The therapist worked through the ABC model with the participant's example, explaining the concepts of irrational beliefs, rational beliefs, dogmatic demands, frustration tolerance and life acceptance (page 201)
Provider	Certified REVT therapist (page 200)
Method of delivery	Individual face to face session (page 200)
Setting/location of intervention	School (page 200)

Intensity/duration of the intervention	Three 45 minute sessions 2 months apart (page 200)
Tailoring/adaptation	None
Unforeseen modifications	None
Planned treatment fidelity	The therapist was supervised during the whole trial, and compliance with protocol and competence was assessed by an expert therapist. A checklist of the six major tasks was used to measure competency and adherence (page 200)
Actual treatment fidelity	Not reported

Study details

Brief name	No treatment control (page 200)
Rationale/theory/Goal	Not applicable
Materials used	Not applicable
Procedures used	Not applicable
Provider	Not applicable
Method of delivery	Not applicable
Setting/location of intervention	School (page 200)
Intensity/duration of the intervention	Not applicable
Tailoring/adaptation	Not applicable
Unforeseen modifications	Not applicable

Planned treatment fidelity	Not applicable
Actual treatment fidelity	Not applicable
Other details	Not applicable

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Individual RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	High *(Weak randomisation methods. Participants and trial personnel most likely knew of intervention allocation. Randomisation was within a school so contamination is possible.)*
Overall bias	Risk of bias judgement (objective outcomes)	Not applicable

D.1.28 Smith, 2015

Bibliographic Reference	Smith, Patrick; Scott, Rebecca; Eshkevari, Ertimiss; Jatta, Fatoumata; Leigh, Eleanor; Harris, Victoria; Robinson, Alex; Abeles, Paul; Proudfoot, Judy; Verduyn, Chrissie; Yule, William; Computerised CBT for depressed adolescents: Randomised controlled trial.; Behaviour research and therapy; 2015; vol. 73; 104-10

Study details

Study design	Randomised controlled trial (RCT)
Trial registration number	ISRCTN 83507297
Study start date	2011
Study end date	2013
Aim	To examine if a C-CBT programme (Stressbusters) shows efficacy for the treatment of mild-moderate depression symptoms, relative to a waiting list control when delivered in a schools-based setting.
Country/geographical location	United Kingdom
Setting	three large non-selective state-sector secondary schools in south London
Type of school	Secondary school
UK key stage	Key stage 3 Key stage 4
Inclusion criteria	• score >= 20 on the Mood and Feelings Questionnaire-Child Report, MFQ-C
Exclusion criteria	• Presence of severe symptoms and/or significant risk requiring immediate intervention
Method of randomisation	Randomisation was carried out by computer using a minimisation procedure with stratification according to school, symptom severity (MFQ-C <29 vs MFQ-C score >=29), age (younger than 14 years old vs 14 years or older), and gender.
Method of allocation concealment	Not reported
Unit of allocation	Individual
Unit of analysis	Individual

Statistical method(s) used to analyse the data	A sample size of 51 per group gives 85% power (p<.05) to detect an effect size of 0.6. Linear mixed models were fitted using maximum likelihood, which allows for models to be estimated in the presence of some missing data on the outcome. Maximum likelihood assumes data is missing at random.
Attrition	4 out of 55 in intervention group and 2 out of 57 in waiting list
Study limitations (author)	• small number of participating parents and teachers
Study limitations (reviewer)	None extra
Source of funding	Guy's & St Thomas' Charity, London.

Study arms

C-CBT (N = 55)

Waiting list (N = 57)

Characteristics

Study-level characteristics

Characteristic	**Study (N = 112)**
Age (years) Range	12 to 16

Outcomes

Study timepoints

- Baseline
- 8 week (post-intervention)

Emotional distress

Outcome	C-CBT, Baseline, N = 55	C-CBT, 8 week, N = 55	Waiting list, Baseline, N = 57	Waiting list, 8 week, N = 55
Depression Mood and Feelings Questionnaire - Child Mean (SD)	25.6 (11.1)	13.4 (12.9)	24.8 (11.8)	24.3 (13.6)

Depression - Polarity - Lower values are better

Emotional distress

Outcome	C-CBT, Baseline, N = 54	C-CBT, 8 week, N = 53	Waiting list, Baseline, N = 57	Waiting list, 8 week, N = 55
Anxiety Screen for Child Anxiety Related Disorders - Child Mean (SD)	32.1 (14.6)	23.8 (18.4)	30.9 (14.1)	31.2 (17.5)

Anxiety - Polarity - Lower values are better

Study details

Brief name	Stressbusters (page 5)
Rationale/theory/Goal	Based on cognitive behavioural therapy. Treatment components include: psycho education about depression and its treatment; behavioural activation; identifying and changing negative automatic thoughts; improving problem solving; improving social skills; relapse prevention. (page 7)
Materials used	Online modules (page 7)
Procedures used	Online individual sessions and customised print-outs (page 8)
Provider	Not applicable
Method of delivery	Online individual (page 8)
Setting/location of intervention	School (page 8)
Intensity/duration of the intervention	8 weeks (page 7)
Tailoring/adaptation	None
Unforeseen modifications	None
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported

Study details

Brief name	Waiting list (page 6)
Rationale/theory/Goal	Not applicable

Materials used	Not applicable
Procedures used	Not applicable
Provider	Not applicable
Method of delivery	Not applicable
Setting/location of intervention	School (page 8)
Intensity/duration of the intervention	Not applicable
Tailoring/adaptation	Not applicable
Unforeseen modifications	Not applicable
Planned treatment fidelity	Not applicable
Actual treatment fidelity	Not applicable

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Individual RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	Some concerns *(Likely that allocation was known to participants. Randomisation within schools so there may be risk of contamination)*
Overall bias	Risk of bias judgement (objective outcomes)	Not applicable

D.1.29 Stice, 2008

Bibliographic Reference	Stice, Eric; Rohde, Paul; Seeley, John R.; Gau, Jeff M.; Brief Cognitive-Behavioral Depression Prevention Program for High-Risk Adolescents Outperforms Two Alternative Interventions: A Randomized Efficacy Trial; Journal of Consulting and Clinical Psychology; 2008; vol. 76 (no. 4); 595-606
Secondary publication(s)	Stice, Eric, Rohde, Paul, Seeley, John R. et al. (2010) Testing Mediators of Intervention Effects in Randomized Controlled Trials: An Evaluation of Three Depression Prevention Programs. Journal of Consulting and Clinical Psychology 78(2): 273-280

Study details

Study design	Randomised controlled trial (RCT)
Trial registration number	Not reported
Aim	To compare the effectiveness of a brief group CB depression prevention program for high-risk youth to an assessment-only control condition
Country/geographical location	USA
Setting	High school
Type of school	Secondary school
UK key stage	Key stage 3 Key stage 4 Post-16

Inclusion criteria	Score of 20 or more on the Center Epidemiologic Studies-Depression scale (CESD)
Exclusion criteria	Current major depression
Method of randomisation	Computer generated random numbers and stratified
Method of allocation concealment	Not reported
Unit of allocation	Individual
Unit of analysis	Individual
Statistical method(s) used to analyse the data	ANCOVA models Descriptive statistics
Attrition	Completers Intervention 81/89 (91%) Control 77/84 (91.7%)
Study limitations (author)	• Outcomes were youth self-reported • Did not exclude participants with previous episodes of depressive disorder
Study limitations (reviewer)	Participants were paid $20 for completing each assessment
Source of funding	Not reported

Study arms

CB prevention (N = 89)

Control (N = 84)

Characteristics

Study-level characteristics

Characteristic	Study (N = 341)
Age Range	14 to 19
Age Mean (SD)	15.6 (1.2)
Male Imputed from female % reported Sample size	n = 150 ; % = 44
Female Sample size	n = 191 ; % = 56
Asian Sample size	n = 7 ; % = 2

Characteristic	Study (N = 341)
African American Sample size	n = 31 ; % = 9
Caucasian Sample size	n = 157 ; % = 46
Hispanic Sample size	n = 113 ; % = 33
Other/Mixed Sample size	n = 34 ; % = 10
High school graduate or less Sample size	n = 89 ; % = 26
Some college Sample size	n = 58 ; % = 17
College graduate Sample size	n = 119 ; % = 35
Graduate degree Sample size	n = 61 ; % = 18
Received treatment/services in last 12 months For emotional/behavioural problems Sample size	n = 95 ; % = 28

Outcomes

Study timepoints

- Baseline
- 6 month

Emotional distress

Outcome	CB prevention, Baseline, N = 89	CB prevention, 6 month, N = 89	Control, Baseline, N = 84	Control, 6 month, N = 84
Depressive symptoms (BDI) Beck Depressive Inventory Mean (SD)	20.03 (10.35)	12.18 (9.56)	19.6 (9.23)	17.22 (1.93)
Major depression diagnosis No of events	n = NA ; % = NA	n = 6 ; % = 6.8	n = NA ; % = NA	n = 11 ; % = 13.1

Depressive symptoms (BDI) - Polarity - Lower values are better
Major depression diagnosis - Polarity - Lower values are better

Social and emotional skills, knowledge and attitudes

Outcome	CB prevention, Baseline, N = 89	CB prevention, 6 month, N = 89	Control, Baseline, N = 84	Control, 6 month, N = 84
Social adjustment 17 item Social Adjustment Scale-Self Report of Youth Mean (SD)	2.8 (0.49)	2.52 (0.49)	2.73 (0.52)	2.69 (0.5)

Social adjustment - Polarity - Lower values are better

Study details

Brief name	**Stice 2008 page 5** CB depression prevention
Rationale/theory/Goal	**Stice 2008 page 5** Based on cognitive behavioural concepts to prevent and treat depression Focused on building group rapport, increasing participant involvement in pleasant activities, and replacing negative cognitions with positive cognitions.
Materials used	None reported
Procedures used	**Stice 2008 page 5** • In-session exercises were used that require youth to apply the skills taught in the intervention. • Homework was used to reinforce the skills taught in the sessions and help participants learn how to apply these skills to their daily life. • Motivational enhancement exercises to maximize willingness to use the new skills

	• Strategic self-presentation to facilitate internalization of key principles • Behavioural techniques to reinforce use of the new skills • Group activities to foster feelings of social support and group cohesion.
Provider	**Stice 2008 page 5** Facilitators and co-facilitators who attended a 2 day workshop
Method of delivery	**Stice 2008 page 5** Group, face to face
Setting/location of intervention	**Stice 2008 page 5** School (not further described)
Intensity/duration of the intervention	**Stice 2008 page 5** 6 x weekly 1 hour sessions
Tailoring/adaptation	None reported
Unforeseen modifications	None reported
Planned treatment fidelity	**Stice 2008 page 5** • Recordings of sessions were used to rate adherence and competence • Two sessions for each facilitator were randomly selected • Adherence was measured using session specific checklists for the concepts, skills, and exercises detailed in the scripts. Each item was rated for full, partial, or minimal presentation. • General facilitator competence was rated using 18 3-point items that assessed the various indicators of a competent therapist
Actual treatment fidelity	**Stice 2008 page 8**

	96% were rated as full adherence 94% were rated as good competence
Other details	**Stice 2008 page 5** A subset of 64 participants (20 at 6-month follow-up; 44 at 1-year follow-up) answered questions about cross-condition contamination Of the 8 participants who had talked with a participant in another condition, responses were vague and referred to only one alternate condition

Study details

Brief name	**Stice 2008 page 5** Assessment-only control Receive a brochure with information on major depression
Rationale/theory/Goal	**Stice 2008 page 5** Described as usual care
Materials used	**Stice 2008 page 5** Received a brochure with information on major depression at pre-test
Procedures used	Not applicable
Provider	Not applicable
Method of delivery	Not applicable

Setting/location of intervention	Not applicable
Intensity/duration of the intervention	Not applicable
Tailoring/adaptation	Not applicable
Unforeseen modifications	Not applicable
Planned treatment fidelity	Not appliable
Actual treatment fidelity	Not applicable
Other details	Not applicable

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Individual RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	Some concerns
Overall bias	Risk of bias judgement (objective outcomes)	Not applicable

D.1.30 Wijnhoven, 2014

Bibliographic Reference	Wijnhoven, Lieke A M W; Creemers, Daan H M; Vermulst, Ad A; Scholte, Ron H J; Engels, Rutger C M E; Randomized controlled trial testing the effectiveness of a depression prevention program ('Op Volle Kracht') among adolescent girls with elevated depressive symptoms.; Journal of abnormal child psychology; 2014; vol. 42 (no. 2); 217-28

Study details

Study design	Randomised controlled trial (RCT)
Trial registration number	NTR3126
Aim	To examine the effectiveness of the CBT component of the depression prevention program ‘Op Volle Kracht’ (OVK) among Dutch adolescent girls with elevated depressive symptoms
Country/geographical location	The Netherlands
Setting	3 secondary schools
Type of school	Secondary school
UK key stage	Key stage 3
Inclusion criteria	• Adolescent girls with elevated depressive symptoms (Child Depression Inventory, CDI score ≥16)
Exclusion criteria	• Receiving mental health care • Suicidal ideation
Method of randomisation	Independent researcher using a computerised random number generator
Method of allocation concealment	Not reported
Unit of allocation	School

Unit of analysis	individual
Statistical method(s) used to analyse the data	• t-tests for independent groups to test differences in depressive symptoms between the experimental and control group • Imputation of missing data • Adjusted for clustering. (ICCs varied between 0.01 and 0.13)
Attrition	Intervention: 50/59 (84.7%) analysed • 9 did not receive lessons Control: 52/59 (88.2%) analysed • 7 did not fill in questionnaires
Study limitations (author)	• Conducted in one Dutch city • Child report of depressive symptoms is susceptible to the placebo effect • Contamination between experimental and control group could not be completely ruled out
Study limitations (reviewer)	Girls who completed at least 6 assessments received a monetary reward
Source of funding	Grants from GGz Oost-brabant and the Olim Foundation

Study arms

OVK (N = 50)

Control (N = 52)

Characteristics

Study-level characteristics

Characteristic	Study (N = 102)
Age (year) Mean (SD)	13.3 (0.64)
Female Sample size	n = 102 ; % = 100
Dutch Sample size	n = 100 ; % = 98
Non-Dutch Sample size	n = 2 ; % = 2
Education: Vocational training n calculated from % reported Sample size	n = 13 ; % = 12.9
Education: Vocational training/high school training n calculated from % reported Sample size	n = 13 ; % = 12.9

Characteristic	Study (N = 102)
Education: High school training n calculated from % reported Sample size	n = 20 ; % = 19.8
Education: High school training/ pre-university training n calculated from % reported Sample size	n = 32 ; % = 31.7
Education: Pre-university training n calculated from % reported Sample size	n = 23 ; % = 22.8

Outcomes

Study timepoints

- Baseline
- 6 month

Emotional distress

Outcome	OVK, Baseline, N = 50	OVK, 6 month, N = 52	Control, Baseline, N = 50	Control, 6 month, N = 52
Depressive symptoms Children's Depression Inventory (CDI) Standardised Mean (SD)	20.8 (4.01)	11.7 (8.24)	21.02 (4.83)	17.77 (8.17)

Depressive symptoms - Polarity - Lower values are better

Study details

Brief name	**Wijnhoven 2014 page 220** Op Volle Kracht
Rationale/theory/Goal	**Wijnhoven 2014 page 218** Aims to reduce depressive symptoms in young adolescents using CBT techniques
Materials used	Not reported
Procedures used	**Wijnhoven 2014 page 220** • Participants were divided into 4 groups • The first 8 lessons consist of cognitive training based on CBT principles where children are taught to change their maladaptive self-schemas into more positive self-schemas
Provider	**Wijnhoven 2014 page 220** • Experienced group therapist
Method of delivery	**Wijnhoven 2014 page 220** • Group, face to face
Setting/location of intervention	Not reported

Intensity/duration of the intervention	**Wijnhoven 2014 page 220** 8 x 50min lessons
Tailoring/adaptation	**Wijnhoven 2014 page 220** Adapted from the US Penn Resiliency Program for Dutch teenagers
Unforeseen modifications	None reported
Planned treatment fidelity	Not reported
Actual treatment fidelity	Not reported
Other details	None

Study details

Brief name	**Wijnhoven 2014 page 219** Control
Rationale/theory/Goal	Not applicable
Materials used	Not applicable
Procedures used	**Wijnhoven 2014 page 219** Offered the opportunity to follow the lessons of OVK after final assessment
Provider	Not applicable
Method of delivery	Not applicable

Setting/location of intervention	Not applicable
Intensity/duration of the intervention	Not applicable
Tailoring/adaptation	Not applicable
Unforeseen modifications	Not applicable
Planned treatment fidelity	Not applicable
Actual treatment fidelity	Not applicable
Other details	Not applicable

Critical appraisal - Cochrane Risk of Bias tool (RoB 2.0) Cluster RCT

Section	Question	Answer
Overall bias	Risk of bias judgement (subjective outcomes)	Some concerns *(Participants and trial personnel possibly knew about treatment allocation)*
Overall bias	Risk of bias judgement (Objective outcomes)	Not applicable

D.2 Acceptability and barriers and facilitators studies

D.2.1 Hamilton-Roberts, 2012

Bibliographic Reference	Hamilton-Roberts, Amy; Teacher and Counsellor Perceptions of a School-Based Counselling Service in South Wales; British Journal of Guidance & Counselling; 2012; vol. 40 (no. 5); 465-483

Study details

Study design	Qualitative study
Trial registration number	Not reported
Aim	To answer three research questions: 1) what are the perceived impacts of the service? 2) what are the perceived attributes of the service? 3) what are the perceived barriers to and facilitators for an effective service?
Country/geographical location	Wales, UK
Setting	Semi-rural South Wales Local Authority (LA) with 9 secondary schools
Type of school	Secondary school
UK Key stage	Key stage 3 Key stage 4 Post-16
Inclusion criteria	Not reported

Exclusion criteria	Not reported
Data collection methods	Semi-structured interviews and questionnaires The focus group lasted for approximately 45 minutes. Discussion was recorded and later transcribed by the researcher. The first section of the questionnaire used Likert-type scales to gather quantitative information (rating from 1 to 10, where the situation being much worse and the situation being much better). There were three categories in this section of the questionnaire; engagement with learning and education (six items), mental health and emotional well-being (four items), and behaviour (four items). All three categories evidenced strong reliability and validity
Ethical considerations	Ethical consent was applied for and granted by Cardiff University's Ethics Committee prior to commencing any stage of the research. Additionally, approval was sought from the relevant LA.
Statistical method(s) used to analyse the data	The research adopted a pluralistic model combining qualitative and quantitative methodologies as well as ascertaining multiple perspectives relating to the research questions
Attrition	NA
Study limitations	None reported by author
Study theme 1	**What are the perceived attributes of the school-based counselling service?** The most frequent code that appeared in both the focus group and interviews was the 'specialist/unique nature of the SBCS. *"I've got a link-teacher who will say, 'Well I pretty much do that anyway . . . so you're just here to take some of the weight off me' . . . which is true in a certain sense. But there's a lot more to it than that. You know . . . we have specific training and the confidentiality thing . . . it's massive and makes it a very different role." (Counsellor focus group)* *". . . the demand is so high for someone of a much higher level of experience, other than just behaviour, you know . . . it's suicidal things." (Link-Teacher 2, Interview)* *"It has enabled us to address issues with pupils who need specialist provision and substantial time and input over and above what a year/assistant year leader could do."* *(Link-Teacher 4, Questionnaire)*

	Counsellors perceived that the service would be valued due to its 'person-centred' approach, its 'independence' from the school system and for the 'confidential' nature of the service: *". . . the client is aware that we don't go to the staff room and discuss all the issues. So they can . . . they are free to discuss anything . . . anything they need to do . . . and also we don't need to have parental consent . . .. "(Counsellor focus group)* A common code that emerged from the link-teacher interviews was that the SBCS was not to be used as a means to address behavioural difficulties *". . it's very unlikely to send a behaviour issue to counselling unless there are deep-rooted issues . . .." (Link-Teacher 3, Interview)*
Study theme 2	**What are the perceived barriers and facilitators of an effective SBCS?** School-based counsellors identified the following barriers and facilitators (frequency): • Appropriateness of being managed by LA (14) • Link-teacher understanding (11) • Appropriate referrals (9) • School understanding (9) Link-teachers identified the following barriers and facilitators (frequency): • More time (11) • Shorter waiting list (6) • Early intervention (3) • Link-teacher understanding (2) The need for more time from the service, shorter waiting lists and more early intervention were consistent codes throughout link-teacher interviews and questionnaire responses

	"The only thing that probably . . . is that the demand outstrips the service." (Link-Teacher 2, Interview) *"To provide school with more time, so that more pupils are able to access the service." (Link-Teacher 6, Questionnaire)* *"Some pupils could have done with this sort of thing at an earlier stage . . .." (Link-Teacher 7, Questionnaire)* A common code arising in the counsellor focus group data was the appropriateness of being managed by the LA, as a school-based counsellor's primary role is not necessarily related to educational or school outcomes *". . we are in the education system . . . but because the work we do is with mental health really . . . it doesn't seem . . . it just doesn't sit here . . . within education . . . I would say that if a young person was sent to me because of education and I thought it was another issue . . . something going on underlying . . . I wouldn't be bothered about their education . . . and that's different to here [the LA] . . .." (Counsellor focus group)* Other frequent codes from the counsellor focus group in relation to barriers/facilitators were concerned with the need for schools and link-teachers to understand and support the role of the SBCS and counsellors *". . . well the confidentiality works with the clients . . . but then that can cause a real problem with the link [teacher] in the school. Because they kind of want to know more* *information or they'll want to tell you a lot of stuff that you don't want to know . . . So the confidentiality thing is kind of dual. It works well with the client but the schools kind of struggle with it . . .". (Counsellor focus group)*

Study arms

Counsellors (N = 4)

Teachers (N = 9)

Critical appraisal - CASP qualitative checklist

Section	Question	Answer
Overall risk of bias	Overall risk of bias	Moderate

D.2.2 Kernaghan, 2016

Bibliographic Reference	Kernaghan, Donna; Stewart, Dave; "Because you have talked about your feelings, you don't have to think about them in school": Experiences of school-based counselling for primary school pupils in Northern Ireland.; Child Care in Practice; 2016; vol. 22 (no. 3); 231-246

Study details

Trial registration number	Not applicable
Study start date	Sep-2014
Study end date	Jun-2015
Aim	To focus on the feedback children have given in their experience of intervention questionnaire, an open-ended survey, which explores their perceptions of why they entered school counselling, their preferences within the service and any changes they identified at a personal, interpersonal and social level.
Country/geographical location	Northern Ireland, UK
Setting	20 primary schools
Type of school	Primary school
UK Key stage	Key stage 1 Key stage 2

Inclusion criteria	Children who have experienced the intervention
Exclusion criteria	None
Data collection methods	Questionnaire which the counsellor went through with the child verbally An anonymous dataset including responses of 75 boys and 45 girls from 20 primary schools who completed the "experience of intervention" survey was analysed by a Barnardo's Northern Ireland researcher using SPSS by assigning numeric codes to associated themes in order to identify emerging patterns in a systematic way.
Ethical considerations	Not reported
Statistical method(s) used to analyse the data	An anonymous dataset including responses of 75 boys and 45 girls from 20 primary schools who completed the "experience of intervention" survey was analysed by a Barnardo's Northern Ireland researcher using SPSS by assigning numeric codes to associated themes in order to identify emerging patterns in a systematic way.
Attrition	Not applicable
Study limitations	None reported by author
Study theme 1	**Reasons for Using Time 4 Me** Relational problems were the most common reason children engaged with counselling (34.2%). Relationships were the biggest concern for girls overall (55.6%) while just over 20% of boys had concerns centred on relationships (21.3%). The majority (70.7%) of the relationship problems cited were to do with the family (e.g. family separation, parental arguing etc). *"I wanted to tell you about my mum and dad."* (Male, six years old) *"I was annoyed that my mummy and sister were arguing all the time.*" (Female, seven years old) "*To help me cope with my mum and dad's separation.*" (Male, 10 years old) *"I needed to talk to someone about my daddy going to jail."* (Female, 10 years old) Behavioural problems were reported by 30.0% of the overall sample as the main reason they used Time 4 Me. Children predominately described behavioural issues as feeling angry, losing their temper and being violent.

