Case Study 1: An Evidence-Based Practice Review Report

Theme: School Based Interventions for Learning

How effective are school-based group interventions, for children and adolescents affected by trauma, at reducing symptoms of Post-Traumatic Stress Disorder (PTSD)?

Summary

Children and adolescents who have experienced trauma are at risk of a range of negative outcomes, including Post-traumatic Stress Disorder (PTSD) and negative emotional, mental health and social outcomes.

A number of psychological treatments have been developed to help treat PTSD. Recent evidence points to Trauma Focused Cognitive Behavioural Therapies (TFCBT) as most effective in reducing PTSD symptoms in children and adolescents exposed to trauma (Gillies, 2016; Morina, Koerssen, & Pollet, 2016). However, it might not always be feasible to deliver one-to-one therapy. There is a need to establish whether group therapies are a potential alternative. School settings have been shown to be a good place for such interventions (Fazel, Garcia, & Stein, 2016; Rolfsnes & Idsoe, 2011; Tyrer & Fazel, 2014).

The aim of this meta-analysis was to look at the effectiveness of group school-based interventions at reducing PTSD symptoms in children and adolescents who experienced trauma. The current review focused on seven randomised trials. Results showed that intervention had a medium size effect on reducing PTSD symptoms, when compared to a waitlist (SMD = -.42), and very small, statistically non-significant effect on reducing symptoms of depression (SMD = -.11). Not enough follow-up data was provided to conclude long-term effectiveness. The overall quality of reviewed

trials was questioned, with high risk of bias present in all trials. Findings indicated that group school-based interventions could effectively reduce PTSD symptoms in children and adolescents, although further research is needed to consider these findings as conclusive.

Introduction

Post-traumatic stress disorder

Post-traumatic stress disorder (PTSD) is a mental health disorder prevalent in those exposed to a traumatic event. According to the Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM-5; American Psychiatric Association, 2013), symptoms of PTSD include: persistently re-experiencing the traumatic event, avoidance of distressing trauma-related stimuli, negative alterations in cognitions, mood, arousal and reactivity, which persist for more than a month and significantly affect person's functioning. PTSD is found to be comorbid with other psychological difficulties such as depression (Donnelly & Amaya-Jackson, 2002; Perrin, Smith, & Yule, 2000). A recent meta-analysis concluded an overall prevalence of PTSD, in the population of children who have experienced trauma, to be 15% (Alisic et al., 2014). The estimates varied according to gender and the type of trauma experienced. For example, the prevalence of PTSD in girls who experienced interpersonal trauma was 33%.

Description of the intervention

Various psychological group therapies are available for PTSD in children and adolescents (Morina et al., 2016). The interventions implemented in the studies chosen for this review are described in Table 1. All the interventions described share common features, such as psychoeducation, teaching of coping skills and relaxation techniques. Other frequent elements are: graded exposure techniques aimed to desensitise traumatic memories and provide a trauma narrative; cognitive restructuring, which aims to challenge pessimistic beliefs about the world, grief-work, parent training, and relapse prevention. Majority of therapies included in this review

contained a group-related feature such as social support, social problem solving and the building of group cohesion.

The current review focuses on evaluating the efficacy of school-based, group interventions. These may be delivered by psychologist, counsellors and school-based clinicians (Barron, Abdallah, & Heltne, 2016; Jaycox et al., 2009; Langley, Gonzalez, Sugar, Solis, & Jaycox, 2015; Layne et al., 2008; Ooi et al., 2016; Qouta, Palosaari, Diab, & Punamaki, 2012; Stein et al., 2003), or by trained teachers (Jaycox et al., 2009).

How the intervention might work

A useful summary of how trauma-specific interventions might generally work for children and adolescents is provided in a recent review of the topic (Gillies et al., 2016).

There is a unique potential in group psychotherapy; it has been proposed that group processes such as cohesion, member interaction and social comparison may act as unique agents of therapeutic change (Adams, 2007). The group modality might be particularly appropriate in adolescence, due to the increased receptiveness of teenagers to their peer group, which may be harnessed for therapeutic benefits (Akos, Hamm, Mack, & Dunaway, 2007). Early adolescents may gain a sense of acceptance and belonging, which might serve to validate their self-worth and aid modelling of adaptive behaviour as well as provide opportunities to practice social skills in a safe environment (Hamm & Faircloth, 2005b). Modelling and practice of social skills in a group setting may also benefit to younger children.