	"I was cross a lot and didn't behave at home." (Male, six years old) *"I used to get very angry and hit out at other people."* (Male, nine years old) *"Because I was angry all the time. My behaviour was getting me into trouble*." (Male, 11 years old) A higher proportion of girls engaged with the service due to problems of an emotional nature (28.9%) in comparison with boys (22.7%). This was described by the children in a number of ways such as feeling sad, worried or stressed. "*I was always worried and nervous*. (Male, seven years old) *"Because I was sad and no-one understood what I was saying*." (Female, nine years old) *"I was getting stressed out by my transfer test and people in my class and at home*." (Female, 10 years old)
Study theme 2	**Preferences Within the Time 4 Me Service** The majority of pupils in the younger age group (aged four to eight) preferred play-based interventions which incorporated communication with the counsellor via play and therapeutic games (60.9%). Results showed a mixed picture for the older children (aged nine to 11) as they are more likely to enjoy talking and receiving help/guidance about problems (39.7%) and a combination of therapeutic play and talking (32.0%) compared with interventions that were mostly play based (17.8%) *"Reading lots of stories. The sand and the animals. The puppets."* (Male, four years old) *"That I get to talk to a person and get to talk about what happened instead of keeping it all in"*. (Female, 10 years old) *"You get to express your feelings, and you get to play lots of games."* (Male, 11 years old) Results indicated that the use of self-help techniques and psycho-education are particularly effective for girls (40.0%) and older children (43.8%), reporting that this made them feel better in comparison with boys (34.7%) and younger children (25.0%). Talking with the counsellor was found to be helpful for 31.6% of the cohort. A higher percentage of girls reported talking as an activity that made them feel better (37.8%) in comparison with boys (27.8%) *"I like coming to talk about problems because it's not easy to talk about stuff with anyone."* (Female, nine years old) *"Talking about my problems and realising that some of them were not so big. Understanding what was causing the problem helped me think about another way of dealing with it."* (Male, eight years old)
Study theme 3	**Change at a Personal Level (Individual)**

	When asked to identify any differences about how they felt after engaging in counselling, over one-half of the children described an emotional change (52.9%). The most common difference identified by both girls and boys was a reduction in worry, although a greater proportion of girls (52.4%) found this compared with boys (24.0%). *"I am sleeping better. I get all my work done in class. I have started to go out and play again*." (Male, six years old) *"I like myself more*." (Female, seven years old) *"Not worrying so much anymore, the panic feeling has gone."* (Female, 10 years old) *"Nothing is blocked up in my head anymore*." (Male, 11 years old) Almost one-quarter of pupils of the whole sample (24.1%) who answered the question reported that their behaviour had improved. Within this group that identified that behaviour had changed, 85.7% of this group were male. *"I don't really get angry at people anymore. I can get calmer. It's just a better life for me with that."* (Male, nine years old) *"A wee bit better. My behaviour's improved but sometimes my anger gets the better of me*." (Male, 11 years old
Study theme 4	**Changes at an Interpersonal Level (Family)** When asked about differences for the child in their home environment, 52.9% primarily noted an improvement in relationships within the family. Improvement in behaviour in the home was also identified by over one-fifth of children (21.1%) as a difference within the family after service engagement. *"My brother is sort of getting me angry, but I know that gets me into trouble so I'm not going to let him anymore*." (Male, nine years old) *"I don't lose my temper with granny anymore and do my homeworks without fighting."* (Male, six years old) *"I can talk to mum and dad about my worries."* (Female, nine years old)
Study theme 5	**Changes at a Social Level (School and Peer Relationships)** Overall, 43.0% of pupils identified that after sessions with Time 4 Me their behaviour in school had changed. One quarter of boys reported better school performance (24.6%) compared with one-fifth of girls (20.6%). This improvement was described as an increase in concentration, finding school work easier to complete and better school attendance.

	"I get more work done and I attend school more." (Male, eight years old) *"Starting to get my spellings right in my spelling test. Got a certificate for being good in class."* (Female, nine years old) *"I stay in class and I get more work done. I get more involved in class activities*." (Male, 11 years old) Pupils identified a change in their conduct within school (29.7%). This included better behaviour in class and acknowledging better relationships with teachers. A smaller number of pupils reported an improvement in their peer relationships (16.2%). In addition to behaviour changes, 20.9% of pupils reported that counselling had given them more confidence and reduced levels of anxiety related to school. Over one-fifth of participants felt that counselling sessions made little or no difference to their school life (23.3%), which mirrors the fact that difficulties related to academic school performance were not a prime motivation to access the service. *"I think about my positive qualities rather than negative ones."* (Male, nine years old) *"I don't get upset anymore when I'm trying to learn stuff*. "(Female, 10 years old) *"I am able to speak out more in class*." (Male, 10 years old)
Study theme 6	**Learning for the Future (Resilience)** Overall, the majority of pupils identified talking about their worries (28.7%) as an important tool to help them in the future. Children reported that they could talk to a parent or a family member about their anxieties in the future, with a smaller number saying they could talk to teachers or staff from the Time 4 Me service if they had concerns *"Talk to my mummy and daddy when I am worried."* (Male, six years old) *"Not to keep things inside, it always helps to talk. I think I kept things bottled up—too much longer I would have exploded! Counselling really helps!"* (Female, 10 years old)

Study arms

School counselling (N = 120)

Characteristics

Study-level characteristics

Characteristic	Study (N = 120)
Age Range	4 to 11
Male Sample size	n = 75 ; % = 62.5
Female Sample size	n = 45 ; % = 37.5

Critical appraisal - CASP qualitative checklist

Section	Question	Answer
Overall risk of bias	Overall risk of bias	Moderate

D.2.3 Lewis-Smith, 2021

Bibliographic Reference	Lewis-Smith, Iona; Pass, Laura; Jones, Dan J W; Reynolds, Shirley; "... if I care about stuff, then other people care about me". Adolescents' experiences of helpful and unhelpful aspects of brief behavioural activation therapy for depression.; Psychotherapy research : journal of the Society for Psychotherapy Research; 2021; 1-12

Study details

Study design	Interview study
Trial registration number	Not reported
Aim	To investigate students' specific views on school as a setting for Brief BA
Country/geographical location	United Kingdom
Setting	Four coeducational secondary schools in the south of England
Type of school	Secondary school
UK Key stage	Key stage 3 Key stage 4 Post-16
Inclusion criteria	Inclusion criteria for students' participation in Brief BA therapy were: 1. The presence of elevated symptoms of depression as indicated by self-report (Revised Child Anxiety and Depression Scale depression subscale or Short Mood and Feelings Questionnaire) or diagnostic interview (Kiddie- Schedule for Affective Disorders Schedule) 2. Help-seeking (identified by school staff or self-report) 3. Young person and parental consent and contact details for parents.
Exclusion criteria	Exclusion criteria were: 1. Currently receiving psychological or psychiatric treatment and/or 2. Diagnosis of autism spectrum disorder, attention deficit hyperactivity disorder, eating disorder, oppositional defiant disorder/ conduct disorder, psychotic symptoms or learning difficulties (young people were referred to services where targeted treatments for these difficulties were provided).

Data collection methods	Interview
Ethical considerations	Ethical approval for the study was obtained from the University of Reading's Research Ethics Committee.
Statistical method(s) used to analyse the data	• Data analysis was undertaken following the six key phases of thematic analysis described by Braun and Clarke. • Initial codes were generated via line-by-line inductive coding, first using printed copies of the anonymised transcripts and then using Nvivo 11 software. • Following the two cycles of line-by-line coding, searching for themes involved iteratively grouping codes into categories based on patterns evident from the data. • The final theme labels were selected collaboratively by all authors.
Attrition	Not applicable
Study limitations	Transferability of the study is limited by the homogeneity of the participants: all but one of the participants were female and most were between the ages of 14–15 years. It is possible that adolescents who did not find Brief BA to be helpful may have been less likely respond to the recruitment information. Therefore the sample may over-represent helpful aspects of therapy and positive experiences.
Study theme 1	**Helpful aspects** <u>Self discovery</u> All participants indicated that Brief BA had initiated an increased awareness of their emotions. Three participants indicated that they had found it difficult to recognise, confront and manage their emotions before they started Brief BA. When asked about their experiences of identifying their values and increasing valued activities, most participants talked about the process of "discovering" their values. Some participants also described how Brief BA increased their awareness of their behaviour towards others. *It was actually really helpful. Um, because I don't think anyone really pointed out what was valuable to me. That actually sounds really sad [laughs]. How you don't really think about, well I didn't really think about that. I don't think many people do, actually.* - Student

	<u>Given the tools to cope and make progress</u> Participants described Brief BA as having provided them with a broad range of coping tools and strategies to help manage their mood and increase their engagement in activities. Nevertheless, the majority of coping tools participants discussed were related to methodically planning and/or writing down their valued behaviours/ activities. Brief BA provided participants with tools they could use to motivate behaviour change, which helped improve their sense of self-efficacy and mood. *I was more active, like when I had to do the activity logs, and I set the goals to like say, do a run in the morning—I didn't do the run, but like I pushed myself to like try and like be more active and like do stuff that really mattered to me but whereas like before, I didn't really like do that 'cause I didn't really bother 'cause it wasn't really written down for me to do.* - Student <u>Having someone to talk to</u> All participants reflected on how having someone to talk to in Brief BA was helpful. Confidentiality was an important aspect of the therapeutic relationship for some participants and Participants demonstrated a range of responses to this sharing of risk information. While some participants found the sharing of risk information challenging at first, all participants who discussed the issue acknowledged that it was part of the therapists' role to help keep them safe. Many participants reflected on how having Brief BA at school facilitated their opening up in therapy. Around half of participants talked about the advantages of the setting being familiar to them, which were principally that it felt comfortable and thus made it easier for them to talk. *…it kind of got annoying 'cause like I wanted it to keep to myself but then like, I understood why 'cause it was to do with my safety and like I just learned over time that they [parents] need to know.* - Student
Study theme 2	**Unhelpful aspects** <u>Discontinuation and maintenance</u>

	This theme encompassed insufficiencies in the duration of Brief BA and the maintenance of progress post-treatment. Students expressed how they thought that Brief BA was too short and too few to build the relationship they wanted with the therapist or see a greater improvement. A few participants struggled to maintain the changes in symptoms and functioning they had experienced over the course of Brief BA after their eight sessions had come to an end. They expressed that this was a consequence of losing motivation. *So, like, even if I planned it I just wouldn't 'cause I wou- [pause] I wouldn't be bothered and, like, I wouldn't have any like motivation to do it 'cause I wouldn't [pause] I just like [pause] when I'm low, I give up on everything so I'd have no like energy to do anything.* - Student

Study arms

Brief Behavioural Activation Therapy (N = 9)
Students

Characteristics

Study-level characteristics

Characteristic	**Study (N = 9)**
Age (years) Range	14 to 19
Male Sample size	n = 1 ; % = 11.1

Characteristic	Study (N = 9)
Female Sample size	n = 8 ; % = 88.9
White British Sample size	n = 5 ; % = 55.6
African Sample size	n = 1 ; % = 11.1
Afro-Caribbean Sample size	n = 1 ; % = 11.1
Mixed Race Sample size	n = 1 ; % = 11.1
Asian Sample size	n = 1 ; % = 11.1

Critical appraisal - CASP qualitative checklist

Section	Question	Answer
Overall risk of bias	Overall risk of bias	Low

D.2.4 McKeague, 2018

Bibliographic Reference	McKeague, L.; Morant, N.; Blackshaw, E.; Brown, J.S.L.; Exploring the feasibility and acceptability of a school-based self-referral intervention for emotional difficulties in older adolescents: qualitative perspectives from students and school staff; Child and Adolescent Mental Health; 2018; vol. 23 (no. 3); 198-205

Study details

Study design	Qualitative study
Trial registration number	Not reported
Aim	To investigate the feasibility and acceptability of the DISCOVER workshop programme
Country/geographical location	UK
Setting	Inner London state secondary schools (nine mixed, one single sex
Type of school	Secondary school
UK Key stage	Post-16
Inclusion criteria	• students were in Year 12 or 13, • over 16 years old • fluent English • wished to receive psychological help for emotional difficulties • were willing and able to attend a 1-day psychological workshop on school premises • were able to provide informed written consent to participate
Exclusion criteria	None

Data collection methods	Semi-structured interviews were conducted in participating schools by the first author, who had no involvement in delivery of the intervention. Interviews focused equally on positive and negative aspects of participants' experiences using primarily open questions, with some closed questions:
Ethical considerations	Ethics approval for the DISCOVER Project was granted by the Health Research Authority NREC Committee London – Camberwell St Giles: ref 14/LO/1416. All participants provided written informed consent and consent for their interview to be audio recorded.
Statistical method(s) used to analyse the data	• Thematic analysis • Data were transcribed verbatim and analysed • Analysis was primarily data-driven, with a priori concerns to explore feasibility and acceptability of the intervention, and was not conducted from a particular theoretical standpoint
Attrition	Not applicable
Study limitations	• There were some schools where no young people gave consent to be interviewed. • More females than males took part in the study
Study theme 1	**Understanding and managing stress** All 15 students indicated that the workshop had helped them to understand their stress or made them aware of stress management techniques. Most (n = 9) said that their time management or planning had in terms of academic outcomes improved since taking part in the workshop. *"I think it's made me think more about where the stress came from and that there are ways to deal with it rather than just freaking out*." (pupil) *". . .DISCOVER helped me with considering different ways of handling stress. . . "* (pupil) *"I'm not as stressed as I used to be, em, and I don't, like find myself needing to be worried about anything as much. Except for exams obviously. . . "* (pupil)

	All White British students (n = 4) who were interviewed described the process of setting a goal in positive terms or said that it was 'easy' to decide on a goal. In contrast, negative perceptions of goal setting were apparent among some of the BME students (n = 4). One described setting a goal as 'worrying', because of the anticipation that she might not achieve it. Another student found the goalsetting task difficult because his goals were constantly changing: "*. . .with me I've gotta keep changing mine."* A small number of students described experiencing difficulties in using the techniques following the workshop, for example, due to challenges posed by increasing academic pressure and impending exam season. *". .in the beginning [. . .] it was more helpful, because [. . .] it would have been fresh in my mind."*
Study theme 2	**Preference for engaging and interactive content** Several students (n = 8) described the workshops as engaging, interactive or 'different' (in terms of including new ideas or techniques). They liked the variety of techniques used, the use of PowerPoint presentations and the workshop booklet. They preferred the more active and interactive components of the workshop day, with all participants commenting that they liked the videos used and/or could relate to the video character(s). *". . . the ones [techniques] that the workshop delivered were quite different and quite unique so they sort of made it easier to deal with things because there's stuff that you haven't 2really done before." (pupil)* *"It [the workshop day] was great, we did, it was a whole day, we did so many activities, we learnt so many things, we tried new things, it was really fun." (pupil)* *". . .there was loads of different activities, not just reading and listening and sitting down, so it was interactive." (pupil)*
Study theme 3	**The importance of an individualised approach** Students valued a personalised approach to workshop provision, for example, when the psychologists asked them to describe their lived experience of stress. *"[the workshop was] really interactive and because there wasn't a really large group of people, there was about 12 of us, it was quite individual as well. So personally I feel like that I got, got quite a good amount of attention and my questions were answered in quite detail [sic] because we had the time to do it." (pupil)*

	Some thought the workshop was not individualised enough or that there was not enough opportunity for one-to-one interaction with the psychologists. *". . .helping young people that are feeling stressed, the best thing to do would be talk to them about their individual circumstance if they're willing to tell you their personal lives, 'cause if they do then you know, you sort of know what angle to talk to them from"* (pupil)
Study theme 4	**Attending a workshop in the school setting** Six students described the convenience of workshops being held at school, and a further six described the setting as familiar, comfortable, safe and/or secure. *". . .it was quite good doing it in school, 'cause we're all comfortable with our surroundings [. . .] whereas if we done it in a place we've never been to before, we'd be a bit, like, on edge*." A few described a conflict between attending the workshop and missing lesson time. They felt that, lasting a full school day, the workshop took up too much of their time and recommended ways of altering the timescale of the workshop, such as spreading its content over two half-days. *"I think it just took a lot of time. It took a whole school day and for me that's really a lot of information that I missed and had to catch up on."* Two students suggested that a different location might be beneficial, with one expressing the concern that privacy and confidentiality might not be fully assured in the school setting
Study theme 5	**Experience of a group-based workshop** Several students (n = 6) said they benefitted from hearing peers sharing information about themselves which led to realising that other people shared similar experiences and increased reassurance and reduced feelings of isolation. Some students (n = 4) described feeling more comfortable about sharing personal information as the day progressed. A small number (n = 3) commented that the size of the group was important in determining how willing they were to make these disclosures. *"It was nice to see what other people thought and how they dealt with stress and what they felt stress was like."* *". . . since it was a small group, we wouldn't feel intimidated to just tell people stuff. It was more confidential in a sense."*

Study theme 6	**Barriers to attending a school-based intervention** The main reason for not attending the workshop (n = 8) was that students did not feel able to give up the amount of time that was required. Some (n = 4) reported feeling able to cope with stress by themselves or that the workshop was not necessary for them because they were not particularly stressed. Two students said that they decided not to enrol for the workshop due to their impression of the workshop content. *"It was just about missing the lessons, I thought that that was kind of going to add to the stress rather than take it away because just more to juggle with and I just thought at the time it was on I wasn't really ready for missing lessons or anything like that."* *"I would say the time thing was the main reason. [. . .] and then the fact that I wasn't super super stressed then did come into it. It wasn't an urgent priority."* *"I wasn't really 100% sure what the project involved so I didn't really want to commit to something that I wasn't entirely like* *convinced about at the time."*
Study theme 7	**Fit with school values and existing school support** All staff interviewees reported that the workshop was in line with their school values, particularly in terms of student welfare and pastoral care. *". .rather than having 200 students knocking on my door because they're feeling overwhelmed and need support, I'll only have 100 students" (School staff)* All staff valued the DISCOVER workshop at their school, often commenting that it addressed a gap in the support that they were able to provide. Having an external agency come to the school to provide additional mental health support was viewed favourably (n = 5). *". .it's quite nice to have people come in, and take some of those students who are really stressed and kind of give them that support that they don't, they can't always get 24/7 with, with us." (school staff)*

	Some staff members (n = 3) highlighted the importance of helping students to become self-managers of their mental health, and felt that the workshops were in keeping with their aims to support students' personal and emotional development. Some (n = 3) also highlighted the value of the preventative nature of the workshop. *"I think the more preventative work we can do the better, really, because I think young people do need to learn to be more resilient and develop skills to develop that resilience, cause you know, life is difficult and there's no getting away from that, but I think we just need to make young people realise that that is normal and how to actually handle it."*
Study theme 8	**Role in recruitment** School staff (n = 8) played a role in reminding students to attend various aspects of the programme. Most accepted this responsibility, but many (n = 7) felt it was helpful when the DISCOVER team called or sent text messages to prompt students to turn up at the required times. *". .it will not require that much time and effort but will give a great opportunity to students."(school staff)* The DISCOVER workshop featured a self referral entry route, staff from three of the five schools described putting considerable time and effort into recruitment of particular students to the workshop. They were more comfortable in encouraging groups of students to enrol, with few (n = 2) approaching students individually. Allowing students to opt-in or self-refer to the workshop was viewed as important. *". .they have to make that decision. That they want to take part in it. I don't think it should be forced upon them, because some students are quite laid back and they don't feel they need it."*
Study theme 9	**Clarity regarding workshop remit** Most staff (n = 7) felt they did not receive enough information about the workshop remit and/or expressed a desire to learn more about the specific techniques that were introduced during the workshop. Staff (n = 4) were keen to provide follow-up support after the workshop ended. Some felt they would be better equipped to provide this support if they had received training or resources from the DISCOVER team. *". . .it would be beneficial for us to be able to have some acknowledgment of what particular strategies work well so that we can reinforce that with students."* *". . .would quite like to have seen some of the materials that were used [. . .] so that they could kind of continue to*

	use them, or use the right language with them. [. . .] we [staff] don't know quite what happened in those workshops so it, it's difficult to follow-up. . . "

Study arms

DISCOVER (N = 15)

Non-participants (N = 9)

School staff (N = 10)

Characteristics

Arm-level characteristics

Characteristic	DISCOVER (N = 15)	Non-participants (N = 9)	School staff (N = 10)
Age Mean (SD)	17.59 (NR)	17.44 (NR)	38.28 (NR)
Male Sample size	n = 3 ; % = 20	n = 4 ; % = 44.44	n = 2 ; % = 20
Female Sample size	n = 12 ; % = 80	n = 5 ; % = 55.56	n = 8 ; % = 80

Characteristic	DISCOVER (N = 15)	Non-participants (N = 9)	School staff (N = 10)
Black British, African Sample size	n = 6 ; % = 40	n = 4 ; % = 44.44	n = 0 ; % = 0
Black British, Caribbean Sample size	n = 3 ; % = 20	n = 0 ; % = 0	n = 3 ; % = 30
White British Sample size	n = 4 ; % = 26.67	n = 2 ; % = 22.22	n = 5 ; % = 50
Other BME group Sample size	n = 2 ; % = 13.33	n = 3 ; % = 33.33	n = 2 ; % = 20

Critical appraisal - CASP qualitative checklist

Section	Question	Answer
Overall risk of bias	Overall risk of bias	Low

D.2.5 Prior, 2012

Bibliographic Reference	Prior, S; Young people's process of engagement in school counselling; Counselling and psychotherapy research; 2012; vol. 12

Study details

Study design	Qualitative study
Trial registration number	Not reported
Aim	To elucidate the key features and stages of the help-seeking process as defined by young people accessing school counselling
Country/geographical location	UK
Setting	Secondary schools
Type of school	Secondary school
UK Key stage	Key stage 3 Key stage 4 Post-16
Inclusion criteria	Students who had completed counselling
Exclusion criteria	None
Data collection methods	Semi-structured interviews lasting 25-45 minutes which were audio-recorded
Ethical considerations	Young people engaged in a process of informed consent, covering the purpose of the study, audio recording and transcription, and how the interview transcript would be anonymised and used, ensuring their comprehension of these issues. Consent was reviewed and young people gave feedback on their experience of the interview. The limits of confidentiality in relation to child protection were explained at the outset. Ethical approval was granted through the relevant University.

Statistical method(s) used to analyse the data	Thematic narrative synthesis
Attrition	N/A
Study limitations	• Small number of interviews • The participants self-selected to be interviewed and may therefore be more likely to be satisfied with their experience of counselling. • The interviews relied on retrospective recall of engagement in counselling
Study theme 1	**Acknowledgement of problem** Young people described that the process commenced with the acknowledgement of 'having problems' which they felt unable to discuss with family or friends. Sometimes to protect their families and friends from their 'disturbing thoughts and feelings'. *"I didn't feel I could talk about it at home. Mum and Dad would be really upset if they knew I was upset."* For some young people non-disclosure related to feelings of shame and guilt in relation to the problem, a lack of trust in others' ability to maintain confidentiality, anxiety about the potential consequences of disclosing to others and the need to appear normal especially in the eyes of their peer group. *"I just thought like I need to talk to somebody, like try and get my problems out, cos I could never tell my Mum the sorta problems I had, cos I know, like, she'd be angry with me. That's how like I tell my best pal things and that, but sometimes I don't trust her, to tell her a lot of my stuff, cos I know, like, if me and her fall out, she'll go away and tell people"*
Study theme 2	**A facilitative conversation** Young people recounted how a member of school staff introduced them to the idea of counselling. They explained what counselling involved and how the process is managed with particular attention to confidentiality, privacy and choice.

	"Well, my guidance teacher, she spoke to me and she explained everything clearly to me and she said that once I'd tried it for the first time, if I didn't want to go back, I didn't have to. It was up to me" Young people described that the facilitator emphasised the counsellor's expertise in areas where other school staff are not always equipped. *"Mrs Jones suggested it, because she felt that it wouldn't help me, or do me any good, to continue talking to her, it would be better if I spoke to someone who would know more and be probably able to help me more than she could."* In their reports of these conversations, the interviewees describe how the facilitator demystifies counselling, presenting it as 'just talking and listening'. *"When she said that all they would do was just talk about it, and try to solve and stuff, I was, like, I'll give it a shot."*
Study theme 3	**Contemplation of counselling** Young people report an internal process of contemplation, evaluation and decision-making in relation to attending counselling. Even though they considered talking to a stranger to be 'strange', it is this unfamiliarity and separateness of the counsellor that was key in the decisions to try counselling. *"I had like an anger management thing in here, but if you told them anything like confidential, like anything that happens at home, they have to go and tell the Head to see if you need social work or anything. Especially, cos, like, they're teachers in the school as well, like, maths teachers and that. So I stopped going to that. And then that's how I knew I wanted somebody that I could talk to that wouldn't go back and tell anybody about it"* Stigmatisation concerns loom large as they consider what other people might think if they discovered the young person was in counselling *"I was like that, I'm gonna get to hear, like, there's something wrong with me or something like that. People would think, like, I'm psycho or that."* Using the language of 'problem-solving', young people perceive the promise of counselling as potentially providing solutions to what they are experiencing as intractable or unbearable problems.

	"Just ideas on how to resolve my situation, on how to cope with everything that was happening, basically, ideas on how to keep it at bay."
Study theme 4	**Evaluating trustworthiness** Some young people felt able to trust their counsellor immediately whilst others took several weeks. This is because of being uncertain in this new situation, feeling initially uncomfortable with a stranger, anxious that they might be judged or interrogated, and deciding initially to hold back while they assessed the trustworthiness of the counsellor and her capacity to maintain confidentiality.
Study theme 5	**Decision to disclose** Concerned about being judged, criticised or reported on, some initially assess the counsellor's reaction to carefully planned partial disclosures. Having established her trustworthiness, these are then followed by full disclosure. *"Cos I didn't know her, I felt uncomfortable at first, but just the way she reacted with it, it was if, like, even though I'd done wrong things, it doesn't matter, I've done it and it's in the past, I just need to get on with myself and just look up to the future basically."* Being accepted, not being judged or criticised, being treated as an equal and not being talked down to, are key factors in their decision to entrust the counsellor with their more disturbing worries. *"I also thought like, maybe, cos of like my age, Jan would treat me like a child, but she just treated me more like a grown up, because I'm getting older. So that was good as well. We sat and laughed, we had a good laugh. She just treated me like, ah, like someone nearer her age. Just like an adult type person. Jan just sat there, an' I just, she asked me a couple of questions to start me off, cos I didn'tknow where to start, and then I just never shut up after that."*

Study arms

School counselling (N = 19)

Characteristics

Study-level characteristics

Characteristic	Study (N = 8)
Age Range	13 to 17
Male Sample size	n = 2 ; % = 25
Female Sample size	n = 6 ; % = 75

Critical appraisal - CASP qualitative checklist

Section	Question	Answer
Overall risk of bias	Overall risk of bias	Low

D.2.6 Rupani, 2012

Bibliographic Reference	Rupani, Pooja; Haughey, Nuala; Cooper, Mick; The impact of school-based counselling on young people's capacity to study and learn.; British Journal of Guidance & Counselling; 2012; vol. 40 (no. 5); 499-514

Study details

Study design	Qualitative study
Trial registration number	Not reported
Aim	To explore how school-based counselling might impact young people's capacity to study and learn
Country/geographical location	Glasgow, UK
Setting	Secondary schools
Type of school	Secondary school
UK Key stage	Key stage 3 Key stage 4 Post-16
Inclusion criteria	School pupils that had received school counselling
Exclusion criteria	None
Data collection methods	Semi-structured qualitative interviews
Ethical considerations	Counsellors were requested to approach those pupils whom they felt were capable of giving informed consent for participation in this study. All pastoral care teachers were sent information sheets and consent forms well in advance of the interviews to pass on to the participants. All procedures in this study received ethical approval from the University Ethics Committee of the University of Strathclyde
Statistical method(s) used to analyse the data	The interviews were recorded, transcribed (by the researcher who conducted them) and all 21 analysed separately by both researchers. The data were analysed thematically. Thematic analysis is a process for categorising, analysing and reporting themes within data
Attrition	NA

Study limitations	• Limited to only the service users perspectives • It might also be possible that the participants may have heightened the benefits of counselling and that the actual effect may be less than has been recorded
Study theme 1	**The impact of difficulties on the capacity to study and learn** **Difficulties in concentration** Most of the participants felt that the problems they were having had negatively affected their concentration at school. With their problems on their minds at all times, pupils reported feeling that they had no space in their head for schoolwork *"You know sometimes just the stress and they're [the problems] constantly on your mind. You can't stop thinking about it and sometimes it would distract me from my work and make me feel upset a lot. (Participant P4)"* *"I just couldn't stop thinking about them [the problems] and it was stressing me out and stuff. And obviously if I was getting stressed out, I wasn't concentrating on my work and stuff. "(Participant P6)* **Reduced motivation to do work** Some participants reported a reduced motivation to do schoolwork because of their problems. They felt that with so much going on in their lives, they 'couldn't be bothered' with schoolwork. *"But it was like, with what was affecting me, I just sort of went downhill. I couldn't really; I just sat down and be taking forever with my work. I didn't want to do it as much. "* (Participant P10) **Reduced motivation to attend school/classes and problems with attendance** Some participants felt that their problems reduced their motivation to attend school/classes and/or they reported having trouble with attendance prior to the counselling *"I didn't really want to come to school and I wasn't doing work and I found school boring and I wouldn't really try and just didn't care"* (Participant N7)

Negative impact on grades

Some pupils reported a negative impact their problems were having on their grades and schoolwork.

"Some classes I was doing well in and then the problems I had were making me like; my grades and stuff go down. So it was like making me lose marks that I knew I could get." (Participant P6)
"Yeah my grades were slipping and before counselling I was on a downward spiral because my problems were just getting the better of me." (Participant P8)

Behavioural issues in class

Some pupils reported having behavioural difficulties in class. They said they would misbehave in class and argue with teachers, and for some this was the main reason to go to counselling.

"I'd just be shouting at teachers, arguing with teachers, carrying on in class, not listening, not doing work really." (Participant N9)

"My head was like . . . I'd start carrying on; I'd carry on with my friends in my class, and we were like throwing rubbers at each other, things like that; shouting out and stuff." (Participant N10)

Difficulties in relationships with teachers

Some participants felt their relationships with the teachers were being negatively affected by their problems or their behaviour in class, with them arguing with teachers all the time and being un-cooperative

"I used to argue with my teachers like just blurt my mouth off and end up shouting at them or something" (Participant P7)
"Yeah before I wasn't really bothered [about teachers]. Just walk away or be just . . . dead aggressive towards teachers and all that." (Participant P3)

Reduced participation in class

	Some of the pupils felt they were participating less in class because of their problems; that they were not interested in anything that was going on in class. *"Before the counselling, whenever stuff happened in class, I always like was not into it at all. I was just upset and stuff and not taking part in it."* (Participant P5)
Study theme 2	**The impact of counselling on the capacity to study and learn** **Increased concentration** Nearly all pupils felt counselling provided a space for them to talk about their problems, hence they felt they did not need to think about them in class, thus increasing their concentration. Some specifically reported being able to separate their problems from their schoolwork, by focusing on their work in class and concentrating on their problem in counselling. *"I concentrate on my work when I'm in my class and my problems I just take them, I just ask the counsellor to help me with them. And I get them all sorted and dealt with." (Participant P11)* *"Like whenever I talk to somebody, just after [the counselling], it helps me clear my thoughts and get my thinking straight . . . I find it easier to concentrate on different things whenever I've been talking to somebody" (Participant P7)* *"Yeah they [the counselling services] did [improve concentration], because when you talked about your problems, you didn't have to think about it as much." (Participant N5)* **Improved relationships with teachers** Participants reported being more able to control their temper and not get into arguments with teachers, being able to understand teachers' points of view, and also being able to talk to them about their problems *"So like, now [after counselling] if I was arguing with my teacher, I wouldn't end up screaming at them. I'd tend rather just to, not ignore them but just pretend to listen but not really listen so you don't end up reacting into it." (Participant P7)* *"Yes [I get along better with teachers]. I've been able to sort of, talk freely to my teachers. Like before counselling, I was sort of, breaking down in most of my classes, just sort of breaking down. And then after counselling, I'm able to sort of talk to my teachers, my fellow classmates easily." (Participant P8)*

Increased motivation to attend school and/or lessons/increased attendance

Most of the participants felt more motivated to attend school after counselling and/or reported improved attendance records after it, especially if the problem was resolved through counselling or after it.

"When I went to counselling, I got all of it [problems] out and I started to enjoy school more, 'cause I could concentrate more and get on with things." (Participant N2)
"After my counselling, I did find myself sort of more, I could get up in the morning andsay to myself like, 'I'll get ready and I'll come' . . .. Since I've started the sessions, basically I've been able to get up, come into school and get on with everything."
(Participant P10)

Increased motivation to do schoolwork/increased amount of schoolwork done

Most pupils felt they were motivated to do schoolwork and/or got more schoolwork done after counselling. With more space in their head after talking to the counsellor, pupils felt they wanted to do more work

"It [counselling] made me happier and that was in a way making me do more work after I went [for counselling]. I just seemed happier so I was doing more work . . . it's just like I was happy in all the classes so I was kinda getting on with it. "(Participant N3)
"I was more keen [to study] after counselling 'cause I just had my own space and I could think better after counselling." (Participant N2)

Increased participation in class

Pupils reported increased confidence due to counselling and an increased motivation to do more work positively influenced their desire to participate in class

"Before the counselling, whenever stuff happened in class, I always like was not into it at all. I was just upset and stuff and not taking part in it. But after it, yeah I was fine with it; taking part, talking and stuff." (Participant P5)
"Yeah I do a lot of that [participating in class] now [after counselling] . . . It makes me feel happier 'cause I can get involved in things more." (Participant N8)

	Better behaviour in class Counselling helped improve behaviour in class by making pupils more in control of their anger; taking responsibility for their actions and understanding others' points of view. *Whenever I talk to the counsellor, I feel it's a lot better to speak to them. I feel it's a lot easier to control my temper when I've spoken to somebody. (Participant P7)* *I always misbehaved in the lessons thinking it was alright. But being in counselling has sorted out all the stuff. It has made me think that I can't be bad in the lessons. (Participant P1)* **Increased confidence** Some participants felt that talking about their problems in counselling made them more confident, which directly affected their schoolwork. *"[Counselling] affected my confidence, like it made that better . . . I gained confidence to do other questions." (Participant P1)* *"Yes, I think I lacked a lot of confidence. But again with counselling, I was sort of able to build my confidence up."* (Participant P8)

Study arms

School-based counselling (N = 21)

Characteristics

Study-level characteristics

Characteristic	Study (N = 21)
Age Range	12 to 17
Age Mean (SD)	14 (NR)
Male Sample size	n = 11 ; % = 52.4
Female Sample size	n = 10 ; % = 47.6

Critical appraisal - CASP qualitative checklist

Section	Question	Answer
Overall risk of bias	Overall risk of bias	Moderate

D.2.7 Segrott, 2013

Bibliographic Reference	Segrott, Jeremy; Rothwell, Heather; Thomas, Menna; Creating safe places: an exploratory evaluation of a school-based emotional support service.; Pastoral care in education; 2013; vol. 31 (no. 3); 211-228

Study details

Study design	Qualitative study
Trial registration number	Not reported
Aim	To explore the views of young people who had used the service in terms of acceptability and perceived outcomes; to examine Bounceback's potential to prevent emotional/mental health issues in young people from becoming more serious; to examine the relationship between Bounceback and schools in which it operated and to identify young people's support needs during the transition from school to independent adulthood.
Country/geographical location	Wales, UK
Setting	Secondary school
Type of school	Secondary school
UK Key stage	Key stage 3 Key stage 4
Inclusion criteria	Not reported
Exclusion criteria	Not reported
Data collection methods	All data collection and analysis were conducted by university-based researchers who had no involvement in the delivery of Bounceback. Interviews were conducted with all five members of Bounceback staff; four staff from the three schools where Bounceback operated and seven service users. These were recorded and transcribed (with participants' permission).

Ethical considerations	Ethical approval for the study was given by a university ethics committee
Statistical method(s) used to analyse the data	A coding framework was developed based on interview schedule questions. Two interviews were coded by one researcher and reviewed by a second, leading to adjustments to the framework. All transcripts were then coded using Atlas.ti 6.1.2. Themes were explored in relation to differences in participants' roles in providing, using or hosting Bounceback.
Attrition	NA
Study limitations	A small number of schools and pupils that participated in the research and the research team could not approach Bounceback service users directly, due to data protection regulations.
Study theme 1	**Organisation of service delivery** • Pastoral teachers in two schools did not want to advertise Bounceback to pupils because it would be more difficult to preserve confidentiality (school staff 1, school staff 4); • there was insufficient capacity to absorb self-referrals in addition to staff referrals (school staff 4); and enough people were already aware of Bounceback (school staff 1). • In the third school (S2), Bounceback had been mentioned in a community newsletter featuring services provided at school and the pastoral teacher had spoken to Year 10/11 pupils in their assembly about Bounceback and other services (school staff 3). • Bounceback had also run a stall at parents' evening (school staff 3). • On the whole, Bounceback staff favoured raising awareness of the service through personal contact with groups of teachers/pupils in years 10/11 or presenting theme-based assemblies, rather than advertising through posters/newsletters (BB Staff 5).
Study theme 2	**Working with young people** Staff emphasised that choice and creation of a safe place were foundations of the communication through which they provided support and that within this environment young people began to trust them and talk about their worries. Bounceback staff estimated that six or seven young people had decided not to continue after attending one or two Bounceback sessions, with most attrition occurring during the early days of service delivery, linked to unsuitable accommodation and inappropriate referrals for classroom misbehaviour.

	Passes given to Bounceback users who needed to be released from lessons stated that they had an 'appointment' or 'interview'. Interviews with Bounceback staff indicated that this was done so that Bounceback users could choose whether they wanted to tell anyone else they were attending, or discuss their problems with them. Their aim was to create a safe, comfortable and informal environment in which young people felt relaxed and cared for (BB Staff 1, 4, 5). Bounceback staff described how they gave young people as long as they needed to get to know the staff, to trust them and to start to talk, sometimes offering activity worksheets to help this process. Whilst focusing on worksheets, young people had the chance to chat naturally, rather than feeling the pressure of an expectation that they would engage in a conversation. Eventually, a relationship of trust could be formed.
Study theme 3	**Working with schools** Bounceback staff described how during the early stages of programme delivery, conditions in schools had shown potential to undermine its work and identified 5 criteria that needed to be specified 1. Understand and follow referral criteria - Teachers should refer young people with emotional difficulties/mental health issues, which had the potential to cause a crisis or have a negative effect on emotional well-being. It was not acceptable to refer young people because they disrupted lessons by expressing anger or showing off 2. Attendance is voluntary - although teachers may have thought it was in pupils' best interests to use Bounceback, they should not put pressure on them to do so. 3. Referral forms needed to be passed to Bounceback before the first appointment since lack of information about a person's circumstances could lead to distress and loss of trust. 4. mechanisms were needed for contacting pupils who were due to attend Bounceback. 5. Accomodation - the same room should be available every week so that young people knew where to go. It should not be used as a route into other rooms. There should be no window in the door and other windows should not be overlooked by public areas. Teachers were unable to devote much time to planning or monitoring how the service operated. They responded well to requests from Bounceback staff but contacting them was often difficult because they had other commitments. Communication became easier when support workers were allocated as Bounceback contacts in each school, with a remit to help organise sessions and pass through referrals (BB Staff 1, 2). Bounceback staff felt that communication more generally with teachers would help avoid situations where some were reluctant for young people to miss class-work to attend Bounceback or did not believe that they had a valid reason to

	leave the class. Pastoral care teams had introduced passes to make it easier for pupils to leave lessons, or arranged appointments so that pupils did not miss the same lesson two weeks running.
Study theme 4	**Receipt and acceptability** Some young people were able to compare Bounceback with other services and said support from Bounceback was much better than they had received from Child and Adolescent Mental Health Services [CAMHS] (YP2, YP4, YP5), social services (YP2) and a private counsellor (YP4). One service user spoke of the staff's kindness in anticipating young people's needs by arranging free taxis and providing spending money for the trips they organised (YP4). They valued the way in which Bounceback sessions created a safe environment, in which they could choose what to talk about. *"… you can take as long as you want, you can talk about whatever you want. 'You're here because you have this problem, that's what we want to talk about. But if you're not comfortable talking we won't.' And that's the most important thing in it I think."* *"Well all the other services I did … you know the NHS, and … it was all very clinical and it wasn't comfortable. I mean [Bounceback] made the effort sort of thing; it was little things like, you know, you could sit and you could eat with them … It's like you go in and they know how to make you feel warm and welcome."* Young people reported that Bounceback practitioners formed strong therapeutic relationships, based on trust and being listened to. *"I sort of know it will be private cos I know [BB Staff 4]'s the kind of guy who won't just go blabbing out 'Oh yeah I went to the school yeah and this guy's Nan died'. I know he's not that sort of person, I know my information is safe with him. I just feel really trusted with him."* The willingness of the staff to base this relationship on a sense of equality and to talk through issues was also appreciated. *"… it was nice to know that they are not always going to have the answers. . . You kind of felt that even though they were older than you, you were kind of in the same boat, you were on the same level"*

	School staff remarked on differences in pupils' self-esteem and confidence. Some young people who rarely attended school started to stay longer in school, using Bounceback as a support base (BB Staff 1). These changes were seen as giving young people more chance of gaining qualifications that would enable them to secure jobs or further education (school staff 3, 4, BB Staff 3). Teaching staff also perceived benefits to the school more generally including helping to demonstrate their strategic commitment to the Social and Emotional Aspects of Learning (SEAL) scheme.

Study arms

Bounceback (N = 21)

Critical appraisal - CASP qualitative checklist

Section	Question	Answer
Overall risk of bias	Overall risk of bias	Moderate

D.2.8 Spratt, 2010

Bibliographic Reference	SPRATT, Jennifer; et, al; 'The bad people go and speak to her': young people's choice and agency when accessing mental health support in school; Children and Society; 2010; vol. 24 (no. 6); 483-494

Study details

Trial registration number	Not applicable

Aim	To explore issues of access, when mental health initiatives are sited in formal educational settings.
Country/geographical location	Scotland, UK
Setting	Primary and secondary school
UK Key stage	Key stage 1 Key stage 2 Key stage 3 Key stage 4
Inclusion criteria	Pupils were invited from the general school population but did not have to had used the services Teachers and other school staff were interviewed
Exclusion criteria	None
Data collection methods	• Semi-structured interviews • Most interviews with staff were one to one, although occasionally staff were interviewed in pairs. • Group interviews were not possible with staff owing to the timetabling restrictions of schools. • Four group interviews were conducted with pupils in each setting.
Ethical considerations	For CYP, written consent was obtained from themselves and their parents. Confidentiality was guaranteed; access to interview data would be restricted to the research team. Anonymity during reporting and dissemination was assured.
Statistical method(s) used to analyse the data	Interviews were recorded and fully transcribed. Data analysis was manual, involving all members of the research team. A grounded approach was taken to identify and analyse key themes emerging from the data.
Attrition	Not applicable
Study limitations	• None reported by author

	• Not clear how many people were interviewed • No information on ethical approval for the study
Study theme 1	**Teachers as the main point of referral** There was very little evidence of teachers being offered training to recognise the types of behaviour that may be associated with poor mental health. Interviewees from outside the teaching profession, such as health workers, voluntary workers and educational psychologists expressed little confidence in teachers' capacities to respond appropriately. *"I don't think they [teachers] are very good at recognising youngsters with emotional behavioural difficulties at the moment.… I mean I am quite categoric on that, we really don't. And I think part of that is actually because they don't know what to look for you know." (Education Authority Representative)* There was evidence throughout the telephone survey data that respondents felt schools were most likely to identify mental health difficulties in pupils whose resulting behaviour was disruptive. Consequently, it was felt, the needs of these CYP were more readily addressed than pupils whose response was more passive. This imbalance could be seen in the types of issues that were referred to other agencies. *"I think there is something to be said to the argument that the brightest will receive attention, and the most difficult will receive attention, and the ones in the middle might be missed. I perfectly understand why there might be some level of truth to that argument in simply looking at what teachers are expected to do in a classroom."* (Youth counsellor) Teachers themselves acknowledged the difficulties they had, in the classroom situation, in identifying those whose mental health difficulties manifested as withdrawn behaviour. *"Yes, these are the ones that are much, much harder to deal with because in some ways these children are behaving as you would ask them to behave.… They are being quiet and they are being good and they are appearing to get on with it. These are the ones who, the danger is, that they may very well slip through the net."* (Secondary teacher)
Study theme 2	**Self-referral opportunities**

A system, which depends on teachers noticing behavioural signs of distress in a classroom setting, does not allow for the full range of difficulties to be identified and supported. Not all of the initiatives studied offered other accessible gateways through which young people could autonomously seek support. Simply including a self-referral element was insufficient to draw CYP into the system.

"Well … for this age group[secondary school] self referral is not expected to be high. I think at the moment we are running with about 10%. And that actually is a pretty good figure for self-referral for this age group so we can't expect that those young people who are pretty isolated […] are going to refer anyway." (Counsellor)

This low level of self-referral may be because of limited knowledge of services on the part of CYP, but there was evidence that it could be associated with how the service was viewed. If most users had been referred by teachers as a result of disruptive behaviour, this could discourage use by the general school population. In another school setting, the interviewees (aged 15 and 16), when asked to discuss vignettes of pupils experiencing various forms of distress, first did not even consider the counselling service as a potential source of help.

"Interviewer: What role does she [school counsellor] have in the school?
David: The bad people go and speak to her, the really extreme cases, the ones who have behavioural problems — the ones who bully people, folk who don't work in class.
Jane: There's one girl I know of and everybody knows she's a nasty piece of work and she had to go and see her"

Strategies were in place in two case studies to improve the accessibility of their services to CYP. The first was a counselling/therapy service, provided in primary schools by a national voluntary organisation (Case study 1). The workers maintained a high profile in the school and cultivated a welcoming and friendly image, encouraging children to visit their office. The service had no lower threshold; children were welcome to discuss anything. They consequently drew in children for a wide range of reasons, which in turn removed any stigma from being seen to use it. Those children who reported serious difficulties were indistinguishable to the outside observer from those whose problems were less critical.

"People say, 'What's the success due to?' I think its because we are there and we are accessible and we are familiar and we are consistent, and they see us there at the same times and the same places … so it's a known factor, so it doesn't feel like something strange and external to their daily lives."

	This was echoed by children who trusted the confidentiality of the service and welcomed thenon-judgmental response, describing this as different from their experiences of teaching staff. *"Sometimes the teacher mentions it [a child's problem] to the whole class. [The schools project manager] only keeps it to herself. She keeps it as a little secret between her and the person."* *"Teachers don't really have time sit and listen, and they [the project staff] have time for you."* A second example of a low-threshold mental health intervention was seen in a well established integrated community secondary school (Case Study3). A health drop-in opened daily and offered a range of health related activities, discussions or just space to eat lunch. Advice and information were available on a range of topics and this was viewed by staff as a springboard to working with young people on related emotional and mental health issues. The drop-in was staffed by the school nurse, youth workers and support workers on a rota basis. A key advantage noted by young people was that they could use the drop in on their own terms and this allowed them to exert some control over the process. *"It is good to be in school but … if one person is being bad then the whole class gets it and that is not very good. The drop in is good and it is good to be able to go and get your lunch or to play pool or just relax."* (young woman, aged 15)

Study arms

Interviewees (N = 66)

Critical appraisal - CASP qualitative checklist

Section	Question	Answer
Overall risk of bias	Overall risk of bias	Moderate

D.2.9 Weeks, 2017

Bibliographic Reference	Weeks, Caoimhe; Hill, Vivian; Owen, Charlie; Changing thoughts, changing practice: Examining the delivery of a group CBT-based intervention in a school setting.; Educational Psychology in Practice; 2017; vol. 33 (no. 1); 1-15

Study details

Study design	Qualitative study
Trial registration number	Not reported
Aim	To consider the factors impacting on the success and outcomes of a CBT-based group intervention.
Country/geographical location	UK
Setting	Secondary school
Type of school	Secondary school
UK Key stage	Key stage 3
Inclusion criteria	Pupils were initially identified through consultation between the researcher EP and school staff (SENCos, Heads of Year and Teaching Assistants (TAs)). Pupils were identified as likely to benefit from accessing an intervention to reduce their anxiety.
Exclusion criteria	Not reported
Data collection methods	Semi-structured interviews were conducted with school staff and pupils and a focus group was held with parents from one school. A questionnaire containing both open and closed questions was administered to all participants

	The researcher also kept a diary of observations and reflections
Ethical considerations	Not reported
Statistical method(s) used to analyse the data	Thematic analysis was used to explore themes emerging from the data gathered from interviews with pupils and school staff and a focus group held with parents
Attrition	NA
Study limitations	None reported by author
Study theme 1	**Commissioning the group** Concerns were raised by school staff about how to identify pupils who were having difficulties managing their anxieties. As secondary schools are particularly complex organisations, the key person involved in the identification process varied. *"The person whose role it is in school to identify the students has to be very clear and there has to be a complete match between what you're looking for, given what you're planning to do, and what we're trying to identify, for it to work well." (SENCo)* In line with typical EP practice, participants were chosen based on adult perceptions of experiences of anxiety, which the pupils may or may not have been in agreement with. *"Anxiety means different things to different people and people use the wrong words for something, they call it anxiety and it isn't." (SENCo)*
Study theme 2	**Measuring change** The need to provide quantitative data was highlighted by a member of staff *"I'm going to look at data in half-term and I'll look at things like attendance and things like are they visiting the nurse as often as they did when they first arrived. And also we can look at academic achievement as well, so the whole area of tracking and data that we can look at to see if the CBT has had an impact on individual students." (SENCo)*

	It was observed that school staff seemed to rely more on their personal qualitative observations, which were more process than outcome focused. *"I'm such a person that will actually stand outside the unit at break and lunch time and just observe students and see how they're interacting socially…so that is not a hard and fast data but I think that gives you a feeling of how they feel about themselves, their self-esteem, their confidence." (SENCo)* Qualitative observations also appeared to place a greater emphasis on the absence of an undesirable behaviour, rather than the observation of a desired one *"No news is good news with students like that. If they don't come forward in any shape or form to any member of staff as being a concern you can usually assume they're fine." (Head of Year)*
Study theme 3	**Managing the therapeutic process in schools** As a traditionally clinic-based intervention, the application of a CBT approach in a school setting raised some practical concerns; for example, timetabling the group and securing an appropriate room within the school. This supported ensuring confidentiality and boundaries of privacy (for example, other staff and pupils entering the room during the group). *"I think we've got an ideal room for you and I think any school that undertakes intervention groups has to have…(this)…it was private, you were able to put the blinds down…a small environment which made it more nurturing." (SENCo)* This issue of who actually delivers the intervention was raised in terms of privacy and confidentiality. *"…someone who's not part of the establishment, someone who they know comes in and goes out, in their heads they know you don't go into the staff room and talk about them or talk about their issues. So I think that means a lot to the students." (Head of Year)* Having an intervention run by an external service provider did also raise concerns about providing ongoing or follow-up support for the students.