Table 1

The therapeutic features incorporated in the interventions included in this review

Therapeutic feature	Aims	Interventions included in this review				
		TRT	CBITS	BB	TCGT	SSET
Psychoeducation	• Rationale for treatment • Normalising effect	✓	✓	✓	✓	✓
Coping skills training (cognitive)	• Managing anxiety associated with flashbacks and trauma-related cues • May involve cognitive-reappraisal of anxiety-evoking situations	✓	✓	✓	✓	✓
Cognitive restructuring	• Challenging catastrophic and pessimistic beliefs about the world, the future, the self and others	x	✓	✓	?	✓
Relaxation skills (affective)	• Managing anxiety associated with flashbacks and trauma-related cues • Addressing hyperarousal	✓	✓	✓	✓	✓
Graded exposure (recalling traumatic memories)	• Habituation • Developing a trauma narrative • Processing traumatic experiences	x	✓	✓	✓	✓
Grief work (processing bereavement)	• Movement through processes of shock, denial, emotional turmoil, acceptance and resolution	x	x	x	✓	x
Group-related (use of social connections)	• Social support/ strengthening social connection • Social problem solving • Building group cohesion	x	✓	✓	✓	✓
Parent training	• Helping parents provide appropriate support during the programme • Learning how to manage their children's trauma-related behavioural problems	x	?	✓	x	x
Relapse prevention (plan for future)	• Learning to anticipate trigger situations and planning strategies for the future • Drafting a relapse management plan	x	✓	✓	✓	?

Note. ✓= feature present in the therapy; x = feature absent; ? = it is unclear whether the feature is present or absent; TRT = Teaching Recovery Techniques; CBITS = Cognitive-Behavioural Intervention for Trauma in Schools; BB = Bounce Back; TCGT = Trauma and Grief Component Therapy; SSET = Support for Students Exposed to Trauma

Rationale and relevance to Educational Psychology

Schools may be the ideal settings to provide interventions for vulnerable children. In many countries education is compulsory for children thus as an institution it can screen, monitor and support most children (Fazel, Doll, & Stein, 2009). For groups such as refugees, schools may be the only link to broader community (Fazel, & Stein, 2002). Arguably, schools provide a less threatening, non-stigmatising and overall more convenient environment, which might increase the likelihood of parents providing consent for the intervention and fewer children dropping out. Indeed, one study demonstrated that a school setting led to considerably higher number of children completing treatment (91%) as opposed to a clinical setting (15%) (Jaycox et al., 2010).

Educational Psychologists in the UK are well placed to provide such therapeutic support to schools and many already do as part of statutory work when responding to critical incidents in schools. With the recently increased focus on children's mental health in the UK (DoH, 2011) and the rising commitment to therapy within the Educational Psychology profession (MacKay, 2007), the need to establish an evidence base on which future work may be based is highly important. Under financial stress, schools may be favourable to providing group as opposed to one-to-one interventions; however, the effectiveness of such interventions needs establishing.

Recently published reviews of psychological interventions for children and adolescents affected by trauma and PTSD (Gillies et al., 2016; Morina et al., 2016; Rolfsnes & Idsoe, 2011; Sullivan & Simonson, 2016; Tyrer & Fazel, 2014) have

reviewed the efficacy of a variety of treatments on the symptoms of PTSD and comorbid difficulties including depression. Two have focused on the refugee population only (Sullivan & Simonson, 2016; Tyrer & Fazel, 2014) and two have not included the school-based context as an inclusion criteria (Gillies et al., 2016; Morina et al., 2016). Rolfsnes and Idsoe (2011) did not separately analyse group-based interventions in their meta-analysis. In addition, three randomised studies have not been included in any of the abovementioned reviews (Barron et al., 2016; Langley et al., 2015; Ooi et al., 2016).

The goal of the present study is to provide a quantitative, meta-analytic review of school-based group interventions for children and adolescents aimed to reduce the symptoms of PTSD as assessed by diagnostic scales (e.g. Children's PTSD Inventory) (Saigh, 2000). Further, secondary analysis will be provided for the effect of those interventions on reducing comorbid symptoms of depression as assessed by diagnostic scales (e.g. Children's Depression Inventory) (Kovacs, 1992).

Primary research question

How effective are school-based, group interventions, for children and adolescents affected by trauma, at reducing symptoms of Post-Traumatic Stress Disorder (PTSD)?

Secondary research question

How effective are school-based, group interventions, for children and adolescents affected by trauma, at reducing symptoms of depression?

Critical Review of the Evidence Base

Methods

Inclusion and exclusion criteria.

See Table 2 for breakdown of inclusion and exclusion criteria with presented rationale.

Types of studies.

All relevant randomised and quasi-randomised controlled trials including cluster-randomised trials. Only studies from peer-reviewed journals were included.