	"The worry is that I don't see…(named three students)…so where's the reminder of it and going to remember…why you are using that strategy again?" (TA) Another concern was that the students already had existing relationships and roles within peer groups, which impacted on their engagement. *"Because of the fact that they know each other so well…if they fell out that day there was an issue that had to be resolved on that day…so it'd be like they'd come to the CBT and then we'd get all the issues of the day that had exploded in break…so that was a hindrance." (TA)*
Study theme 4	**Pupil engagement** Concerns were raised in relation to the motivation of pupils to participate in an intervention which had been suggested by an adult (school staff and/or parent), rather than self-selected. *"I just think it's very hard to explain why you're offering them, this is about something you want…" (Head of Year)* *"…with certain individuals in the group, we want them to change more than they want to change and that's a bit of an issue I think." (TA)* It was apparent throughout the process that some students did find it difficult to engage with the CBT process in terms of understanding and applying the principles to themselves and applying and generalising them beyond example presented in sessions. *"I think it was quite hard for them to get their heads around why they were in the group."(TA)*

Study arms

CBT (N = 19)

Characteristics

Study-level characteristics

Characteristic	Study (N = 19)
Age Range	11 to 14

Critical appraisal - CASP qualitative checklist

Section	Question	Answer
Overall risk of bias	Overall risk of bias	Moderate

Appendix E: Forest plots

E.1 RQ5.1a Targeted mental health support in primary education

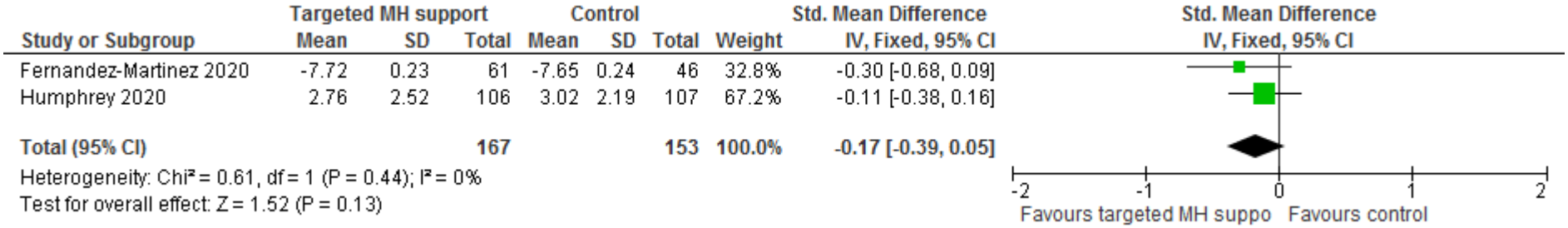
E.1.1 Social and emotional skills and attitudes

E.1.1.1 Group interventions provided by external specialists

Single study only

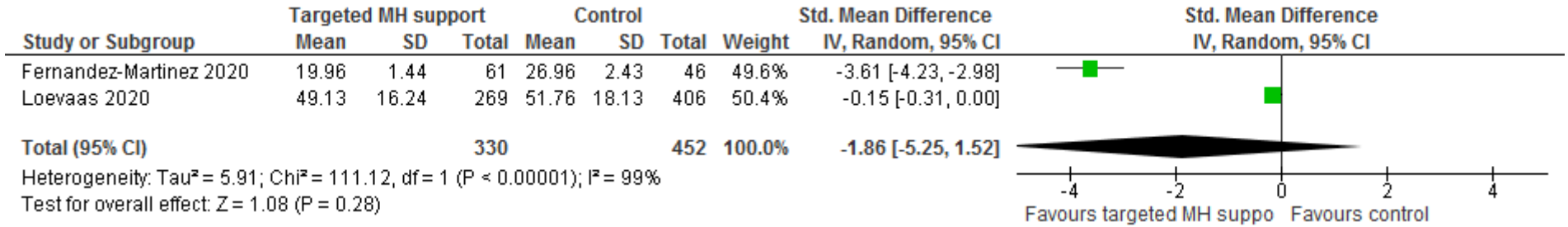
E.1.2 Behavioural outcomes

E.1.2.1 Group interventions provided by external specialists



E.1.3 Emotional distress

E.1.3.1 Group interventions provided by external specialists



E.1.4 Academic progress and attainment

No studies identified

E.1.5 School attendance

No studies identified

E.1.6 School exclusions

No studies identified

E.1.7 Quality of life

E.1.7.1 Group interventions provided by external specialists

Single study only.

E.1.8 Unintended consequences

No studies identified

E.2 RQ5.1b Targeted mental health support in secondary education

E.2.1 Social and emotional skills and attitudes

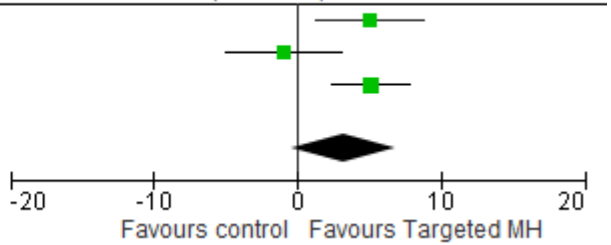
E.2.1.1 Group interventions provided by external specialists

Single study only.

E.2.1.2 Individual interventions provided by external specialists: Self-esteem

	Targeted MH support			Control				Mean Difference	
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	Year
McArthur 2011	20.31	6.27	16	15.29	4.62	17	31.7%	5.02 [1.24, 8.80]	2011
Pybis 2013	14.92	5.72	16	15.88	5.99	16	30.1%	-0.96 [-5.02, 3.10]	2013
Pearce 2017	19.67	5.29	30	14.6	5.4	30	38.1%	5.07 [2.36, 7.78]	2017
Total (95% CI)			**62**			**63**	**100.0%**	**3.24 [-0.40, 6.87]**	

Heterogeneity: Tau² = 7.11; Chi² = 6.52, df = 2 (P = 0.04); I² = 69%
Test for overall effect: Z = 1.75 (P = 0.08)

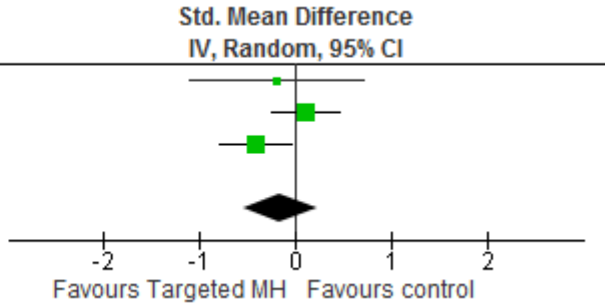


E.2.2 Behavioural outcomes

E.2.2.1 Group interventions provided by external specialists: Behavioural outcomes

	Targeted MH support			Control				Std. Mean Difference	
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	Year
Fung 2016	49.22	11.48	9	51	4.5	10	14.2%	-0.20 [-1.10, 0.70]	2016
Goossens 2016	5.36	2.29	57	5.12	2.34	63	43.8%	0.10 [-0.26, 0.46]	2016
Fung 2019	52.53	10.04	68	57.34	13.33	46	42.0%	-0.42 [-0.79, -0.04]	2019
Total (95% CI)			**134**			**119**	**100.0%**	**-0.16 [-0.54, 0.22]**	

Heterogeneity: Tau² = 0.05; Chi² = 3.83, df = 2 (P = 0.15); I² = 48%
Test for overall effect: Z = 0.81 (P = 0.42)



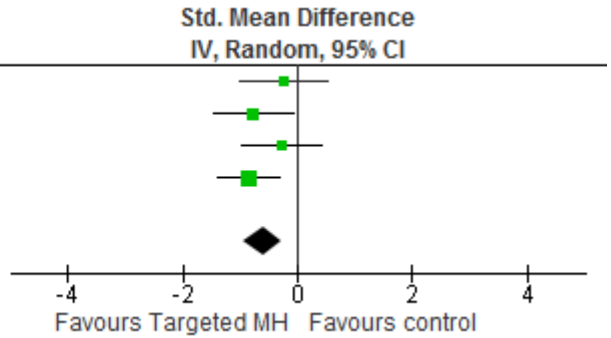
E.2.2.2 Group interventions provided by school specialists

Single study only.

E.2.2.3 Individual interventions provided by external specialists: Behavioural difficulties

	Targeted MH support			Control				Std. Mean Difference	
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	Year
Cooper 2010	12.46	5.53	13	13.86	5.41	14	18.3%	-0.25 [-1.01, 0.51]	2010
McArthur 2011	11.44	4.98	18	15.47	5.23	17	22.1%	-0.77 [-1.46, -0.08]	2011
Pybis 2013	16.44	5.76	16	18.13	6.04	16	21.6%	-0.28 [-0.98, 0.42]	2013
Pearce 2017	14.45	5.38	31	18.8	4.63	30	38.0%	-0.85 [-1.38, -0.33]	2017
Total (95% CI)			**78**			**77**	**100.0%**	**-0.60 [-0.93, -0.28]**	

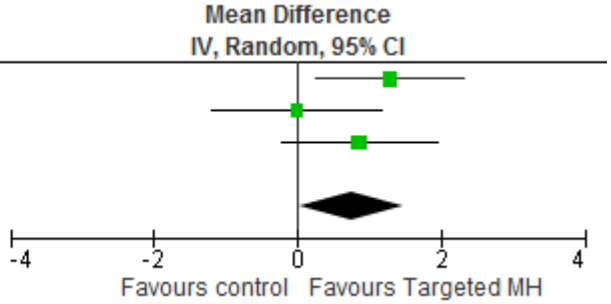
Heterogeneity: Tau² = 0.00; Chi² = 2.78, df = 3 (P = 0.43); I² = 0%
Test for overall effect: Z = 3.63 (P = 0.0003)



E.2.2.4 Individual interventions provided by external specialists: Prosocial behaviour

Study or Subgroup	Targeted MH support Mean	SD	Total	Control Mean	SD	Total	Weight	Mean Difference IV, Random, 95% CI	Year
Cooper 2010	9.15	0.69	13	7.86	1.83	14	36.4%	1.29 [0.26, 2.32]	2010
McArthur 2011	7.81	1.83	18	7.82	1.74	17	29.6%	-0.01 [-1.19, 1.17]	2011
Pearce 2017	8.29	1.62	31	7.43	2.56	30	34.0%	0.86 [-0.22, 1.94]	2017
Total (95% CI)			**62**			**61**	**100.0%**	**0.76 [0.03, 1.49]**	

Heterogeneity: Tau² = 0.11; Chi² = 2.68, df = 2 (P = 0.26); I² = 25%
Test for overall effect: Z = 2.04 (P = 0.04)

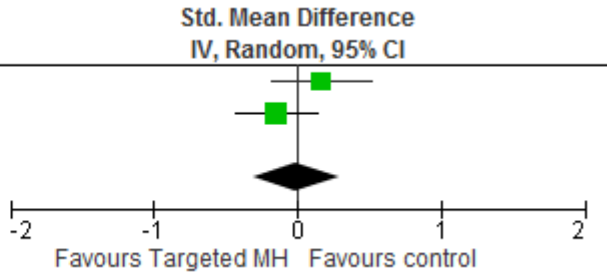


E.2.3 Emotional distress

E.2.3.1 Group interventions provided by school specialists: Emotional distress

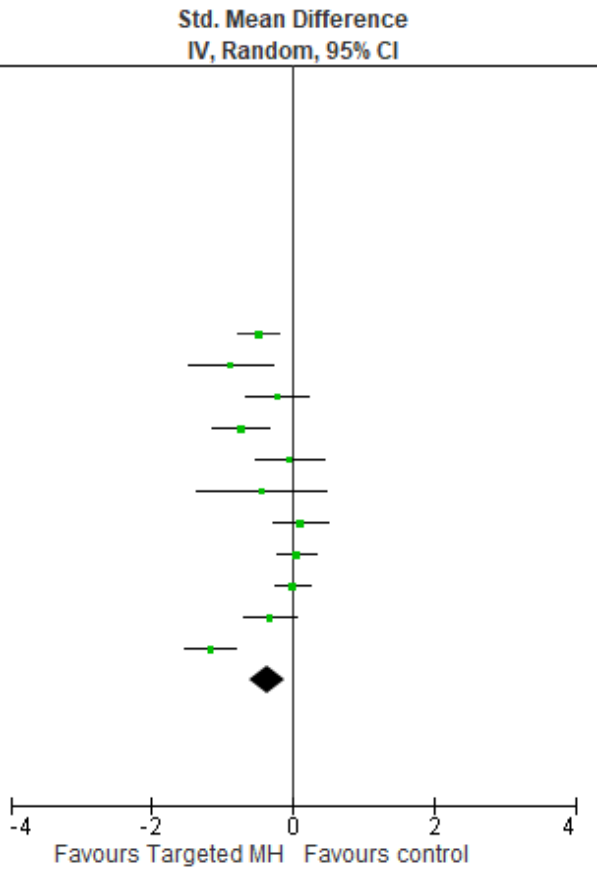
Study or Subgroup	Targeted MH Mean	SD	Total	Control Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI	Year
Hunt 2009	27.2	16	68	24.7	14	62	44.8%	0.16 [-0.18, 0.51]	2009
O'Leary-Barrett 2013	8.22	2.57	113	8.6	2.57	84	55.2%	-0.15 [-0.43, 0.14]	2013
Total (95% CI)			**181**			**146**	**100.0%**	**-0.01 [-0.31, 0.30]**	

Heterogeneity: Tau² = 0.02; Chi² = 1.88, df = 1 (P = 0.17); I² = 47%
Test for overall effect: Z = 0.05 (P = 0.96)

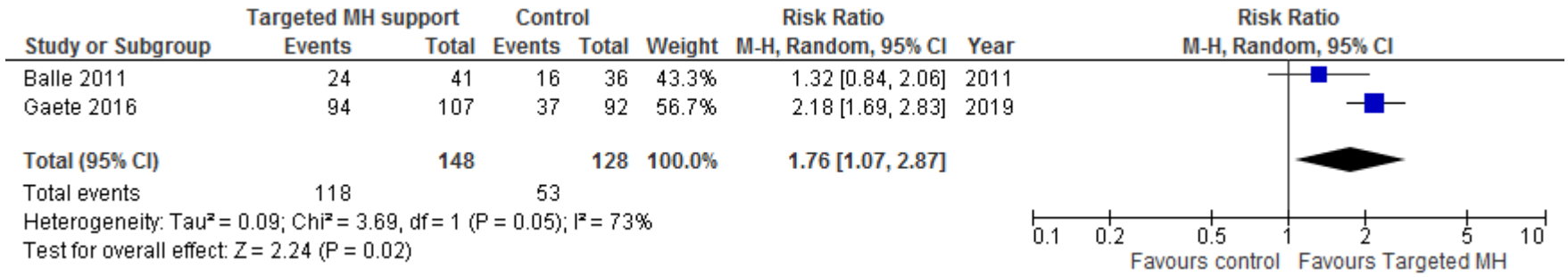


E.2.3.2 Group interventions provided by external specialists: Emotional distress

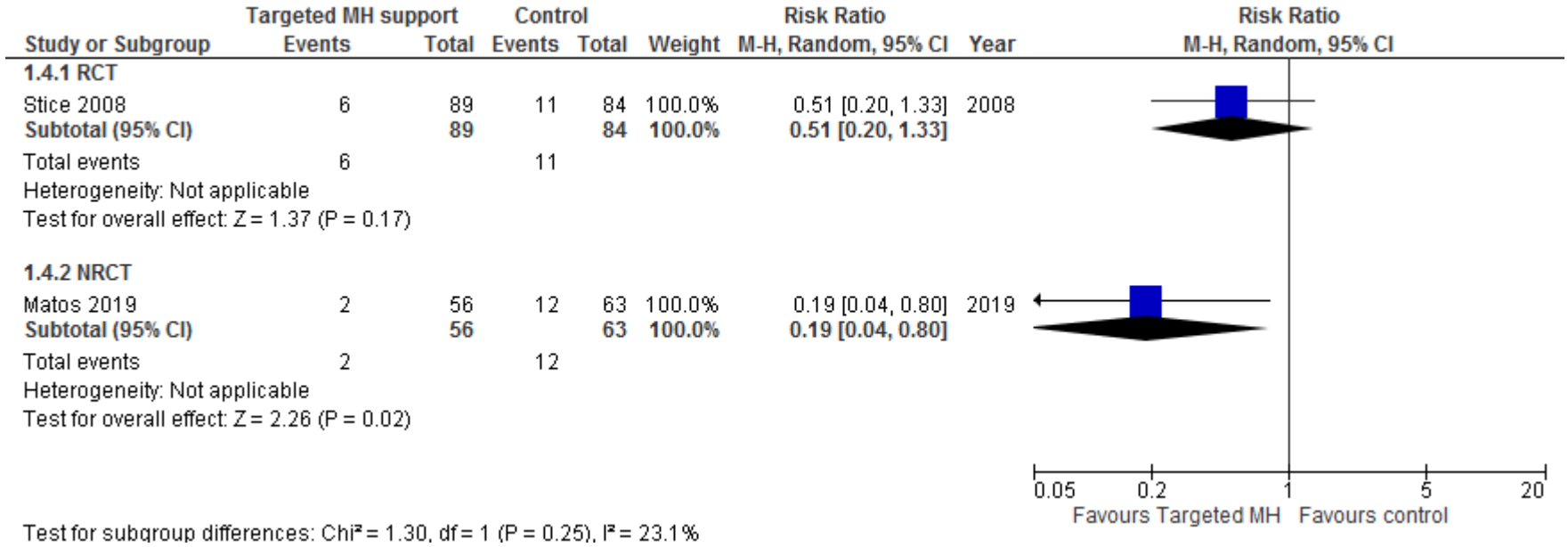
Study or Subgroup	Targeted MH support Mean	SD	Total	Control Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI	Year
1.1.1 Primary education									
Fernandez-Martinez 2020	19.96	1.44	61	26.96	2.43	46	0.0%	-3.61 [-4.23, -2.98]	2020
Loevaas 2020	49.13	16.2372	269	51.76	18.1345	406	0.0%	-0.15 [-0.31, 0.00]	2020
Subtotal (95% CI)			**0**			**0**		**Not estimable**	
Heterogeneity: Not applicable									
Test for overall effect: Not applicable									
1.1.2 Secondary education									
Stice 2008	12.18	9.56	89	17.22	10.93	84	10.4%	-0.49 [-0.79, -0.19]	2008
Berry 2009	17.45	10.19	22	27	11.14	24	7.2%	-0.88 [-1.49, -0.27]	2009
Balle 2011	27.66	9.54	41	30.36	15.32	36	8.9%	-0.21 [-0.66, 0.24]	2011
Wijnhoven 2014	11.7	8.24	52	17.77	8.17	52	9.4%	-0.73 [-1.13, -0.34]	2014
Livheim 2015	64.95	23.6	32	66.17	28.6	32	8.5%	-0.05 [-0.54, 0.44]	2015
Fung 2016	50.22	7.34	9	53.89	8.49	10	4.8%	-0.44 [-1.35, 0.47]	2016
Poppelaars 2016	58.98	13.11	50	57.62	13.33	51	9.5%	0.10 [-0.29, 0.49]	2016
Goossens 2016	14.79	7.55	97	14.46	6.66	106	10.7%	0.05 [-0.23, 0.32]	2016
Gaete 2016	15.1	10.4	187	15.2	10.14	92	11.0%	-0.01 [-0.26, 0.24]	2019
Fung 2019	62.6	17.31	68	68	15.12	46	9.7%	-0.33 [-0.70, 0.05]	2019
Brown 2019	45.4	10.9	62	58.8	11.9	80	9.9%	-1.16 [-1.52, -0.80]	2019
Subtotal (95% CI)			**709**			**613**	**100.0%**	**-0.36 [-0.62, -0.10]**	
Heterogeneity: $Tau^2 = 0.14$; $Chi^2 = 48.33$, df = 10 (P < 0.00001); $I^2 = 79\%$									
Test for overall effect: Z = 2.75 (P = 0.006)									
Test for subgroup differences: Not applicable									



E.2.3.3 Group interventions provided by external specialists: Response (reduction in depressive symptomatology)



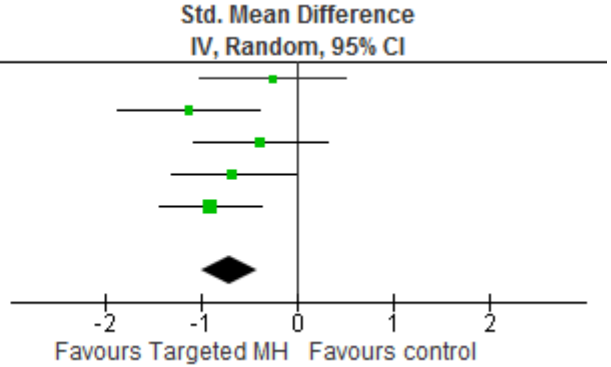
E.2.3.4 Group interventions provided by external specialists: Depression diagnosis



E.2.3.5 Individual interventions provided by external specialists: Emotional distress

Study or Subgroup	Targeted MH support Mean	SD	Total	Control Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI	Year
Cooper 2010	10.46	7.45	13	12.29	6.17	14	15.0%	-0.26 [-1.02, 0.50]	2010
McArthur 2011	9.25	7.26	16	17.47	6.83	17	15.7%	-1.14 [-1.88, -0.40]	2011
Pybis 2013	15.19	7.18	16	18.25	7.98	16	17.6%	-0.39 [-1.09, 0.31]	2013
Saelid 2017	7.21	3.53	19	10.6	5.91	20	20.7%	-0.68 [-1.33, -0.03]	2017
Pearce 2017	12.61	7.57	31	19.3	6.92	30	31.0%	-0.91 [-1.44, -0.38]	2017
Total (95% CI)			**95**			**97**	**100.0%**	**-0.71 [-1.00, -0.41]**	

Heterogeneity: Tau² = 0.00; Chi² = 3.98, df = 4 (P = 0.41); I² = 0%
Test for overall effect: Z = 4.72 (P < 0.00001)



E.2.3.6 Computer-based interventions

Single studies only

E.2.4 Academic progress and attainment

No studies identified

E.2.5 School attendance

No studies identified

E.2.6 School exclusions

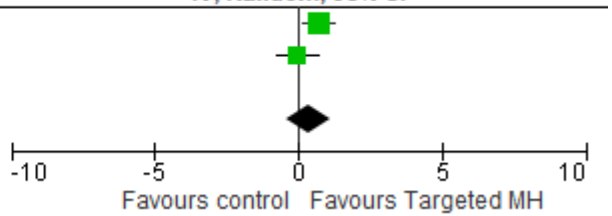
No studies identified

E.2.7 Quality of life

E.2.7.1 Computer-based interventions

Study or Subgroup	Targeted MH support Mean	SD	Total	Control Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI
Do 2021	71.8	19.94	25	54.6	26.96	25	54.2%	0.71 [0.14, 1.29]
Fleming 2012	1.3	7.47	19	1.74	7.48	12	45.8%	-0.06 [-0.78, 0.67]
Total (95% CI)			**44**			**37**	**100.0%**	**0.36 [-0.39, 1.11]**

Heterogeneity: Tau² = 0.19; Chi² = 2.69, df = 1 (P = 0.10); I² = 63%
Test for overall effect: Z = 0.94 (P = 0.35)



E.2.8 Unintended consequences

No studies identified

Appendix F: GRADE profiles

F.1 RQ5.1a Targeted mental health support in primary education

F.1.1 Social and emotional skills and attitudes

F.1.1.1 Group interventions provided by external specialists

Quality assessment							No of participants		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Targeted mental health support	Control	Relative (95% CI)	Absolute	
Social and emotional skills: Self-esteem (Better indicated by higher values) (Humphrey 2020)											
1	randomised trial	serious [1]	N/A	no serious indirectness	serious[2]	none	106	107	-	MD 0.47 higher (0.24 lower to 1.18 higher)	LOW

[1] Participants were most likely aware of allocation of intervention
[2] 95% CI crosses line of no effect

F.1.2 Behavioural outcomes

F.1.2.1 Group interventions provided by external specialists

Quality assessment							No of participants		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Targeted mental health support	Control	Relative (95% CI)	Absolute	
Behavioural outcomes (Better indicated by lower values) (Fernandez-Martinez 2020, Humphrey 2020)											

Quality assessment							No of participants		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Targeted mental health support	Control	Relative (95% CI)	Absolute	
2	randomised trials	serious [1]	no serious inconsistency	no serious indirectness	serious[2]	none	167	153	-	SMD 0.17 lower (0.39 lower to 0.05 higher)	LOW

[1] Participants were most likely aware of allocation of intervention
[2] 95% CI crosses line of no effect

F.1.2.2 Group interventions provided by school specialists

Quality assessment							No of participants		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Targeted mental health support	Control	Relative (95% CI)	Absolute	
Behavioural outcomes (teacher reported behavioural assessment) at 2.5 months (Better indicated by lower values) (Miller 2011)											
1	randomised trials	serious [1]	no serious inconsistency	no serious indirectness	serious[2]	none	50	111	-	MD 7.35 lower (11.27 to 3.43 lower)	LOW

[1] Unclear if intervention allocation was known where parents and teachers assessed outcomes
[2] 95%CI crosses 1 MID

F.1.3 Emotional distress

F.1.3.1 Group interventions delivered by external specialists

Quality assessment							No of participants		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Targeted mental health support	Control	Relative (95% CI)	Absolute	
Emotional distress (Better indicated by lower values) (Fernandez-Martinez 2020, Humphrey 2020)											
2	randomised trials	serious [1]	very serious[2]	no serious indirectness	serious[3]	none	330	452	-	SMD 1.86 lower (5.25 lower to 1.52 higher)	VERY LOW

[1] Participants were most likely aware of allocation of intervention
[2] Downgraded twice as I^2 = 99%
[3] 95% CI crosses line of no effect and 1 MID

F.1.3.2 Group interventions delivered by school specialists

Quality assessment							No of participants		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Targeted mental health support	Control	Relative (95% CI)	Absolute	
Emotional distress (child-reported anxiety MASC) at 2.5 months (Better indicated by lower values) (Miller 2011)											
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	61	119	-	MD 1.47 higher (3.83 lower to 6.77 higher)	LOW
Emotional distress (child-reported anxiety SCAS) at 12 months (Better indicated by lower values) (McLoone 2012)											
1	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	65	39	-	MD 4.56 lower (12.35 lower to 3.23 higher)	VERY LOW

[1] Unclear if intervention allocation was known where parents and teachers assessed outcomes
[2] 95%CI crosses line of no effect
[3] Consent was obtained after randomisation once participants were aware of allocation
[4] 95%CI crosses line of no effect and 1 MID

F.1.4 Quality of life

F.1.4.1 Group interventions delivered by external specialists

Quality assessment							No of participants		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Targeted mental health support	Control	Relative (95% CI)	Absolute	
Quality of life (Better indicated by higher values) (Bazzano 2018)											
1	randomised trial	serious[1]	N/A	no serious indirectness	serious[2]	none	20	32	-	MD 6.31 higher (3.76 lower to 16.38 higher)	LOW

[1] Participants were most likely aware of allocation of intervention[2] 95% CI crosses line of no effect and 1 MID

F.2 RQ5.1b Targeted mental health support in secondary and further education

F.2.1 Social and emotional skills and attitudes

F.2.1.1 Group interventions provided by external specialists

Quality assessment							No of participants		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Targeted mental health support	Control	Relative (95% CI)	Absolute	
Social adjustment (follow-up mean 6 months; measured with: Social adjustment scale, youth-reported; Better indicated by lower values) (Stice 2008)											
1	randomised trial	serious [1]	Not applicable [2]	serious[3]	no serious imprecision [4]	none[5]	89	84	-	MD 0.17 lower (0.32 to 0.02 lower)	LOW

[1] *Participants were most likely aware of allocation of intervention. Bias could impact subjective outcomes.*
[2] *N/A as only a single study included*
[3] *Study did not exclude participants with previous depression diagnoses*
[4] *95% confidence intervals do not cross the line of no effect*
[5] *N/A*

F.2.1.2 Individual interventions provided by external specialists

Quality assessment							No of participants		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Targeted mental health support	Control	Relative (95% CI)	Absolute	
Self-esteem (follow-up mean 3 months; measured with: RSES- student reported; Better indicated by higher values) (McArthur 2011, Pybis 2013, Pearce 2017)											
3	randomised trials	serious[1]	serious[2]	no serious indirectness [3]	serious [4]	none[5]	62	63	-	MD 3.24 higher (0.40 lower to 6.84 higher)	VERY LOW

[1] *Participants were most likely aware of allocation of intervention. Randomisation mostly happened within schools.*
[2] *Significant heterogeneity. I squared >50%*

[3] *Population, intervention, comparator and outcomes as specified in the review protocol*
[4] *95% confidence intervals cross the line of no effect*
[5] *N/A*

F.2.1.3 Computer-based interventions

Quality assessment							No of participants		Effect		
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Targeted mental health support**	**Control**	**Relative (95% CI)**	**Absolute**	**Quality**
Self-esteem (follow-up mean 5 weeks; measured with: RSE; Better indicated by higher values) (Do 2021)											
1	randomised trials	serious[1]	serious[2]	no serious indirectness [3]	no serious imprecision[4]	none[5]	25	25	-	MD 3.24 higher (0.45 lower to 6.03 higher)	LOW

[1] *Participants were most likely aware of allocation of intervention. Randomisation mostly happened within schools.*
[2] *Significant heterogeneity. I squared >50%*
[3] *Population, intervention, comparator and outcomes as specified in the review protocol*
[4] *95% confidence intervalsdo not cross the line of no effect*
[5] *N/A*

F.3 Behavioural outcomes

F.3.1.1 Group interventions provided by school specialists

Quality assessment							No of participants		Effect		
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Targeted mental health support	Control	Relative (95 % CI)	Absolute	Quality
Conduct problems (follow-up mean 2 years; measured with: Strengths and difficulties questionnaire; Better indicated by lower values) (O'Leary-Barrett 2013)											
1	randomised trial	serious[1]	Not applicable [2]	no serious indirectness [3]	serious[4]	none[2]	93	69	-	MD 0.19 lower (0.55 lower to 0.17 higher)	LOW

[1] *Participants were most likely aware of allocation of intervention. Bias could impact subjective outcomes.*
[2] *N/A as a single study included*
[3] *Population, intervention, comparator and outcomes as specified in the review protocol*
[4] *95% confidence intervals cross the line of no effect*
[5] *N/A*

F.3.1.2 Group interventions provided by external specialists

Quality assessment							No of participants		Effect		
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Targeted mental health support	Control	Relative (95% CI)	Absolute	Quality
Behavioural outcome (follow-up 2-3 months; measured with: Self-reported -Student or parent; Better indicated by lower values) (Goossens 2016, Fung 2016, Fung 2019)											
3	randomised trials	serious[1]	no serious inconsistency[2]	no serious indirectness[3]	serious [4]	none[5]	134	119	-	SMD 0.16 lower (0.54 lower to 0.22 higher)	LOW

[1] *Participants were most likely aware of allocation of intervention. Randomisation mostly happened within schools. One study randomised two cohorts at different times. Bias could impact subjective outcomes although the use of clinical interviews for assessment may have reduced this.*
[2] *No significant heterogeneity. I squared <50%*
[3] *Population, intervention, comparator and outcomes as specified in the review protocol*

[4] *95% confidence intervals cross the line of no effect*
[5] *N/A*

F.3.1.3 Individual interventions provided by external specialists

Quality assessment							No of participants		Effect		
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Targeted mental health support**	**Control**	**Relative (95% CI)**	**Absolute**	**Quality**
Behavioural outcomes (difficulties) (follow-up 6-12 weeks; measured with: Strength and difficulties questionnaire - student rated; Better indicated by lower values) (Cooper 2010, McArthur 2011, Pybis 2013, Pearce 2017)											
4	randomised trials	serious[1]	no serious inconsistency[2]	no serious indirectness[3]	no serious imprecision[4]	none[5]	78	77	-	SMD 0.6 lower (0.93 to 0.28 lower)	MODERATE
Behavioural outcomes (prosocial) (follow-up 6-12 weeks; measured with: Strengths and difficulties questionnaire - Student rated; Better indicated by higher values) (Cooper 2010, McArthur 2011, Pearce 2017)											
3	randomised trials	serious[1]	no serious inconsistency[5]	no serious indirectness[3]	no serious imprecision[4]	none[5]	62	61	-	MD 0.76 higher (0.03 to 1.49 higher)	MODERATE

[1] *Participants were most likely aware of allocation of intervention. Randomisation mostly happened within schools.*
[2] *No significant heterogeneity. I squared <50%*
[3] *Population, intervention, comparator and outcomes as specified in the review protocol*
[4] *95% confidence intervals do not cross the line of no effect*
[5] *N/A*

F.4 Emotional distress

F.4.1.1 Group interventions provided by school specialists

Quality assessment							No of participants		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Targeted mental health support	Control	Relative (95% CI)	Absolute	
Emotional distress (follow-up mean 2 years; measured with: Student rated; Better indicated by lower values) (Hunt 2009, O'Leary-Barrett 2013)											
2	randomised trials	serious[1]	no serious inconsistency [2]	no serious indirectness [3]	serious [4]	none[5]	181	146	-	SMD 0.01 lower (0.31 lower to 0.3 higher)	LOW
Initial episode of depressive disorder (follow-up mean 12 months) (Arnason 2009)											
1	randomised trials	serious[1]	Not applicable [5]	no serious indirectness [3]	no serious imprecision [6]	none[5]	2/51 (3.9%)	13/62 (21%)	RR 0.2 (0 to 0.8)	170 fewer per 1000 (from 44 fewer to 201 fewer)	MODERATE

[1] *Participants were most likely aware of allocation of intervention in one study.*
[2] *No significant heterogeneity. I squared <50%*
[3] *Population, intervention, comparator and outcomes as specified in the review protocol*
[4] *95% confidence intervals cross the line of no effect*
[5] *N/A*
[6] *95% confidence intervals do not cross the line of no effect*

F.4.1.2 Group interventions provided by external specialists

Quality assessment							No of participants		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Targeted mental health support	Control	Relative (95% CI)	Absolute	
Emotional distress (follow-up 2-6 months; Better indicated by lower values) (Stice 2008, Berry 2009, Balle 2011, Wijnhoven 2014, Livheim 2015, Fung 2016, Poppelaars 2016, Goossens 2016, Gaete 2016, Fung 2019, Brown 2019)											

Quality assessment							No of participants		Effect		
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Targeted mental health support	Control	Relative (95% CI)	Absolute	Quality
11	randomised trials	serious[1]	serious[2]	no serious indirectness[3]	no serious imprecision[4]	none[5]	647	533	-	SMD 0.36 lower (0.62 to 0.10 lower)	LOW
Response (follow-up 3-5 months) (Balle 2011, Gaete 2016)											
2	randomised trials	serious[6]	serious[2]	no serious indirectness[3]	no serious imprecision[4]	none[5]	118/148 (79.7%)	53/128 (41.4%)	RR 1.76 (1.07 to 2.87)	315 more per 1000 (from 29 more to 774 more)	LOW
Depression diagnosis - RCT (follow-up mean 6 months) (Stice 2008)											
1	randomised trial	no serious risk of bias[7]	Not applicable[8]	no serious indirectness[3]	no serious imprecision[4]	none[5]	6/89 (6.7%)	11/84 (13.1%)	RR 0.51 (0.2 to 1.33)	64 fewer per 1000 (from 105 fewer to 43 more)	HIGH
Depression diagnosis - NRCT (follow-up mean 2 years) (Matos 2019)											
1	Non-randomised study	serious[9]	not applicable[8]	no serious indirectness[3]	no serious imprecision[4]	none[5]	2/56 (3.6%)	12/63 (19%)	RR 0.19 (0.04 to 0.8)	154 fewer per 1000 (from 38 fewer to 183 fewer)	VERY LOW

[1] Participants were most likely aware of allocation of intervention. Randomisation mostly happened within schools. One study randomised two cohorts at different times. Bias could impact subjective outcomes although the use of clinical interviews for assessment may have reduced this.
[2] Significant heterogeneity. I squared >50%
[3] Population, intervention, comparator and outcomes as specified in the review protocol
[4] 95% confidence intervals do not cross the line of no effect
[5] N/A
[6] Participants were most likely aware of allocation of intervention. Randomisation mostly happened within schools. Bias could impact subjective outcomes although the use of clinical interviews for assessment may have reduced this.
[7] Study rated as low risk of bias
[8] N/A only one study in the analysis .
[9] Participants self-selected the intervention they were allocated to which may have an impact on the self-reported measures as well as increasing bias whereby those who were seeking the intervention may show a better response

F.4.1.3 Individual interventions provided by external specialists

Quality assessment							No of participants		Effect		
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Targeted mental health support	Control	Relative (95% CI)	Absolute	Quality
Emotional distress (follow-up mean 6-24 weeks; measured with: Self-report; Student-rated; Better indicated by lower values) (Cooper 2010, McArthur 2011, Pybis 2013, Saelid 2017, Pearce 2017)											
5	randomised trials	serious[1]	no serious inconsistency[2]	no serious indirectness[3]	no serious imprecision[4]	none[5]	95	97	-	SMD 0.71 lower (1.0 to 0.41 lower)	MODERATE

[1] *Participants were most likely aware of allocation of intervention. Randomisation mostly happened within schools. One study used weak randomisation methods. Bias could impact subjective outcomes.*
[2] *No significant heterogeneity. I squared <50%*
[3] *Population, intervention, comparator and outcomes as specified in the review protocol*
[4] *95% confidence intervals do not cross the line of no effect*
[5] *N/A*

F.4.1.4 Computer-based interventions

Quality assessment							No of participants		Effect		
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Targeted mental health support	Control	Relative (95% CI)	Absolute	Quality
Depression (follow-up mean 8 weeks; measured with: MFQ-child rated; Better indicated by lower values) (Smith 2013)											
1	randomised trials	serious[1]	Not applicable[2]	no serious indirectness[3]	no serious imprecision[4]	none[2]	55	55	-	MD 10.9 lower (15.85 to 5.95 lower)	MODERATE
Depression (follow-up mean 5 weeks; measured with: CDSR; Better indicated by lower values) (Fleming 2012)											

Quality assessment							No of participants		Effect		Quality
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Targeted mental health support	Control	Relative (95% CI)	Absolute	
1	randomised trials	serious[1]	Not applicable[2]	no serious indirectness[3]	no serious imprecision[4]	none[2]	19	12	-	MD 13.6 lower (19.52 to 7.68 lower)	MODERATE
Depression (follow-up mean 5 weeks; measured with: CES-D; Better indicated by lower values) (Do 2021)											
1	randomised trials	serious[1]	Not applicable[2]	no serious indirectness[3]	no serious imprecision[4]	none[2]	25	25	-	MD 9.08 lower (1556 to 2.60 lower)	MODERATE

[1] *Likely that allocation was known to participants. Randomisation within schools so there may be risk of contamination. Bias can impact on subjective outcomes*
[2] *N/A as a single study included*
[3] *Population, intervention, comparator and outcomes as specified in the review protocol*
[4] *95% confidence intervals do not cross the line of no effect*
[5] *N/A*

F.4.2 Academic progress and attainment

No studies identified.

F.4.3 School attendance

No studies identified.

F.4.4 School exclusions

No studies identified.

F.4.5 Quality of life

F.4.5.1 Computer-based interventions

Quality assessment							No of participants		Effect		
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Targeted mental health support	Control	Relative (95% CI)	Absolute	Quality
Quality of Life (follow-up mean 5 weeks; measured with: PQ-LES-Q; Better indicated by higher values) (Do 2021, Fleming 2012)											
2	randomised trials	serious[1]	Serious [2]	no serious indirectness[3]	serious [4]	none[5]	44	37	-	SMD 0.36 lower (0.39 lower to 1.11 higher)	VERY LOW

[1] *Likely that allocation was known to participants. Randomisation within schools so there may be risk of contamination. Bias can impact on subjective outcomes*
[2] *I^2 > 50%*
[3] *Population, intervention, comparator and outcomes as specified in the review protocol*
[4] *95% confidence intervals cross the line of no effect*
[5] *N/A*

F.5 Unintended consequences

No studies identified.

Appendix G: GRADE CERQual profiles

G.1 Acceptability of targeted mental health support in primary, secondary and further education

Table 14: Acceptability of interventions

Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
The need for intervention **Types of problem** The most common reason for children engaged with counselling was due to relational problems. This was more common in girls. Most relational problems were to do with family (e.g. family separation). Where children engaged with counselling due to behavioural problems, they described feeling angry, losing their temper or being violent. Those children presenting with emotional problems described this as feeling sad, worried or stressed. **Unable to talk about problems** Young people described they acknowledged that they were 'having problems' that they felt they could not discuss with family or friends. This feeling often came from the feeling of shame guilt, lack of trust in others' ability to maintain confidentiality and the	Kernaghan 2016 Prior 2012a Rupani 2012	**Moderate concerns** (1 study with low risk of bias, 2 studies with moderate risk of bias due to unclear reflexivity)	**No concerns** Finding reflects the data from all studies that report on this theme.	**Minor concerns** Data obtained from 3 studies but limited to views from children and young people only.	**No concerns** All included studies related to the views and experiences of children and young people engaging with targeted mental health support.	**High confidence** There was still consistency in the findings between the studies with moderate risk of bias and the study with low risk of bias. Lack of teacher and parents views unlikely to affect this finding.

Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
anxiety linked to disclosing to others as well as the need to appear 'normal' especially in the eyes of their peers. **Impact of problems** Young people felt that their problems negatively affected their concentration at school. They felt that problems were occupying their minds and that they had 'no space' in their heads for schoolwork and they lacked motivation to go to school or lost interest in participating in class. Some young people felt that this also affected their relationships with teachers due to misbehaving in class.						
Introducing the interventions to young people **Informing and demystifying** Young people described how a member of school staff introduced them to the idea of counselling. They emphasised the expertise of a counsellor relative to other school staff. The process of counselling was explained with an emphasis on confidentiality. They also demystified counselling by presenting it as 'just talking and listening'. **Motivation for engagement** There were some concerns that the motivation of young people to participate in an intervention may lie with the person who had suggested it e.g. school staff/ parent rather than being self-selected.	Prior 2012a Weeks 2017	**Moderate concerns** (1 study with low risk of bias, 1 study with moderate risk of bias due to unclear reflexivity)	**No concerns** Finding reflects the data from all studies that report on this theme.	**No concerns** Data obtained from 2 studies and include the views and perceptions of both young people and school staff.	**No concerns** All studies included related to the views and experiences of young people and school staff involved with targeted mental health support.	**High confidence** There was still consistency in the findings between the studies with moderate risk of bias and the study with low risk of bias.

Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
Perceived benefits and harms Young people perceived counselling as a potential solution to the problems they were experiencing. However, they were also concerned about what others might think if they knew they were receiving counselling.						
Identification of children and young people who may benefit from interventions **How to identify** School staff raised concerns about identifying children and young people with anxieties. They noted that students would be identified through adult perceptions of experiences of anxiety which students may or may not agree with. Teachers also suggested that counselling was not to be used to address behavioural difficulties. It was also noted that the key person identifying students varied from school to school. **Self-referral** Some teachers viewed the 'opt in' or self-referral approach to interventions for (post-16) students as being important. They felt more comfortable encouraging groups of students to enrol.	Weeks 2017 Hamilton-Roberts 2012 McKeague 2018	**Moderate concerns** (1 study with low risk of bias, 2 studies moderate risk of bias due to unclear reflexivity)	**No concerns** Finding reflects the data from all studies that report on this theme.	**No concerns** Data obtained from 3 studies and include the views and perceptions of both young people and school staff.	**No concerns** All studies included related to the views and experiences of young people and school staff involved with targeted mental health support.	**High confidence** There was still consistency in the findings between the studies with moderate risk of bias and the study with no concerns.
The importance of having a 'safe space' **Freedom to speak** Young people valued sessions that created a safe environment in which they could choose what to talk about.	Segrott 2013 Rupani 2012 McKeague 2018 Weeks 2017	**Moderate concerns** (1 study with low risk of bias, 3 studies moderate risk of	**No concerns** Finding reflects the data from all studies that	**No concerns** Data obtained from 4 studies and include the views and perceptions of	**No concerns** All studies included related to the views and experiences	**High confidence** There was still consistency in the findings

Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
A space separate from class Young people felt that counselling provided a space for them to talk about their problems so that they did not have to think about them while in class. It allowed them to separate their problems from their schoolwork so that they could concentrate on work in class and problems in counselling. **Physical space** Young people described having workshops at school as being convenient, familiar, comfortable, safe and secure. School staff however raised practical concerns with holding CBT in a school setting such as timetabling and securing a suitable room to ensure confidentiality and boundaries of privacy.		bias due to unclear reflexivity)	report on this theme.	both young people and school staff.	of young people and school staff involved with targeted mental health support.	between the studies with moderate risk of bias and the study with low risk of bias.
Acceptability of intervention content **Types of intervention** Young children (aged 4-8) preferred play-based interventions which incorporated communication with the counsellor. Older children (aged 9-11) tended to prefer receiving help/guidance about problems and a combination of therapeutic play compared to interventions that were just play-based. Girls and older children found self-help techniques and psychoeducation were particularly effective as they made them feel better. **Materials**	Kernaghan 2016 McKeague 2018	**Moderate concerns** (1 study with low risk of bias, 1 study with moderate risk of bias due to unclear reflexivity)	**No concerns** Finding reflects the data from all studies that report on this theme.	**No concerns** Data obtained from 2 studies and include the views and perceptions of both young people and school staff.	**No concerns** All studies included related to the views and experiences of young people and school staff involved with targeted mental health support.	**High confidence** There was still consistency in the findings between the studies with moderate risk of bias and the study with low risk of bias.

Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
Young people found workshops engaging, interactive and different in terms of new ideas and techniques. They liked the variety of materials used including PowerPoint presentations, videos and workshop booklet. They preferred the active and interactive parts of the workshop. **Fit with existing school values and policies** School staff felt that the workshop was in line with existing school values, especially in terms of student welfare and pastoral care. They described the intervention as addressing a gap in the support that the school offers. They highlighted the importance of helping students become self-managers of their mental health and felt that the workshop was in keeping with their aims to support students to do this.						
Acceptability of intervention delivery **Approaches** Young people valued the personalised approach to workshop provision such as when psychologists asked them to describe their experience of stress. In contrast, some young people did not think it was individualised enough or that there was not enough one-to-one interaction with the psychologists. **Working in groups** Many young people said that they benefitted from hearing peers sharing information about themselves because it helped them realise that other people	McKeague 2018 Weeks 2017	**Moderate concerns** (1 study with low risk of bias, 1 study with moderate risk of bias due to unclear reflexivity)	**Minor concerns** Finding reflects the data from all studies that report on this theme but there were some conflicting views on working in groups.	**No concerns** Data obtained from 2 studies and include the views and perceptions of both young people and school staff.	**No concerns** All studies included related to the views and experiences of young people and school staff involved with targeted mental health support.	**High confidence** There was still consistency in the findings between the studies with moderate risk of bias and the study with low risk of bias. The conflicting

Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
were experiencing similar things. Some young people described this as a way of making them feel more comfortable in disclosing information. They commented that the size of the group was important in determining willingness to disclose. A teaching assistant described problems that arise where the groups are based on existing friendships and roles within peer groups.						views can be attributed to individual preference rather than significant incoherence.
Acceptability of intervention provider (young people) **Confidentiality** Even though young people considered talking to someone they don't know to be 'strange', it was often this unfamiliarity and separateness of the counsellor that was key in the decision to try counselling. The use of a provider who is not part of the school establishment may reassure young people in terms of privacy and confidentiality. Children trust the confidentiality of services and welcome the non-judgemental response which they describe as different from usual teaching. **Trust** Some young people felt able to trust their counsellor immediately whilst others took several weeks. his is because of being uncertain in this new situation, feeling initially uncomfortable with a stranger, anxious that they might be judged, interrogated or reported on. In this scenario, young	Prior 2012a Weeks 2017 Segrott 2013 Spratt 2010 Hamilton-Roberts 2012	**Moderate concerns** (1 study with low risk of bias, 4 studies with moderate risk of bias due to unclear reflexivity)	**No concerns** Finding reflects the data from all studies that report on this theme.	**No concerns** Data obtained from studies and include the views and perceptions young people and service providers.	**No concerns** All studies included related to the views and experiences of young people involved with targeted mental health support.	**High confidence** There was still consistency in the findings between the studies with moderate risk of bias and the study with low risk of bias.

Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
people initially assess the counsellor's reaction to carefully planned partial disclosures until they are happy with the trustworthiness of the counsellor. **Treated as an equal** Being accepted, not being judged or criticised, being treated as an equal and not being talked down to, are key factors in their decision to entrust the counsellor with their more disturbing worries.						
Acceptability of the intervention provider (school staff) **Follow-up** School staff raised concerns about the potential for difficulties with ongoing support or follow-up when using external service providers. **Links with teachers** Most school staff felt that they did not receive enough information or expressed a desire to learn more about the intervention (delivered by external providers). This is so that they would be able to feel better equipped to provide continuing support for their students. Teachers also commented on the benefits of the specialist nature of some of the counselling services	Weeks 2017 McKeague 2018 Hamilton-Roberts 2012	**Moderate concerns** (1 study with low risk of bias, 2 studies moderate risk of bias due to unclear reflexivity)	**No concerns** Finding reflects the data from all studies that report on this theme.	**No concerns** Data obtained from 3 studies and include the views and perceptions of school staff.	**No concerns** All studies included related to the views and experiences of young people and school staff involved with targeted mental health support.	**High confidence** There was still consistency in the findings between the studies with moderate risk of bias and the study with low risk of bias.
Effectiveness of the intervention **Impact of intervention observed by school staff**	Segrott 2013 Kernaghan 2016 McKeague 2018	**Moderate concerns** (2 studies with low risk of bias,	**Minor concerns** Finding reflects the	**No concerns** Data obtained from 6 studies and include	**No concerns** All studies included related to the	**High confidence** There was still

Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
School staff observed notable changes in their students' self-esteem and confidence following intervention. Young peoples' attendance at school improved due to the perception of this support giving more chance of securing jobs or further education. **Impact of intervention reported by children and young people: individual level** Young children experienced an emotional change after receiving counselling, described mostly as a reduction in worry. This was more common in girls. Boys were more likely to experience a change in their behaviour. Young people indicated that the workshop had helped them to understand their stress or made them aware of useful techniques. Participants commented that having someone to talk to and being provided with coping tools and strategies were helpful aspects of the intervention. Some participants struggled to maintain positive changes in symptoms once the intervention had ended due to losing motivation. **Impact of intervention reported by children and young people: family level** Young children experienced an improvement in relationships with the family and behaviour at home after receiving counselling.	Weeks 2017 Rupani 2012 Lewis-Smith 2021	4 studies with moderate risk of bias due to unclear reflexivity)	data from all studies that report on this theme.	the views and perceptions of both young people and school staff.	views and experiences of young people and school staff involved with targeted mental health support.	consistency in the findings between the studies with moderate risk of bias and the study with low risk of bias.

Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
Impact of intervention reported by children and young people: school level Following counselling, young children reported an improvement in their classroom behaviour, which was mostly described as increased concentration, finding school work easier and better attendance. They also reported better relationships with teachers, increased confidence and reduced school-related anxiety. However, some children said counselling made no difference to their school life in terms of academic achievement. After counselling, young people reported feeling more in control of their temper and were less likely to get into arguments with their teachers. They reported improvements in confidence which positively affected their schoolwork. Most young people felt more motivated to attend school after counselling. **Measuring change after intervention** School staff highlighted that quantitative measurements of change in students was needed, however, it was found that most school staff rely on more qualitative observations. It was felt that this had greater importance in identifying and monitoring needs of students in the absence of an observed undesirable behaviour. **Generalisability of skills learned** Young children identified that being able to talk about their worries was an important tool to help them in the future and felt that they should be able						

Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
to discuss future worries with a family member. Young people found it difficult to continue using the techniques they learned from the workshop due to increasing academic pressures. Other young people found it difficult to generalise the principles they learned in CBT sessions beyond the examples presented.						

G.2 Barriers and facilitators to targeted mental health support in primary, secondary and further education

Table 15: Barriers and facilitators

Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
Raising awareness and identifying those who may benefit from the interventions: Barriers • There was very little evidence of teachers being offered training to recognise the types of behaviour that may be associated with poor mental health. Specialist providers expressed little confidence in	Segrott 2013 Spratt 2010 Hamilton-Roberts 2010	**Moderate concerns** (3 studies with moderate risk of bias due to unclear reflexivity)	**No concerns** Finding reflects the data from all studies that report on this theme.	**No concerns** Data obtained from 3 studies and include the views and perceptions multiple informants.	**No concerns** All studies included related to the views and experiences barriers to targeted	**High confidence** There was still consistency in the findings between the studies.

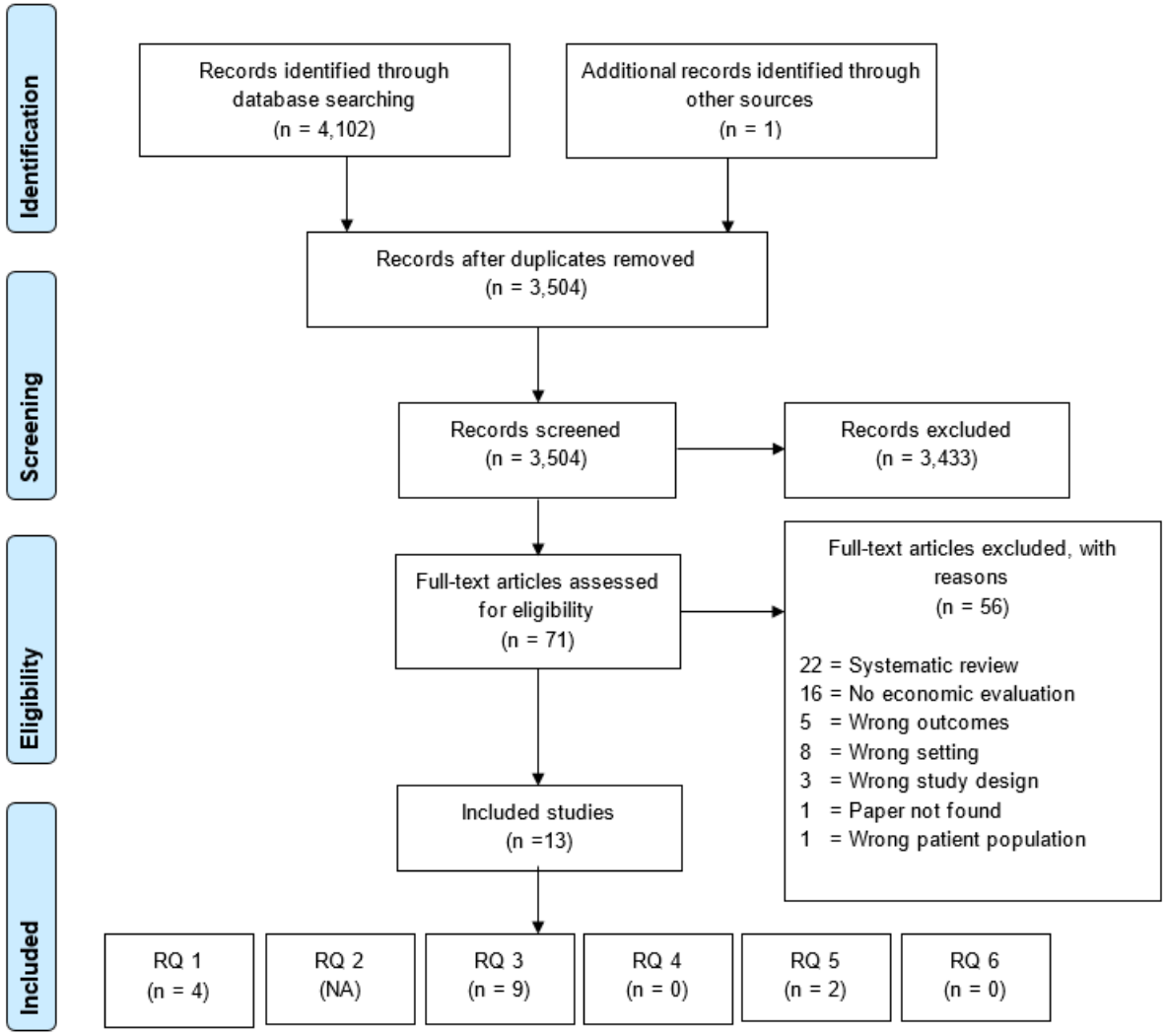
Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
teacher's capacities to respond appropriately. • Schools are most likely to identify mental health difficulties in pupils showing disruptive behaviour which means that those whose behaviour was 'more passive' or withdrawn were not readily addressed. • Not all interventions offer other accessible gateways through which young people can seek support. Self-referral is not sufficient to draw children and young people into the system. • How children and young people view the intervention will impact on their decision to take part. If most users had been referred by teachers as a result of disruptive behaviour, this could discourage use by the general school population, especially when it is not recognised as form of help.					mental health support	
Raising awareness and identifying those who may benefit from the interventions: Facilitators • An example in a primary school showed counselling/therapy providers who maintaining a high profile in school and cultivating a welcoming and friendly image with no lower threshold to access the service. This allowed children to discuss anything and consequently remove stigma. Those children who reported serious difficulties were indistinguishable to their	Spratt 2010 Segrott 2013	**Moderate concerns** (2 studies with moderate risk of bias due to unclear reflexivity)	**No concerns** Finding reflects the data from all studies that report on this theme.	**No concerns** Data obtained from 2 studies and include the views and perceptions multiple informants.	**No concerns** All studies included related to the views and experiences barriers to targeted mental health support	**High confidence** There was still consistency in the findings between the studies.

Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
peers. An example was a drop-in session in a secondary school. A key advantage noted by young people was that they could use the drop in on their own terms and this allowed them to exert some control over the process. • Teachers should refer young people (to Bounceback) with emotional difficulties/mental health issues, which had the potential to cause a crisis or have a negative effect on emotional well-being but not young people who disrupt lessons. They should emphasise that it is voluntary.						
Confidentiality, trust and 'safe space': Barriers • Service providers noted several young people who decided not to continue with their sessions linked to unsuitable accommodation.	Segrott 2013	**Minor concerns** (study with moderate risk of bias due to unclear reflexivity)	Not applicable as only one study included	**Moderate concerns** Limited to data from one study. No supporting statements.	**No concerns** Study related to the views and experiences barriers to targeted mental health support	**Moderate confidence** Data from a single study and unable to check for inconsistency.
Confidentiality, trust and 'safe space': Facilitators • Where young people needed to released from a lesson for a session, they were provided with passes which stated "appointment" or "interview". This was so the young person could choose whether to share this information or not. While some participants found the sharing of risk	Segrott 2013 Lewis-Smith 2021	**Minor concerns** (1 study with low risk of bias and 1 study with moderate risk of bias due to unclear reflexivity)	**No concerns** Finding reflects the data from all studies that report on this theme.	**No concerns** Data obtained from 2 studies and include the views and perceptions multiple informants.	**No concerns** Studies relate to the views and experiences barriers to targeted mental health support	**High confidence** There was still consistency in the findings between the studies.

Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
information challenging at first, all participants who discussed the issue acknowledged that it was part of the therapists' role to help keep them safe. • Providers of the intervention gave young people as long as they needed to get to know and trust them. They sometimes used activity worksheets to help with this and allow the conversation to happen naturally. • The same room should be available every week so that young people knew where to go. It should not be used as a route into other rooms. There should be no window in the door and other windows should not be overlooked by public areas.						
Working with schools: Barriers • Teachers were unable to devote much time to planning or monitoring how the service operated. It was difficult to contact them due to other commitments. • Counsellors queried the appropriateness of being run by the local authority (LA). This is because the counsellor's primary role is not necessarily related to educational or school outcomes.	Segrott 2013 Hamilton-Roberts 2012	**Moderate concerns** (2 studies with moderate risk of bias due to unclear reflexivity)	**No concerns** Finding reflects the data from all studies that report on this theme.	**No concerns** Data obtained from 2 studies and include the views and perceptions multiple informants.	**No concerns** All studies included related to the views and experiences barriers to targeted mental health support	**High confidence** There was still consistency in the findings between the studies
Working with schools: Facilitators • Communication between school and external providers became easier when members of school staff were allocated as named contacts.	Segrott 2013	**Minor concerns** (study with moderate risk of bias due to	Not applicable as only one study included	**Moderate concerns** Limited to data from one study. No	**No concerns** Study related to the views and experiences	**Moderate confidence** Data from a single study and unable to

Summary of review finding	Studies contributing to review finding	Methodological limitations	Coherence	Adequacy	Relevance	CERQual assessment of confidence in the evidence
		unclear reflexivity)		supporting statements.	barriers to targeted mental health support	check for inconsistency.
Allocating time for interventions: Barriers • Young people expressed a conflict between attending the intervention and missing lessons. A workshop that takes a whole day took too much time.	McKeague 2018	**No concerns** (study with low risk of bias)	Not applicable as only one study included	**Minor concerns** Limited to data from one study.	**No concerns** Study related to the views and experiences barriers to targeted mental health support	**Moderate confidence** Data from a single study and unable to check for inconsistency.

Appendix H: Economic evidence study selection



Notes:
702 records were identified in the search reruns of which 17 duplications were removed, 685 were screened, 6 were assessed at full text and 2 were included in the review.
2 studies were included in both RQ 3 and RQ 5.
9 studies were included in RQ 3 but were reported across 11 papers.

s for

Appendix I: Economic evidence tables

Lee (2017)						
Study	**Method of Analysis**	**Costs**	**Outcomes**	**Results**	**Limitations**	**Comments**
Study type: A Markov model to calculate health benefit followed by cost-effectiveness analysis (CEA) **Country:** Australia **Population:** Students aged 11 to 17 **Population size (hypothetical):** 1,558,171 (78.6% of the 2013 Australian population aged 11 to 17 years) for the universal intervention 161,835 for the indicated intervention **Interventions:** A school-based psychological universal	**Perspective:** Health and education perspective **Time horizon:** 10-years **Discounting:** 3% for costs 3% for benefits **Data sources Costs:** Published literature **Effects:** Meta-analyses of randomised control trial data using the quality effects model **Disability weights:** Global Burden of Disease (2013)	**Total intervention cost (95% UI); AUD$ thousands:** Universal 37,178 (£25,118 GBP 2020[f]) (16,404 to 72,107) Indicated 77,592 (£52,421 GBP 2020[f]) (48,096 to 118,754) **Cost offset [d] (95% UI); AUD$ thousands:** Universal -15,376 (£10,388 GBP 2020[f]) (-22,968 to -7,585) Indicated -18,749 (£12,666 GBP 2020 [f]) (-41,988 to -5,853) **Net costs (95% UI); AUD$ thousands:** Universal 21,802 (£14,729 GBP 2020[f]) (-75 to 55,743)	**Total DALYs averted (95% UI):** Universal 3,367 (£2,274 GBP 2020[f]) (1,618 to 5,184) Indicated 4,083 (£2,757 GBP 2020[f]) (1,295 to 9,361)	**ICER (95% UI); mean, AUD$:** Universal 7,350 (£4,965 GBP 2020f) per DALY averted (dominates to 23,070) Indicated 19,550 per DALY averted (£13,208 GBP 2020[f]) (3,081 to 56,713) **Uncertainty:** Across the majority of univariate sensitivity analyses, cost-effectiveness results were either consistent or more favourable relative to baseline model. Sensitivity analysis found that unmoderated internet-delivered [e] prevention interventions were highly cost-effective when assuming intervention effect sizes of 100 and 50% relative to effect sizes	**Author identified:** • Limits health benefits to those linked to the prevention of incident depression only • Assumes preventative interventions for depression lead to a reduction in depression incidence; however, due to short time horizons of RCT studies, it is unclear whether interventions prevent or merely delay onset **Reviewer identified:** None	**Source of funding:** The project was funded through the Australian Government National Health and Medical Research Council Centre of Research Excellence in Mental Health Systems Improvement **Further research:** Further evaluation of the cost-effectiveness of school-based prevention will be required as evidence regarding system-level implementation of these programmes is refined

Lee (2017)						
Study	**Method of Analysis**	**Costs**	**Outcomes**	**Results**	**Limitations**	**Comments**
intervention targeting youth in the general population [a]; and a school-based psychological indicated intervention targeting youth with elevated depressive symptoms but who do not have a diagnosis of major depression [b] **Comparator:** No intervention [c]		Indicated 58,843 (£39,754 GBP 2020[f]) (23,460 to 102,573) **Currency & cost year:** AUD ($); 2013		observed for face-to-face delivered interventions. While clinician moderated internet-delivered [e] prevention interventions were not deemed cost-effective, it is likely that the unmoderated intervention pathway would be implemented in practice.		
Overall applicability: Partly applicable		**Overall quality: Potentially serious limitations**				

Abbreviations: CEA: cost-effectiveness analysis; CES-D: Center for Epidemiologic Studies Depression Scale; DALY: disability-adjusted life-year; ICER: incremental cost-effectiveness ratio; RCT: randomised control trial; UI: uncertainty interval

a. The intervention pathway for face-to-face delivery of universal psychological prevention involved teachers delivering psychological intervention modules in the classroom during regular school hours.
b. The intervention pathway for face-to-face delivery of indicated psychological prevention involves three main steps: (1) screening students at participating schools for elevated symptoms of depression using the CES-D; (2) psychologists conducting further diagnostic testing to identify students without a depression diagnosis; and (3) psychologists delivering group-based psychological intervention modules to eligible students
c. The eligible population receives neither the proposed intervention nor any established prevention services currently being delivered by the education/health sector. This equates to a 'partial null' comparator scenario.
d. The cost offsets are the costs of treating major depression that are averted due to the prevention of incident cases. The average annual cost offset for a treated case of depression was calculated to be $1,182.
e. The study was unable to identify any relevant RCT studies involving internet-delivered prevention interventions, which met the inclusion criteria for the model. It was assumed that the effect sizes of internet-delivered prevention interventions were equal to some proportion of the pooled intervention effect sizes calculated for face-to-face prevention interventions. Given the heroic nature of this assumption, this investigation was relegated to a separate sensitivity analysis. Unmoderated modalities (i.e., self-help) or clinician-moderated modalities (i.e., self-directed treatment with periodic monitoring by a health professional or clinician) were both considered.

Lee (2017)						
Study	**Method of Analysis**	**Costs**	**Outcomes**	**Results**	**Limitations**	**Comments**
f. Converted by the reviewer using historical exchange rates and PSSRU inflation indices.						

McCabe (2007)						
Study	**Method of Analysis**	**Costs**	**Outcomes**	**Results**	**Limitations**	**Comments**
Study type: Cost-effectiveness analysis **Country:** UK **Population:** Primary school children aged 7 to 11 **Population size:** Not reported **Intervention:** A universal intervention that is based broadly on the Promoting Alternative Thinking Strategies [a] (PATHS) programme. The program consists of three 20-minute sessions per week for each class in school that are run by the class teacher	**Perspective:** Not reported **Time horizon:** Not reported **Discounting:** Not reported [b] **Data sources** **Costs:** Not reported **Effects:** Not reported **Utilities:** Health Utilities Index Mark 2 (HUI2) data came from a subset of the UK Paediatric Intensive Care Outcome Study (UK PICOS)	**Total cost per person; £:** Not reported **Intervention cost per person; £:** Universal intervention 125 (£158 GBP 2020[g]) Focused intervention Not reported [c] Usual school provision Not reported **Currency & cost year:** GBP (£); year not reported	**QALYs per person:** Not reported **HUI2 score:** Not reported	**ICER; £:** Universal intervention vs. usual school provision Emotional functioning alone [d] 10,594 per QALY (£13,406 GBP 2020[g]) Emotional and cognitive functioning [e] 5,278 per QALY (£6,679 GBP 2020[g]) Focused intervention vs. usual school provision Emotional functioning alone [d] 988,404 per QALY (£1,250,811 GBP 2020[g]) Emotional and cognitive functioning [f] 177,560 per QALY (£244,699 GBP 2020[g])	**Author identified:** • The sample used in the analysis may not be genuinely representative and thus it is unclear whether the results are generalisable • The analyses do not consider the costs incurred by the parents to attend the training sessions **Reviewer identified:** • Costs were not clearly reported • QALYs, study perspective and time horizon were not reported	**Comments:** The difference in the results is driven by the large reduction in the number of children who benefit from the focused intervention compared to the universal programme without a proportionate reduction in the cost of providing the intervention **Source of funding:** Not reported **Further research:** Further research should be done to establish the long-term cost-effectiveness of focused interventions in primary schools

McCabe (2007)						
Study	**Method of Analysis**	**Costs**	**Outcomes**	**Results**	**Limitations**	**Comments**
as well as a 10-week parent training course involving 10 2-hour sessions. A focused intervention that is similar in content to the universal intervention but children with identified problems receive the intervention outside of the classroom in small groups or individually **Comparator:** Usual school provision				**Uncertainty:** The uncertainty around the ICER was represented as a scatterplot on the cost-effectiveness plane. Cost-effectiveness acceptability curves were constructed to represent the decision uncertainty. For emotion alone, the probability that the ICER is less than £30,000 per QALY is 65%. For emotion and cognition, the probability that the ICER is below £30,000 per QALY is 66%.		
Overall applicability: Partly applicable		**Overall quality: Potentially serious limitations**				
Abbreviations: HRQoL: health-related quality of life; HUI2: Health Utilities Index Mark 2; ICER: incremental cost-effectiveness ratio; PATHS: Promoting Alternative Thinking Strategies; PICOS: Paediatric Intensive Care Outcome Study; QALY: quality-adjusted life year						
a. The aim of PATHS is to promote self-control, emotional understanding, positive self-esteem, relationships and interpersonal problem-solving skills among children in pre-school and primary education settings through the provision of a taught curriculum.						
b. As the study is defined as a short-term study, it is assumed that discounting would not be applicable.						
c. According to the report, the cost of the focused intervention is similar to that of the universal intervention, except for a reduction in school co-ordinator time and parent training resource costs. This cost was not reported.						
d. This represents the ICER assuming the intervention produces a one-level improvement upon the emotion dimension of HRQoL only.						
e. This represents the ICER assuming the intervention produces a one-level improvement upon both the emotion and cognition dimensions of HRQoL.						
f. This represents the ICER assuming the intervention produces a two-level improvement on both the emotion and cognition dimensions of HRQoL.						
g. Converted by the reviewer using historical exchange rates and PSSRU inflation indices. Assuming currency year 2007.						

Appendix J: Health economic analysis

A bespoke model was developed to capture the costs and consequences of an intervention, or combination of interventions, that promote social, emotional and mental wellbeing in children and young people in primary and secondary education. It covers more than 1 evidence review in the guideline so the full write up is contained in a separate document rather than in appendix I (see Evidence review J).

Excluded studies

J.1 Public health studies: Effectiveness

	Study	Reason
1.	, Simon, Thomas R, Ikeda, Robin M et al. (2008) The multisite violence prevention project: impact of a universal school-based violence prevention program on social-cognitive outcomes. Prevention Science 9(4): 231-244	- Universal intervention - Intervention not school-based [Selected intervention was community-based]
2.	Apsler, R., Formica, S., Fraster, B. et al. (2006) Promoting positive adolescent development for at-risk students with a student assistance program. Journal of primary prevention 27(6): 533-554	- Publication date before 2007
3.	Attwood, Megan, Meadows, Sara, Stallard, Paul et al. (2012) Universal and targeted computerised cognitive behavioural therapy (Think, Feel, Do) for emotional health in schools: Results from two exploratory studies. Child and Adolescent Mental Health 17(3): 173-178	- Study design - No control group [For targeted intervention only - case series]
4.	Beaumont, Renae and Sofronoff, Kate (2008) A multi-component social skills intervention for children with Asperger syndrome: the Junior Detective Training Program.. Journal of child psychology and psychiatry, and allied disciplines 49(7): 743-53	- Setting - not school-based
5.	Benas, J. S., McCarthy, A. E., Haimm, C. A. et al. (2019) The Depression Prevention Initiative: Impact on Adolescent Internalizing and Externalizing Symptoms in a Randomized Trial. Journal of clinical child and adolescent psychology : the official journal for the Society of Clinical Child and Adolescent Psychology, American Psychological Association, Division 53 48(supplement1): 57-s71	- Comparator - not usual education
6.	Bernstein, G. A., Layne, A. E., Egan, E. A. et al. (2005) School-based interventions for anxious children. Journal of the american academy of child and adolescent psychiatry 44(11): 1118-1127	- Publication date before 2007 - Setting - delivered out of school hours
7.	Bernstein, Gail A, Bernat, Debra H, Victor, Andrea M et al. (2008) School-based interventions for anxious children: 3-, 6-, and 12-month follow-ups.. Journal of the American Academy of Child and Adolescent Psychiatry 47(9): 1039-47	- Population - majority not subclinical
8.	Bevan Jones, Rhys, Thapar, Anita, Stone, Zoe et al. (2018) Psychoeducational interventions in adolescent depression: A systematic review.. Patient education and counseling 101(5): 804-816	- Study design - Systematic review
9.	Bierman, K. L., Coie, J. D., Dodge, K. A. et al. (2002) Evaluation of the first 3 years of the Fast Track prevention trial with children at high risk for adolescent conduct problems. Journal of Abnormal Child Psychology 30(1): 19-35	- Publication date before 2007
10.	Bluth, Karen, Campo, Rebecca A., Pruteanu-Malinici, Sarah et al. (2016) A school-based mindfulness pilot study for ethnically diverse at-risk adolescents. Mindfulness 7(1): 90-104	- Comparator - not usual education

	Study	Reason
11.	Bothe, Denise A; Grignon, Josephine B; Olness, Karen N (2014) The effects of a stress management intervention in elementary school children.. Journal of developmental and behavioral pediatrics : JDBP 35(1): 62-7	- Universal intervention
12.	Brondino; Michael, J.; And, Others (1989) Coping Skills Training with Adolescents at Risk for Substance Abuse. National inst. on drug abuse (DHHS/PHS), rockville, md.: 20	- Publication date before 2007
13.	Caldarella, Paul, Larsen, Ross A., Williams, Leslie et al. (2018) Effects of CW-FIT on Teachers' Ratings of Elementary School Students at Risk for Emotional and Behavioral Disorders. Journal of Positive Behavior Interventions 20(2): 78-89	- Assessing risk - Universal intervention [Delivered to all students]
14.	Carroll, Annemaree, Ashman, Adrian, Hemingway, Francene et al. (2012) A preliminary evaluation of Mindfields: A self-regulatory cognitive behavioural program for school-aged adolescent offenders.. The Australian Educational and Developmental Psychologist 29(2): 81-94	- Setting - not school-based
15.	Cavell, Timothy A., Elledge, L. Christian, Malcolm, Kenya T. et al. (2009) Relationship Quality and the Mentoring of Aggressive, High-Risk Children. Journal of Clinical Child and Adolescent Psychology 38(2): 185-198	- Comparator - not usual education
16.	Chu, Brian C, Crocco, Sofia T, Esseling, Petra et al. (2016) Transdiagnostic group behavioral activation and exposure therapy for youth anxiety and depression: Initial randomized controlled trial.. Behaviour research and therapy 76: 65-75	- Population - majority not subclinical
17.	Claro, Anthony; Boulanger, Marie-Michelle; Shaw, Steven R (2015) Targeting vulnerabilities to risky behavior: An intervention for promoting adaptive emotion regulation in adolescents.. Contemporary School Psychology 19(4): 330-339	- Study design - No control group [Control group non-equivalent]
18.	Conrod, PJ; Castellanos-Ryan, N; Mackie, C (2011) Long-term effects of a personality-targeted intervention to reduce alcohol use in adolescents. Journal of consulting and clinical psychology 79(3): 296-306	- Intervention - Wrong aim [Alcohol intervention]
19.	Conroy, Maureen A., Sutherland, Kevin S., Algina, James et al. (2018) Prevention and Treatment of Problem Behaviors in Young Children: Clinical Implications from a Randomized Controlled Trial of BEST in CLASS. AERA Open 4(1): 1-16	- Population - early years foundation stage
20.	Costello, Karen M. and Smyth, Sinead (2017) Group contingencies to increase school and project attendance in at-risk adolescents: A pilot study. Education & Treatment of Children 40(3): 379-400	- Study design - No control group
21.	Cova, F.; Rincon, P.; Melipillan, R. (2011) Evaluation of the efficacy of a prevention program for depression in female adolescents. Terapia Psicologica 29(2): 245-250	- Non-English language article
22.	Cristea, Ioana-Alina; Benga, Oana; Opre, Adrian (2008) The implementation of a rational-emotive	- Non-OECD country

	Study	Reason
	educational intervention for anxiety in a 3rd grade classroom: An analysis of relevant procedural and developmental constraints.. Journal of Cognitive and Behavioral Psychotherapies 8(1): 31-51	
23.	Daki, Julia and Savage, Robert S. (2010) Solution-Focused Brief Therapy: Impacts on Academic and Emotional Difficulties. Journal of Educational Research 103(5): 309-326	- Comparator - not usual education
24.	de Hullu, Eva, Sportel, B Esther, Nauta, Maaike H et al. (2017) Cognitive bias modification and CBT as early interventions for adolescent social and test anxiety: Two-year follow-up of a randomized controlled trial.. Journal of behavior therapy and experimental psychiatry 55: 81-89	- Population - above cut off for social phobia and/or test anxiety
25.	DeRosier, M. E. (2004) Building relationships and combating bullying: effectiveness of a school-based social skills group intervention. Journal of clinical child and adolescent psychology 33(1): 196-201	- Publication date before 2007
26.	Dougherty, Danielle and Sharkey, Jill (2017) Reconnecting Youth: Promoting emotional competence and social support to improve academic achievement.. Children and Youth Services Review 74: 28-34	- No extractable outcome data
27.	Duong, M. T., Cruz, R. A., King, K. M. et al. (2016) Twelve-Month Outcomes of a Randomized Trial of the Positive Thoughts and Action Program for Depression Among Early Adolescents. Prevention science 17(3): 295-305	- Comparator - not usual education [Comparator was individual counselling]
28.	Eacott, Chelsea and Frydenberg, Erica (2009) Promoting positive coping skills for rural youth: benefits for at-risk young people.. The Australian journal of rural health 17(6): 338-45	- Comparator - not usual education
29.	Edward, Kumakech (2009) Peer-group support intervention improves the psychosocial well-being of AIDS orphans: cluster randomized trial. Social Science and Medicine 68(6): 1038-1043	- Non-OECD country
30.	Essau, C.A., Sasagawa, S., Jones, G. et al. (2019) Evaluating the real-world effectiveness of a cognitive behavior therapy-based transdiagnostic program for emotional problems in children in a regular school setting. Journal of Affective Disorders 253: 357-365	- Study design - No control group
31.	Feiss, Robyn, Dolinger, Sarah Beth, Merritt, Monaye et al. (2019) A Systematic Review and Meta-Analysis of School-Based Stress, Anxiety, and Depression Prevention Programs for Adolescents.. Journal of youth and adolescence 48(9): 1668-1685	- Study design - Systematic review
32.	Firth, Nola, Frydenberg, Erica, Steeg, Charlotte et al. (2013) Coping successfully with dyslexia: an initial study of an inclusive school-based resilience programme. Dyslexia (Chichester, England) 19(2): 113-30	- Study design - No control group
33.	Fite, Paula J, Cooley, John L, Poquiz, Jonathan et al. (2019) Pilot evaluation of a targeted intervention for peer-victimized youth.. Journal of Clinical Psychology 75(1): 46-65	- No extractable outcome data

	Study	Reason
34.	Gatzke-Kopp, LM; Greenberg, M; Bierman, K (2015) Children's parasympathetic reactivity to specific emotions moderates response to intervention for early-onset aggression. Journal of clinical child and adolescent psychology 44(2): 291-304	- Comparator - not usual education
35.	Gold, Christian, Saarikallio, Suvi, Crooke, Alexander Hew Dale et al. (2017) Group Music Therapy as a Preventive Intervention for Young People at Risk: Cluster-Randomized Trial.. Journal of music therapy 54(2): 133-160	- Comparator - not usual education
36.	Gormez, V., Kilic, H. N., Orengul, A. C. et al. (2017) Evaluation of a school-based, teacher-delivered psychological intervention group program for trauma-affected Syrian refugee children in Istanbul, Turkey. Psychiatry and clinical psychopharmacology 27(2): 125-131	- Study design - No control group
37.	Haft, S.L., Chen, T., LeBlanc, C. et al. (2019) Impact of mentoring on socio-emotional and mental health outcomes of youth with learning disabilities and attention-deficit hyperactivity disorder. Child and Adolescent Mental Health	- Setting - delivered out of school hours
38.	Henneberger, Angela K, Deutsch, Nancy L, Lawrence, Edith C et al. (2013) The Young Women Leaders Program: A mentoring program targeted toward adolescent girls.. School Mental Health: A Multidisciplinary Research and Practice Journal 5(3): 132-143	- Setting - delivered out of school hours
39.	Hickey, Grainne, McGilloway, Sinead, Hyland, Lynda et al. (2017) Exploring the Effects of a Universal Classroom Management Training Programme on Teacher and Child Behaviour: A Group Randomised Controlled Trial and Cost Analysis. Journal of Early Childhood Research 15(2): 174-194	- Universal intervention
40.	Hojjat, Seyed Kaveh, Golmakani, Ebrahim, Norozi Khalili, Mina et al. (2015) The Effectiveness of Group Assertiveness Training on Happiness in Rural Adolescent Females With Substance Abusing Parents.. Global journal of health science 8(2): 156-64	- Non-OECD country
41.	Horowitz, Jason L, Garber, Judy, Ciesla, Jeffrey A et al. (2007) Prevention of depressive symptoms in adolescents: a randomized trial of cognitive-behavioral and interpersonal prevention programs.. Journal of consulting and clinical psychology 75(5): 693-706	- Universal intervention
42.	Hutchings, Judy, Bywater, Tracey, Gridley, Nicole et al. (2012) The Incredible Years Therapeutic Social and Emotional Skills Programme: A Pilot Study. School Psychology International 33(3): 285-293	- Universal intervention [With a high-risk subgroup]
43.	Irfan Arif, Muhammad and Mirza, Munawar S. (2017) Effectiveness of an Intervention Program in Fostering Academic Resilience of Students at Risk of Failure at Secondary School Level. Bulletin of Education and Research 39(1): 251-264	- Non-OECD country
44.	Jarrett, Matthew, Siddiqui, Salma, Lochman, John et al. (2014) Internalizing problems as a predictor of change in externalizing problems in at-risk youth..	- Secondary publicationof a study published before 2007

	Study	Reason
	Journal of clinical child and adolescent psychology : the official journal for the Society of Clinical Child and Adolescent Psychology, American Psychological Association, Division 53 43(1): 27-35	
45.	Keogh, Edmund; Bond, Frank W.; Flaxman, Paul E. (2006) Improving academic performance and mental health through a stress management intervention: Outcomes and mediators of change. Behaviour Research and Therapy 44(3): 339-357	- Publication date before 2007
46.	Kindt, Karlijn C M, Kleinjan, Marloes, Janssens, Jan M A M et al. (2014) Evaluation of a school-based depression prevention program among adolescents from low-income areas: a randomized controlled effectiveness trial.. International journal of environmental research and public health 11(5): 5273-93	- Universal intervention
47.	Kliewer, W., Lepore, S. J., Farrell, A. D. et al. (2011) A school-based expressive writing intervention for at-risk urban adolescents' aggressive behavior and emotional lability. Journal of clinical child and adolescent psychology 40(5): 693-705	- Unselected population
48.	Lam, Kanei (2016) School-based cognitive mindfulness intervention for internalizing problems: Pilot study with Hong Kong elementary students. Journal of Child and Family Studies 25(11): 3293-3308	- Setting - delivered out of school hours
49.	Lamb, J. M., Puskar, K. R., Sereika, S. M. et al. (1998) School-based intervention to promote coping in rural teens. MCN. The american journal of maternal child nursing 23(4): 187-194	- Publication date before 2007
50.	Larkin, R. and Thyer, B. A. (1999) Evaluating cognitive-behavioral group counseling to improve elementary school students' self-esteem, self-control, and classroom behavior. Behavioral interventions 14(3): 147-161	- Publication date before 2007
51.	Lattie, E.G., Ho, J., Sargent, E. et al. (2017) Teens engaged in collaborative health: The feasibility and acceptability of an online skill-building intervention for adolescents at risk for depression. Internet Interventions 8: 15-26	- Study design - No control group [Non-equivalent control group]
52.	Lau, Anna S, Kim, Joanna J, Nguyen, Diem Julie et al. (2019) Effects of Preference on Outcomes of Preventive Interventions among Ethnically Diverse Adolescents At-Risk of Depression.. Journal of clinical child and adolescent psychology : the official journal for the Society of Clinical Child and Adolescent Psychology, American Psychological Association, Division 53: 1-17	- Comparator - not usual education
53.	Lau, Ngar Sze and Hue, Ming Tak (2011) Preliminary outcomes of a mindfulness-based programme for Hong Kong adolescents in schools: Well-being, stress and depressive symptoms. International Journal of Children's Spirituality	- Non-OECD country
54.	Laugeson, E. A., Ellingsen, R., Sanderson, J. et al. (2014) The ABC's of teaching social skills to	- Comparator - not usual education

	Study	Reason
	adolescents with autism spectrum disorder in the classroom: the UCLA PEERS program. Journal of autism and developmental disorders 44(9): 2244-2256	
55.	Lee, Susanne S, Victor, Andrea M, James, Matthew G et al. (2016) School-Based Interventions for Anxious Children: Long-Term Follow-Up.. Child psychiatry and human development 47(2): 183-93	- Secondary publicationof a study published before 2007
56.	Livheim, Fredrik, Hayes, Louise, Ghaderi, Ata et al. (2015) The effectiveness of Acceptance and Commitment Therapy for adolescent mental health: Swedish and Australian pilot outcomes *SWEDEN*. Journal of Child and Family Studies 24(4): 1016-1030	- Setting - delivered out of school hours
57.	Lobo, Yovanka B. and Winsler, Adam (2006) The Effects of a Creative Dance and Movement Program on the Social Competence of Head Start Preschoolers. Social Development 15(3): 501-519	- Publication date before 2007
58.	Lochman, J. E. and Wells, K. C. (2002) The Coping Power program at the middle-school transition: universal and indicated prevention effects. Psychology of addictive behaviors 16(4s): 40-54	- Setting - delivered out of school hours - Publication date before 2007
59.	Lochman, John E, Wells, Karen C, Qu, Lixin et al. (2013) Three year follow-up of coping power intervention effects: evidence of neighborhood moderation?.. Prevention science : the official journal of the Society for Prevention Research 14(4): 364-76	- Secondary publicationof a study published before 2007
60.	Lochmann, Je, Fitz et al. (2001) Effects of a social cognitive intervention for aggressive deaf children: the Coping Power Program. Jadara 35(2): 39-61	- Publication date before 2007
61.	Luxford, Sarah; Hadwin, Julie A.; Kovshoff, Hanna (2017) Evaluating the Effectiveness of a School-Based Cognitive Behavioural Therapy Intervention for Anxiety in Adolescents Diagnosed with Autism Spectrum Disorder. Journal of Autism and Developmental Disorders 47(12): 3896-3908	- Treatment of anxiety
62.	Mazurek Melnyk, Bernadette; Kelly, Stephanie; Lusk, Pamela (2014) Outcomes and Feasibility of a Manualized Cognitive-Behavioral Skills Building Intervention: Group COPE for Depressed and Anxious Adolescents in School Settings.. Journal of child and adolescent psychiatric nursing : official publication of the Association of Child and Adolescent Psychiatric Nurses, Inc 27(1): 3-13	- Study design - No control group
63.	McArdle, Paul, Young, Robert, Quibell, Toby et al. (2011) Early intervention for at risk children: 3-year follow-up.. European child & adolescent psychiatry 20(3): 111-20	- Secondary publicationof a study published before 2007 - Population - Primary and secondary age. Data not disaggregated
64.	Mckenna, A.E.; Cassidy, T.; Giles, M. (2014) Prospective evaluation of the pyramid plus psychosocial intervention for shy withdrawn children: An assessment of efficacy in 7- to 8-year-old school children in Northern Ireland. Child and Adolescent Mental Health 19(1): 9-15	- Study design - No control group [Non-equivalent control group]

	Study	Reason
65.	Mendelson, Tamar, Greenberg, Mark T., Dariotis, Jacinda K. et al. (2010) Feasibility and Preliminary Outcomes of a School-Based Mindfulness Intervention for Urban Youth. Journal of Abnormal Child Psychology 38(7): 985-994	- Unselected population
66.	Menrath, I., Pr??mann, M., M?ller-Godeffroy, E. et al. (2015) Effectiveness of School-Based Life Skills Programmes on Secondary Schoolchildren in a High Risk Sample. Gesundheitswesen (bundesverband der arzte des offentlichen gesundheitsdienstes (germany)) 77suppl1: 76-7	- Non-English language article
67.	Metropolitan Area Child Study Research, Group (2007) Changing the way children "think" about aggression: social-cognitive effects of a preventive intervention. Journal of consulting and clinical psychology 75(1): 160-7	- Secondary publication of a study published before 2007
68.	Mikami, A. Y., Griggs, M. S., Lerner, M. D. et al. (2013) A randomized trial of a classroom intervention to increase peers' social inclusion of children with attention-deficit/hyperactivity disorder. Journal of consulting and clinical psychology 81(1): 100-112	- Setting - delivered out of school hours
69.	Miller, Thomas W.; Kraus, Robert F.; Veltkamp, Lane J. (2008) Character education as a prevention strategy for school-related violence. School violence and primary prevention.: 377-390	- Setting - delivered out of school hours
70.	Milligan, Karen, Irwin, Alexandra, Wolfe-Miscio, Michelle et al. (2016) Mindfulness enhances use of secondary control strategies in high school students at risk for mental health challenges.. Mindfulness 7(1): 219-227	- Population - Large proportion already being treated for anxiety or depression
71.	Molina, Brooke S. G., Flory, Kate, Bukstein, Oscar G. et al. (2008) Feasibility and Preliminary Efficacy of an After-School Program for Middle Schoolers with ADHD: A Randomized Trial in a Large Public Middle School. Journal of Attention Disorders 12(3): 207-217	- Setting - delivered out of school hours
72.	Natalie, Castellanos and Patricia, Conrod (2006) Brief interventions targeting personality risk factors for adolescent substance misuse reduce depression, panic and risk-taking behaviours. Journal of Mental Health 15(6): 645-658	- Publication date before 2007
73.	Noel, La Tonya; Rost, Kathryn; Gromer, Jill (2013) Depression prevention among rural preadolescent girls: A randomized controlled trial.. School Social Work Journal 38(1): 1-18	- Setting - delivered out of school hours
74.	Obsuth, I., Sutherland, A., Cope, A. et al. (2017) London Education and Inclusion Project (LEIP): Results from a Cluster-Randomized Controlled Trial of an Intervention to Reduce School Exclusion and Antisocial Behavior. Journal of youth and adolescence 46(3): 538-557	- Comparator - not usual education
75.	Obsuth, Ingrid, Sutherland, Alex, Pilbeam, Liv et al. (2014) London Education and Inclusion Project (LEIP): A cluster-randomised controlled trial protocol of an intervention to reduce antisocial behaviour and	- Protocol

	Study	Reason
	improve educational/occupational attainment for pupils at risk of school exclusion. BMC Psychology 2(1)	
76.	Ohl, Madeleine; Fox, Pauline; Mitchell, Kathryn (2013) Strengthening socio-emotional competencies in a school setting: Data from the Pyramid project. British Journal of Educational Psychology 83(3): 452-466	- Setting - delivered out of school hours
77.	Omizo, M. M. and Omizo, S. A. (1987) The effects of group counselling on classroom behaviour and self-concept among elementary school learning disabled children. Exceptional children 34(1): 57-64	- Publication date before 2007
78.	P, Neace William and A, Munoz Marco (2012) Pushing the boundaries of education: evaluating the impact of Second Step: A Violence Prevention Curriculum with psychosocial and non-cognitive measures. Child and Youth Services 33(1): 46-69	- Universal intervention [With a subgroup of at-risk students]
79.	Pereira, Ana Isabel, Marques, Teresa, Russo, Vanessa et al. (2014) Effectiveness of the friends for life program in Portuguese schools: Study with a sample of highly anxious children.. Psychology in the Schools 51(6): 647-657	- Treatment of anxiety
80.	Philipsson, A., Duberg, A., Moller, M. et al. (2013) Cost-utility analysis of a dance intervention for adolescent girls with internalizing problems. Cost Effectiveness and Resource Allocation 11(1): 4	- Setting - not school-based - Study design - economic study
81.	Pluess, Michael and Boniwell, Ilona (2015) Sensory-Processing Sensitivity predicts treatment response to a school-based depression prevention program: Evidence of Vantage Sensitivity.. Personality and Individual Differences 82: 40-45	- Universal intervention
82.	Possel, Patrick; Seemann, Simone; Hautzinger, Martin (2008) Impact of comorbidity in prevention of adolescent depressive symptoms.. Journal of Counseling Psychology 55(1): 106-117	- Universal intervention
83.	Reid, M. J.; Webster-Stratton, C.; Hammond, M. (2007) Enhancing a classroom social competence and problem-solving curriculum by offering parent training to families of moderate- to high-risk elementary school children. Journal of clinical child and adolescent psychology 36(4): 605-620	- Parent intervention for at risk children - Universal intervention
84.	Rotheram, Mary J. (1982) Social skills training with underachievers, disruptive, and exceptional children. Psychology in the Schools	- Publication date before 2007
85.	Sahin, Mustafa (2012) An investigation into the efficiency of empathy training program on preventing bullying in primary schools.. Children and Youth Services Review 34(7): 1325-1330	- Comparator - not usual education
86.	Sanchez, A.L., Cornacchio, D., Poznanski, B. et al. (2018) The Effectiveness of School-Based Mental Health Services for Elementary-Aged Children: A Meta-Analysis. Journal of the American Academy of Child and Adolescent Psychiatry 57(3): 153-165	- Study design - Systematic review
87.	Sanchez, Oscar; Carrillo, Francisco X. Mendez; Garber, Judy (2016) Promoting resilience in children	- Treatment for depression

	Study	Reason
	with depressive symptoms.. Anales de Psicologia 32(3): 741-748	
88.	Sapouna, Maria, Wolke, Dieter, Vannini, Natalie et al. (2010) Virtual learning intervention to reduce bullying victimization in primary school: a controlled trial.. Journal of child psychology and psychiatry, and allied disciplines 51(1): 104-12	- Universal intervention
89.	Shechtman, Z. and Ifargan, M. (2009) School-based integrated and segregated interventions to reduce aggression. Aggressive behavior 35(4): 342-356	- Population - Primary and secondary age. Data not disaggregated
90.	Soorya, L. V., Siper, P. M., Beck, T. et al. (2015) Randomized comparative trial of a social cognitive skills group for children with autism spectrum disorder. Journal of the american academy of child and adolescent psychiatry 54(3): 208-216e1	- Treatment for ASD
91.	Stallard, P., Phillips, R., Montgomery, A. A. et al. (2013) A cluster randomised controlled trial to determine the clinical effectiveness and cost-effectiveness of classroom-based cognitive-behavioural therapy (CBT) in reducing symptoms of depression in high-risk adolescents. Health Technology Assessment 17(47)	- Universal intervention [Intervention was delivered to the whole-class (universally)]
92.	Stallard, P., Sayal, K., Phillips, R. et al. (2012) Classroom based cognitive behavioural therapy in reducing symptoms of depression in high risk adolescents: pragmatic cluster randomised controlled trial. BMJ (clinical research ed.) 345: e6058	- Universal intervention [Intervention was delivered to the whole-class (universally)]
93.	Stallard, P., Simpson, N., Anderson, S. et al. (2007) The FRIENDS emotional health programme: Initial findings from a school-based project. Child and Adolescent Mental Health 12(1): 32-37	- Study design - No control group
94.	Stevens, Alex, Coulton, Simon, O'Brien, Kate et al. (2014) RisKit: The participatory development and observational evaluation of a multi-component programme for adolescent risk behaviour reduction. Drugs: Education, Prevention & Policy 21(1): 24-34	- Study design - No control group
95.	Stoltz, Sabine, van Londen, Monique, Dekovic, Maja et al. (2012) Effectiveness of Individually Delivered Indicated School-Based Interventions on Externalizing Behavior. International Journal of Behavioral Development 36(5): 381-388	- Study design - Systematic review
96.	Sutherland, Kevin S., Conroy, Maureen A., Algina, James et al. (2018) Reducing Child Problem Behaviors and Improving Teacher-Child Interactions and Relationships: A Randomized Controlled Trial of Best in Class. Grantee Submission 42: 31-43	- Population - early years foundation stage
97.	Sutherland, Kevin S., Conroy, Maureen A., Vo, Abigail et al. (2015) Implementation Integrity of Practice-Based Coaching: Preliminary Results from the BEST in CLASS Efficacy Trial. School Mental Health 7(1): 1-13	- Population - early years foundation stage
98.	Tol, Wietse A., Komproe, Ivan H., Jordans, Mark J. D. et al. (2012) Outcomes and moderators of a preventive school-based mental health intervention for children affected by war in Sri Lanka: a cluster	- Non-OECD country

	Study	Reason
	randomized trial. World psychiatry : official journal of the World Psychiatric Association (WPA) 11(2): 114-22	
99.	Vahabzadeh, Arshya, Keshav, Neha U., Abdus-Sabur, Rafiq et al. (2018) Improved Socio-Emotional and Behavioral Functioning in Students with Autism Following School-Based Smartglasses Intervention: Multi-Stage Feasibility and Controlled Efficacy Study. Behavioral sciences (Basel, Switzerland) 8(10)	- Treatment for ASD
100.	van Starrenburg, Manon L A, Kuijpers, Rowella C M W, Kleinjan, Marloes et al. (2017) Effectiveness of a Cognitive Behavioral Therapy-Based Indicated Prevention Program for Children with Elevated Anxiety Levels: a Randomized Controlled Trial.. Prevention science : the official journal of the Society for Prevention Research 18(1): 31-39	- Setting - delivered out of school hours
101.	Wallace, Beatrice (2011) Studying the effects of the PASSPORT Program on self-esteem with students who have learning disabilities. Dissertation Abstracts International Section A: Humanities and Social Sciences 72(1a): 147	- Not full publication
102.	Werner-Seidler, Aliza, Perry, Yael, Calear, Alison L et al. (2017) School-based depression and anxiety prevention programs for young people: A systematic review and meta-analysis.. Clinical psychology review 51: 30-47	- Study design - Systematic review
103.	Winther, Jo; Carlsson, Anthony; Vance, Alasdair (2014) A pilot study of a school-based prevention and early intervention program to reduce oppositional defiant disorder/conduct disorder.. Early intervention in psychiatry 8(2): 181-9	- Whole school intervention
104.	Wolpert, Miranda, Humphrey, Neil, Belsky, Jay et al. (2013) Embedding Mental Health Support in Schools: Learning from the Targeted Mental Health in Schools (TaMHS) National Evaluation. Emotional & Behavioural Difficulties 18(3): 270-283	- Whole school intervention
105.	Wolpert, Miranda, Humphrey, Neil, Deighton, Jessica et al. (2015) An evaluation of the implementation and impact of England's mandated school-based mental health initiative in elementary schools.. School Psychology Review 44(1): 117-138	- Whole school intervention
106.	Woods, Barbara and Jose, Paul E (2011) Effectiveness of a school-based indicated early intervention program for Maori and Pacific adolescents.. Journal of Pacific Rim Psychology 5(1): 40-50	- Not full publication [Original publication was an unpublished dissertation]
107.	Young, J. F., Jones, J. D., Sbrilli, M. D. et al. (2019) Long-Term Effects from a School-Based Trial Comparing Interpersonal Psychotherapy-Adolescent Skills Training to Group Counseling. Journal of clinical child and adolescent psychology : the official journal for the Society of Clinical Child and Adolescent Psychology, American Psychological Association, Division 53 48(supplement1): 362-s370	- Comparator - not usual education

	Study	Reason
108.	Young, Jami F; Mufson, Laura; Gallop, Robert (2010) Preventing depression: a randomized trial of interpersonal psychotherapy-adolescent skills training.. Depression and anxiety 27(5): 426-33	- Setting - delivered out of school hours
109.	Young-Pelton, C. A. and Bushman, S. L. (2015) Using video self-modelling to increase active learning responses during small-group reading instruction for primary school pupils with social emotional and mental health difficulties. Emotional and behavioural difficulties 20(3): 277-288	- Study design - No control group

J.2 Public health studies: Acceptability and barriers and facilitators

	Study	Code [Reason]
	Ball, Barbara, Holland, Kristin M, Marshall, Khiya J et al. (2015) Implementing a targeted teen dating abuse prevention program: challenges and successes experienced by expect respect facilitators. The Journal of adolescent health : official publication of the Society for Adolescent Medicine 56(2suppl2): 40-6	- Non-UK qualitative study
	Cavell, Timothy A., Elledge, L. Christian, Malcolm, Kenya T. et al. (2009) Relationship Quality and the Mentoring of Aggressive, High-Risk Children. Journal of Clinical Child and Adolescent Psychology 38(2): 185-198	- Comparator - not usual education
	Children, Education and Skills, Scottish Government (2019) Additional Support for Learning: research on the experience of children and young people and those that support them.: 75	- Non-SEW intervention
	COHOLIC Diana, A. and EYS, Mark (2016) Benefits of an arts-based mindfulness group intervention for vulnerable children. Child and Adolescent Social Work Journal 33(1): 1-13	- Non-UK qualitative study
	Fung, Annis L. C (2007) A qualitative evaluation of social-cognitive changes in children with reactively aggressive behaviors. Journal of School Violence 6(1): 45-64	- Non-UK qualitative study
	GALLAGHER, Jen and SCHOSSER, Annette (2015) Service users' experiences of a brief intervention service for children and adolescents: a service evaluation. Child Care in Practice 21(4): 374-391	- Setting - not school-based
	Girio-Herrera, E., Ehrlich, C.J., Danzi, B.A. et al. (2019) Lessons Learned About Barriers to Implementing School-Based Interventions for Adolescents: Ideas for Enhancing Future Research and Clinical Projects. Cognitive and Behavioral Practice 26(3): 466-477	- Non-UK qualitative study
	Gronholm, Petra C; Nye, Elizabeth; Michelson, Daniel (2018) Stigma related to targeted school-based mental health interventions: A systematic review of qualitative evidence. Journal of affective disorders 240: 17-26	- Study design - Systematic review

	Study	Code [Reason]
	Milligan, K, Cosme, R, Wolfe Miscio, M et al. (2017) Integrating mindfulness into mixed martial arts training to enhance academic, social, and emotional outcomes for at-risk high school students: A qualitative exploration. Contemporary School Psychology 21(4): 335-346	- Non-UK qualitative study
	Moneta, I. and Rousseau, C. (2008) Emotional expression and regulation in a school-based drama workshop for immigrant adolescents with behavioral and learning difficulties. Arts in Psychotherapy 35(5): 329-340	- Non-UK qualitative study
	MOWAT Joan, Gaynor (2010) Towards the development of self-regulation in pupils experiencing social and emotional behavioural difficulties (SEBD). Emotional and Behavioural Difficulties 15(3): 189-206	- Qualitative measure of effectiveness
	Mowat, Joan Gaynor (2010) Inclusion of Pupils Perceived as Experiencing Social and Emotional Behavioural Difficulties (SEBD): Affordances and Constraints. International Journal of Inclusive Education 14(6): 631-648	- Qualitative measure of effectiveness
	Sutherland, Kevin S., Conroy, Maureen A., Algina, James et al. (2018) Reducing Child Problem Behaviors and Improving Teacher-Child Interactions and Relationships: A Randomized Controlled Trial of Best in Class. Grantee Submission 42: 31-43	- Population - early years foundation stage
	Sutherland, Kevin S., Conroy, Maureen A., McLeod, Bryce D. et al. (2018) Factors Associated with Teacher Delivery of a Classroom-Based Tier 2 Prevention Program. Grantee Submission 19(2): 186-196	- Non-UK qualitative study
	Sutherland, Kevin S., Conroy, Maureen A., Vo, Abigail et al. (2015) Implementation Integrity of Practice-Based Coaching: Preliminary Results from the BEST in CLASS Efficacy Trial. School Mental Health 7(1): 1-13	- Population - early years foundation stage
	Thompson, I. and Tawell, A. (2017) Becoming other: social and emotional development through the creative arts for young people with behavioural difficulties. Emotional and Behavioural Difficulties 22(1): 18-34	- Setting - not school-based
	Wolpert, Miranda, Humphrey, Neil, Belsky, Jay et al. (2013) Embedding Mental Health Support in Schools: Learning from the Targeted Mental Health in Schools (TaMHS) National Evaluation. Emotional & Behavioural Difficulties 18(3): 270-283	- Whole school intervention
	Woolf, A. (2008) Better Play Times training - Theory and practice in an EBD primary school. Emotional and Behavioural Difficulties 13(1): 49-62	- No extractable outcome data
	Zwaanswijk, M. and Kosters, M.P. (2015) Children's and parents' evaluations of 'FRIENDS for life', an indicated school-based prevention program for children with symptoms of anxiety and depression. Behaviour Change 32(4): 243-254	- Non-UK qualitative study

J.3 Excluded Economic studies

Reference	Reason for exclusion
Anderson, R., et al. (2014). Cost-effectiveness of classroom-based cognitive behaviour therapy in reducing symptoms of depression in adolescents: a trial-based analysis. Journal of Child Psychology and Psychiatry 55(12) 1390-1397.	NA
Anttila S, Clausson E, Eckerlund I, Helgesson G, Hjern A, Hakansson PA, et al. Methods of preventing mental ill-health among schoolchildren. The Swedish Council on Health Technology A; 05 May 2010 2010. Available from: http://www.crd.york.ac.uk/CRDWeb/ShowRecord.asp?ID=32010000471.	Paper not found
Bak PL, Midgley N, Zhu JL, Wistoft K, Obel C. The Resilience Program: preliminary evaluation of a mentalization-based education program. Frontiers in psychology. 2015;6:753.	No economic evaluation
Bannink R, Joosten-van Zwanenburg E, van de Looij-Jansen P, van As E, Raat H. Evaluation of computer-tailored health education ('E-health4Uth') combined with personal counselling ('E-health4Uth + counselling') on adolescents' behaviours and mental health status: design of a three-armed cluster randomised controlled trial. BMC public health. 2012;12:1083.	No economic evaluation
Beckman L, Svensson M. The cost-effectiveness of the Olweus Bullying Prevention Program: Results from a modelling study. Journal of Adolescence. 2015;45:127-37.	NA
Belfield C, Bowden AB, Klapp A, Levin H, Shand R, Zander S. The Economic Value of Social and Emotional Learning. Journal of Benefit-Cost Analysis. 2015;6(3):508-44.	Wrong outcomes
Borman GD, Rozek CS, Pyne J, Hanselman P. Reappraising academic and social adversity improves middle school students' academic achievement, behavior, and well-being. Proceedings of the National Academy of Sciences of the United States of America. 2019;116(33):16286-91.	No economic evaluation
Bowden AB, Shand R, Levin HM, Muroga A, Wang A. An Economic Evaluation of the Costs and Benefits of Providing Comprehensive Supports to Students in Elementary School. Prevention science : the official journal of the Society for Prevention Research. 2020;21(8):1126-35	NA
Bungay H, Vella-Burrows T. The effects of participating in creative activities on the health and well-being of children and young people: A rapid review of the literature. Perspectives in Public Health. 2013;133(1):44-52.	Systematic review
Cook PJ, Dodge K, Farkas G, Fryer RG, Jr., Guryan J, Ludwig J, et al. The (Surprising) Efficacy of Academic and Behavioral Intervention with Disadvantaged Youth: Results from a Randomized Experiment in Chicago. 2014	No economic evaluation
Das JK, Salam RA, Arshad A, Finkelstein Y, Bhutta ZA. Interventions for Adolescent Substance Abuse: An Overview of Systematic Reviews. Journal of Adolescent Health. 2016;59(2 Supplement):S61-S75.	Systematic review
Domitrovich CE, Durlak JA, Staley KC, Weissberg RP. Social-Emotional Competence: An Essential Factor for Promoting Positive Adjustment and Reducing Risk in School Children. Child development. 2017;88(2):408-16.	Systematic review
Ekwaru JP, Ohinmaa A, Tran BX, Setayeshgar S, Johnson JA, Veugelers PJ. Cost-effectiveness of a school-based health promotion program in Canada: A life-course modeling approach. PLoS ONE. 2017;12(5):e0177848.	Wrong outcomes

Reference	Reason for exclusion
Ford T, Hayes R, Byford S, Edwards V, Fletcher M, Logan S, et al. The effectiveness and cost-effectiveness of the Incredible Years Teacher Classroom Management programme in primary school children: results of the STARS cluster randomised controlled trial. Psychological medicine. 2019;49(5):828-42.	NA
Foster EM, Johnson-Shelton D, Taylor TK. Measuring time costs in interventions designed to reduce behavior problems among children and youth. American journal of community psychology. 2007;40(1-2):64-81.	Wrong study design
Foster EM. Costs and Effectiveness of the Fast Track Intervention for Antisocial Behavior. Journal of Mental Health Policy and Economics. 2010;13(3):101-19.	Wrong outcomes
Frick KD, Carlson MC, Glass TA, McGill S, Rebok GW, Simpson C, et al. Modeled cost-effectiveness of the Experience Corps Baltimore based on a pilot randomized trial. Journal of Urban Health. 2004;81(1):106-17.	Wrong patient population
Garmy P, Clausson EK, Berg A, Steen Carlsson K, Jakobsson U. Evaluation of a school-based cognitive-behavioral depression prevention program. Scandinavian journal of public health. 2019;47(2):182-89.	NA
Garmy P, Jakobsson U, Carlsson KS, Berg A, Clausson EK. Evaluation of a school-based program aimed at preventing depressive symptoms in adolescents. The Journal of school nursing : the official publication of the National Association of School Nurses. 2015;31(2):117-25.	No economic evaluation
George M, Taylor L, Schmidt SC, Weist MD. A review of school mental health programs in SAMHSA's national registry of evidence-based programs and practices. Psychiatric services (Washington, D.C.). 2013;64(5):483-6.	Systematic review
Grimes KE, Schulz MF, Cohen SA, Mullin BO, Lehar SE, Tien S. Pursuing cost-effectiveness in mental health service delivery for youth with complex needs. Journal of Mental Health Policy and Economics. 2011;14(2):73-86.	Wrong setting
Guo JJ, Wade TJ, Keller KN. Impact of school-based health centers on students with mental health problems. Public Health Reports. 2008;123(6):768-80.	No economic evaluation
Haynes NM. Addressing students' social and emotional needs: The role of mental health teams in schools. Journal of Health and Social Policy. 2002;16(1-2):109-23.	No economic evaluation
Herman PM, Chinman M, Cannon J, Ebener P, Malone PS, Acosta J, et al. Cost Analysis of a Randomized Trial of Getting to Outcomes Implementation Support of CHOICE in Boys and Girls Clubs in Southern California. Prevention science : the official journal of the Society for Prevention Research. 2020;21(2):245-55.	Wrong setting
Houri AK, Thayer AJ, Cook CR. Targeting parent trust to enhance engagement in a school-home communication system: A double-blind experiment of a parental wise feedback intervention. School psychology (Washington, D.C.). 2019;34(4):421-32.	No economic evaluation
Hoven CW, Doan T, Musa GJ, Jaliashvili T, Duarte CS, Ovuga E, et al. Worldwide child and adolescent mental health begins with awareness: a preliminary assessment in nine countries. International review of psychiatry (Abingdon, England). 2008;20(3):261-70.	No economic evaluation
Humphrey, N., et al. (2018). The PATHS curriculum for promoting social and emotional well-being among children aged 7-9 years: a cluster RCT. Public Health Research 6(10).	NA
Hunter LJ, DiPerna JC, Hart SC, Crowley M. At what cost? Examining the cost effectiveness of a universal social-emotional	NA

Reference	Reason for exclusion
learning program. School psychology quarterly : the official journal of the Division of School Psychology, American Psychological Association. 2018;33(1):147-54.	
Iemmi V, Knapp M, Brown FJ. Positive behavioural support in schools for children and adolescents with intellectual disabilities whose behaviour challenges: An exploration of the economic case. Journal of Intellectual Disabilities. 2016;20(3):281-95.	Wrong outcomes
Jones DE, Karoly LA, Crowley DM, Greenberg MT. Considering Valuation of Noncognitive Skills in Benefit-Cost Analysis of Programs for Children. Journal of Benefit-Cost Analysis. 2015;6(3):471-507.	Systematic review
Kautz T, Heckman JJ, Diris R, ter Weel B, Borghans L. Fostering and Measuring Skills: Improving Cognitive and Non-Cognitive Skills to Promote Lifetime Success. 2014	Systematic review
Kolbe LJ. School Health as a Strategy to Improve Both Public Health and Education. Annual Review of Public Health. 2019;40:443-63.	Systematic review
Kuklinski MR, Briney JS, Hawkins JD, Catalano RF. Cost-benefit analysis of communities that care outcomes at eighth grade. Prevention science : the official journal of the Society for Prevention Research. 2012;13(2):150-61.	Wrong setting
Kuo E, Vander Stoep A, McCauley E, Kernic MA. Cost-effectiveness of a school-based emotional health screening program. Journal of School Health. 2009;79(6):277-85.	Wrong outcomes
Kutcher S, Wei Y. Mental health and the school environment: Secondary schools, promotion and pathways to care. Current Opinion in Psychiatry. 2012;25(4):311-16.	Systematic review
Le LK-D, Esturas AC, Mihalopoulos C, Chiotelis O, Bucholc J, Chatterton ML, et al. Cost-effectiveness evidence of mental health prevention and promotion interventions: A systematic review of economic evaluationsAU. PLoS Medicine. 2021;18(5):e1003606.	Systematic review
Lee S, Kim C-J, Kim DH. A meta-analysis of the effect of school-based anti-bullying programs. Journal of child health care : for professionals working with children in the hospital and community. 2015;19(2):136-53.	No economic evaluation
Legood R, Opondo C, Warren E, Jamal F, Bonell C, Viner R, et al. Cost-Utility Analysis of a Complex Intervention to Reduce School-Based Bullying and Aggression: An Analysis of the Inclusive RCT. Value in health : the journal of the International Society for Pharmacoeconomics and Outcomes Research. 2021;24(1):129-35.	NA
Long K, Brown JL, Jones SM, Aber JL, Yates BT. Cost Analysis of a School-Based Social and Emotional Learning and Literacy Intervention. Journal of Benefit-Cost Analysis. 2015;6(3):545-71.	No economic evaluation
Macdonald G, Livingstone N, Hanratty J, McCartan C, Cotmore R, Cary M, et al. The effectiveness, acceptability and cost-effectiveness of psychosocial interventions for maltreated children and adolescents: an evidence synthesis. programme NHTA; 17 Dec 2013 2016. Available from: http://www.crd.york.ac.uk/CRDWeb/ShowRecord.asp?ID=32013000983.	Systematic review
Mackenzie K, Williams C. Universal, school-based interventions to promote mental and emotional well-being: what is being done in the UK and does it work? A systematic review. BMJ open. 2018;8(9):e022560.	Systematic review
May J, Osmond K, Billick S. Juvenile delinquency treatment and prevention: A literature review. Psychiatric Quarterly. 2014;85(3):295-301.	Systematic review

Reference	Reason for exclusion
McCabe C. A systematic review of the cost effectiveness of universal mental health promotion interventions in primary schools. June 2007 2007.	Systematic review
McDaid D, Park AL. Investing in mental health and well-being: findings from the DataPrev project. Health promotion international. 2011;26 Suppl 1:i108-39.	Systematic review
Merry SN. Prevention and early intervention for depression in young people - A practical possibility? Current Opinion in Psychiatry. 2007;20(4):325-29.	Systematic review
Mihalopoulos C, Vos T, Pirkis J, Carter R. The population cost-effectiveness of interventions designed to prevent childhood depression. Pediatrics. 2012;129(3):e723-e30.	Wrong setting
Modi S, Joshi U, Narayanakurup D. To what extent is mindfulness training effective in enhancing self-esteem, self-regulation and psychological well-being of school going early adolescents? Journal of Indian Association for Child and Adolescent Mental Health. 2018;14(4):89-108.	No economic evaluation
Moodie ML, Fisher J. Are youth mentoring programs good value-for-money? An evaluation of the Big Brothers Big Sisters Melbourne Program. BMC public health. 2009;9:41.	Wrong setting
Muratori P, Bertacchi I, Giuli C, Nocentini A, Lochman JE. Implementing Coping Power Adapted as a Universal Prevention Program in Italian Primary Schools: a Randomized Control Trial. Prevention science : the official journal of the Society for Prevention Research. 2017;18(7):754-61.	No economic evaluation
Murray NG, Low BJ, Hollis C, Cross AW, Davis SM. Coordinated school health programs and academic achievement: a systematic review of the literature. The Journal of school health. 2007;77(9):589-600.	Systematic review
O'Connor K, Wozney L, Fitzpatrick E, Bagnell A, McGrath P, Radomski A, et al. An internet-based cognitive behavioral program for adolescents with anxiety: Pilot randomized controlled trial. JMIR Mental Health. 2020;7(7):e13356.	Wrong study design
Organisation for Economic C-o, Development. PISA 2009 at a Glance. 2011:97.	No economic evaluation
Persson M, Wennberg L, Beckman L, Salmivalli C, Svensson M. The Cost-Effectiveness of the Kiva Antibullying Program: Results from a Decision-Analytic Model. Prevention science : the official journal of the Society for Prevention Research. 2018;19(6):728-37.	NA
Philipsson A, Duberg A, Moller M, Hagberg L. Cost-utility analysis of a dance intervention for adolescent girls with internalizing problems. Cost Effectiveness and Resource Allocation. 2013;11(1):4.	Wrong setting
Poitras VJ, Gray CE, Borghese MM, Carson V, Chaput J-P, Janssen I, et al. Systematic review of the relationships between objectively measured physical activity and health indicators in school-aged children and youth. Applied physiology, nutrition, and metabolism = Physiologie appliquee, nutrition et metabolisme. 2016;41(6 Suppl 3):S197-239.	Systematic review
Schmidt M, Werbrouck A, Verhaeghe N, Putman K, Simoens S, Annemans L. Universal Mental Health Interventions for Children and Adolescents: A Systematic Review of Health Economic Evaluations. Applied health economics and health policy. 2020;18(2):155-75.	Systematic review
Shackleton N, Jamal F, Viner RM, Dickson K, Patton G, Bonell C. School-Based Interventions Going beyond Health Education to Promote Adolescent Health: Systematic Review of Reviews. Journal of Adolescent Health. 2016;58(4):382-96.	Systematic review

Reference	Reason for exclusion
Shoemaker EZ, Tully LM, Niendam TA, Peterson BS. The Next Big Thing in Child and Adolescent Psychiatry: Interventions to Prevent and Intervene Early in Psychiatric Illnesses. The Psychiatric clinics of North America. 2015;38(3):475-94.	Systematic review
Simon E, Dirksen C, Bogels S, Bodden D. Cost-effectiveness of child-focused and parent-focused interventions in a child anxiety prevention program. Journal of Anxiety Disorders. 2012;26(2):287-96.	Wrong setting
Simon E, Dirksen CD, Bogels SM. An explorative cost-effectiveness analysis of school-based screening for child anxiety using a decision analytic model. European Child and Adolescent Psychiatry. 2013;22(10):619-30.	Wrong setting
Skre I, Friborg O, Breivik C, Johnsen LI, Arnesen Y, Wang CEA. A school intervention for mental health literacy in adolescents: effects of a non-randomized cluster controlled trial. BMC public health. 2013;13:873.	No economic evaluation
Spence SH, Sawyer MG, Sheffield J, Patton G, Bond L, Graetz B, et al. Does the absence of a supportive family environment influence the outcome of a universal intervention for the prevention of depression? International Journal of Environmental Research and Public Health. 2014;11(5):5113-32.	No economic evaluation
Stallard P, Phillips R, Montgomery AA, Spears M, Anderson R, Taylor J, et al. A cluster randomised controlled trial to determine the clinical effectiveness and cost-effectiveness of classroom-based cognitive-behavioural therapy (CBT) in reducing symptoms of depression in high-risk adolescents. Health Technology Assessment. 2013;17(47)	NA
Stallard P, Skryabina E, Taylor G, Anderson R, Ukoumunne OC, Daniels H, et al. A cluster randomised controlled trial comparing the effectiveness and cost-effectiveness of a school-based cognitive behavioural therapy programme (FRIENDS) in the reduction of anxiety and improvement in mood in children aged 9/10 years. programme NPHR; 18 Nov 2015 2015. Available from: http://www.crd.york.ac.uk/CRDWeb/ShowRecord.asp?ID=32015001174.	NA
Turner AJ, Sutton M, Harrison M, Hennessey A, Humphrey N. Cost-Effectiveness of a School-Based Social and Emotional Learning Intervention: Evidence from a Cluster-Randomised Controlled Trial of the Promoting Alternative Thinking Strategies Curriculum. Applied Health Economics and Health Policy. 2019	NA
Waddell C, Hua JM, Garland OM, Peters RD, McEwan K. Preventing mental disorders in children: a systematic review to inform policy-making. Canadian journal of public health = Revue canadienne de sante publique. 2007;98(3):166-73.	Systematic review
Wei Y, Kutcher S. International school mental health: global approaches, global challenges, and global opportunities. Child and adolescent psychiatric clinics of North America. 2012;21(1):11-vii.	Systematic review
Wellander L, Wells MB, Feldman I. Does Prevention Pay? Costs and Potential Cost-Savings of School Interventions Targeting Children with Mental Health Problems. Journal of Mental Health Policy and Economics. 2016;19(2):91-101.	NA
Wright B, Marshall D, Adamson J, Ainsworth H, Ali S, Allgar V, et al. Social Stories to alleviate challenging behaviour and social difficulties exhibited by children with autism spectrum disorder in mainstream schools: design of a manualised training toolkit and feasibility study for a cluster randomised controlled trial with nested qualitative and cost-effectiveness components. programme NHTA; 11 May 2012 2016. Available from:	Wrong study design

Reference	Reason for exclusion
http://www.crd.york.ac.uk/CRDWeb/ShowRecord.asp?ID=32011001660.	

Appendix K: Research recommendations

K.1 Research recommendation

What is the effectiveness of targeted group or individual interventions for children who have been identified as needing additional mental health support, and does it vary by ethnicity and socioeconomic status?

Why this is important

The committee discussed evidence that showed that targeted individual or group interventions were effective at reducing emotional distress and could prevent a first diagnosis of depression, but there was no evidence to compare the relative effectiveness of group vs. individual interventions. The qualitative evidence showed that some children and young people preferred group-based approaches and others preferred one-to-one interventions, so the committee considered it important to understand which format may be most effective and whether that is linked with ethnicity or socioeconomic status.

Rationale for research recommendation

Importance to 'patients' or the population	Providing effective interventions to children who have been identified as needing additional mental health support is important to help prevent poor social, emotional and mental wellbeing outcomes in this population.
Relevance to NICE guidance	The committee were unable to take an informed view on whether group or individual interventions were more effective and whether ethnicity and socioeconomic status have an impact on effectiveness. More information on this may provide better evidence that can be used to make recommendations in future iterations of this guideline.
Relevance to the NHS	Providing targeted interventions for children and young people who have been identified as needing additional mental health support may reduce the pressure on CAMHS
National priorities	NICE will publish the current guideline on SEMW in primary and secondary education in July 2022
Current evidence base	Some data on the effectiveness of group interventions and individual interventions compared to control, but no data on the relative effectiveness of group vs. individual interventions.
Equality considerations	The effectiveness of group or individual interventions may be impacted by ethnicity or socioeconomic status.

Modified PICO table

Population	Children and young people (including those with SEND) in primary, secondary or further

	education, who have been identified as being at risk of depression, anxiety or stress
Intervention	Small group interventions (including face to face or digital interventions) aimed at reducing symptoms or preventing symptoms in those at risk of depression, anxiety, or stress
Comparator	Individual interventions (including face to face or digital interventions) aimed at reducing symptoms or preventing symptoms in those at risk of depression, anxiety, or stress
Outcome	Social and emotional wellbeing outcomes, including social and emotional skills and attitudes, emotional distress, or behavioural outcomes such as positive social behaviour or conduct problems. Academic outcomes such as academic progress and attainment Secondary outcomes such as school attendance, school exclusions, quality of life and unintended consequences
Study design	Randomised controlled trial or cluster randomised controlled trial
Timeframe	Medium term (6-12 month follow up)
Additional information	None

K.12 Research recommendation

What is the long-term impact of targeted group or individual interventions for children who have been identified as needing additional mental health support?

Why this is important

The committee noted that the evidence reported outcomes between 2.5 and 12 months follow-up for the primary school review and an average follow-up of 3 months for the secondary school review. While they recognised that some short-term findings can be beneficial, particularly to school leaders, the committee were concerned that the follow up time of the studies was too short for some more complex issues such as depression and therefore wanted evidence to demonstrate the longer-term impacts of targeted interventions.

Rationale for research recommendation

Importance to 'patients' or the population	Providing effective interventions to children who have been identified as needing additional mental health support is important to help with their social, emotional and mental wellbeing in the long term.
Relevance to NICE guidance	Improved knowledge of the long-term impact of interventions would enable the committee to better understand which interventions to recommend and may influence subsequent iterations of this guideline.
Relevance to the NHS	Providing targeted interventions for children and young people who have been identified as

	needing additional mental health support may reduce their long-term support needs and could reduce pressure on CAMHS
National priorities	NICE will publish the current guideline on SEMW in primary and secondary education in July 2022
Current evidence base	Limited data on long-term outcomes beyond 12 months
Equality considerations	None known

Modified PICO table

Population	Children and young people (including those with SEND) in primary, secondary or further education, who have been identified as being at risk of depression, anxiety or stress
Intervention	Individual or small group interventions (including face to face or digital interventions) aimed at reducing symptoms or preventing symptoms in those at risk of depression, anxiety, or stress
Comparator	Usual practice
Outcome	Social and emotional wellbeing outcomes, including social and emotional skills and attitudes, emotional distress, or behavioural outcomes such as positive social behaviour or conduct problems. Academic outcomes such as academic progress and attainment Secondary outcomes such as school attendance, school exclusions, quality of life and unintended consequences
Study design	Randomised controlled trial or cluster randomised controlled trial
Timeframe	Long term (12 month to 5 year follow up)
Additional information	None

K.143 Research recommendation

What are the possible harms and unintended consequences of targeted group or individual interventions for children who have been identified as needing additional mental health support?

Why this is important

While no unintended consequences of targeted mental health interventions were identified in the evidence, the committee maintained that care needs to be taken to avoid negative labelling or stigmatising pupils when selecting them for targeted support. The committee were concerned that children who were known to be attending mental health support sessions may become more withdrawn, may be targeted by classmates, or could be at risk of negative experiences due to the association of being identified and referred with bad behaviour, amongst other potential unintended consequences. The committee agreed that more evidence in this area would allow recommendations to be refined in the future

Rationale for research recommendation

Importance to 'patients' or the population	Providing effective interventions to children who have been identified as needing additional mental health support is important to help with their social, emotional and mental wellbeing, and it is important to recognise any potential unintended consequences of these interventions to avoid a worsening of symptoms or other negative impact.
Relevance to NICE guidance	Understanding any potential unintended consequences would provide the committee with a more comprehensive picture of intervention impacts, which could influence future recommendations and subsequent iterations of this guideline.
Relevance to the NHS	Providing targeted interventions for children and young people who have been identified as needing additional mental health support may reduce their support needs and could reduce pressure on CAMHS
National priorities	NICE will publish the current guideline on SEMW in primary and secondary education in July 2022
Current evidence base	No evidence
Equality considerations	None known

Modified SPICE/SPIDER/PerSPEcTIF table

Setting	Primary / secondary schools
Perspective	The views on, and experiences of, unintended consequences from children and young people receiving the interventions, teachers and/or professionals delivering the interventions, and parents and carers of children receiving the interventions.
Intervention	Not applicable
Comparator	Not applicable
Evaluation	Thematic analysis
Study design	Interviews / focus groups
Timeframe	Short-term

K.14 Research recommendation

What are parents' views on targeted group or individual interventions for children who have been identified as needing additional mental health support?

Why this is important

Families and parents or carers can have an influence on their child's social, emotional and mental health behaviours, so the committee considered that it was important that schools engage with parents and carers when considering targeted support. They agreed that further research could clarify what is important to parents and their views on targeted mental health interventions for their children.

1 Rationale for research recommendation

Importance to 'patients' or the population	Providing effective interventions to children who have been identified as needing additional mental health support is important to help with their social, emotional and mental wellbeing. Involving their parents or carers in this process may be important.
Relevance to NICE guidance	Improved knowledge of parents' views and experiences of targeted mental health interventions might highlight which interventions would be most acceptable and how best to deliver them. This information could influence subsequent iterations of this guideline.
Relevance to the NHS	Providing targeted interventions for children and young people who have been identified as needing additional mental health support may reduce their support needs and could reduce pressure on CAMHS
National priorities	NICE will publish the current guideline on SEMW in primary and secondary education in July 2022
Current evidence base	No evidence
Equality considerations	None known

2 Modified SPICE/SPIDER/PerSPEcTIF table

Setting	Primary / secondary schools
Perspective	Parent and carer's views and experiences of targeted interventions for children identified as needing additional mental health support
Intervention	Not applicable
Comparator	Not applicable
Evaluation	Thematic analysis
Study design	Interview study / focus groups
Timeframe	Short-term

3