Types of participants.

Participants had to be school aged (5-18) children or adolescents, who had been exposed to a traumatic event and may or may not have had a PTSD diagnosis. Studies, which did not screen participants based on, either exposure to trauma, or PTSD diagnosis were excluded.

Setting.

Interventions had to take place in school settings, which differentiated this review from recently published reviews on the effectiveness of psychological therapies for children and adolescents (Gillies et al., 2016; Morina et al., 2016).

Types of intervention.

Therapies had to be delivered in a group format primarily, although studies were not excluded if one to three individual sessions were provided as part of the therapy. Children and adolescents had to be the primary recipients of the therapy but support

could also be targeted at parents. The therapy could not be part of a multi-layered approach. The comparator interventions had to be one of the below:

- Treatment as usual, waiting list or no treatment
- Another psychological therapy
- Pharmacological therapy

Outcome measures.

Primary outcomes.

Symptoms of PTSD measured on scales based on diagnostic criteria with published reliability and validity were used used as primary outcomes.

Secondary outcomes.

Reports of secondary outcomes were not required for inclusion in this review. When available, the following outcomes were collated:

- Severity or incidence of depressive symptoms

Table 2

Inclusion and exclusion criteria for literature search with rationale

Criterion category	No	Inclusion criteria	Exclusion criteria	Rationale
Peer review	**1**	Study is published in a peer reviewed journal	Study is not in a peer reviewed journal	Studies in a peer reviewed journal have withheld a level of scrutiny and therefore are more likely to be of higher quality
Language	**2**	Study is published in English	Study is not published in English	The author of the review is unable to access translation arrangements due to limited sources and time constraints
Research design	**3**	Randomised and quasi-randomised controlled trials	Studies do not employ randomised design	Studies that employ a randomised design assess the effectiveness of interventions more objectively
Participants	**4**	Children or adolescents aged 5 to 18 years	Children younger than 5 and older than 18	Direct link to review question: the focus of this review is on school-based interventions, thus school-age is necessary
Experimental intervention	**5**	Psychological interventions or therapies aimed at reducing PTSD symptoms	Primary intervention is not a psychotherapy (e.g. pharmacological) or therapy is not aimed at PTSD	Direct link to review question: the focus of the review is on psychological interventions for PTSD
	6	Group therapy	One-to-one therapy	The focus of the review is on group therapy
	7	Intervention must be delivered in school	Intervention delivered outside of school premises	The focus of the review is on school-based interventions therefore, findings from another setting could not be generalised
	8	Must include a quantifiable PTSD outcome measure	No quantifiable PTSD outcome measure provided	The focus of the interventions is on the reduction of PTSD symptoms and therefore this is how the effectiveness of a given intervention will be assessed
	9	Not part of a multi-layer programme	Intervention is part of multi-layered programme	To avoid confounding effects and therefore allow for fair comparison between interventions
	10	Original data, sample sizes reported (or enough study design details provided for quality assessment)	Description of study is not provided	Enough information provided to allow for assessment of study quality and relevance in order to answer the review question
	11	Participants must be screened for trauma or PTSD symptoms	Participants not screened for either trauma or PTSD	Inclusion of participants who have not experienced trauma might bias the outcomes of the intervention

Control group	**12**	The control group intervention must be an alternative intervention or a waiting list control group	The control intervention cannot be a different version of the intervention (e.g. same intervention +/- one component)	The aim of the review is to compare different group interventions and not individual components of therapies

Search methods for identification of studies.

A comprehensive search of online databases was carried out (21-January-2017). The databases searched were Web of Science, PsycINFO and ERIC, using the following terms in title, abstract and keyword search.

- School-based intervention = (school* or classroom or teach*) adj6 (intervention* or support)
- Group modality = (group* or psychotherapy or therapy)
- Trauma focused = (traum* or PTSD or "post-traumatic stress disorder" or "posttraumatic stress disorder")

Data collection and analysis.

The results of database searches were searched for duplicates, and if found, removed. The review author screened the titles of the reviews and removed those that clearly were not relevant to the review. The remaining studies were screened firstly by abstract, if doubts regarding meeting the inclusion criteria were remaining at this point, the studies were selected for full-text review.

Table 4
Overview of studies included in the review

Publication	Number of participants in analyses	Country (city)	PTSD outcome measure	Secondary outcomes reported	Follow-up in months	Type of treatment (Delivered by), Number of sessions (time per session) Group size	Age in years: range (mean)	Study design (control group)	PTSD diagnosis at pre-treatment (%)	Type of trauma
Ooi, Rooney, Roberts, Kane, Wright, Chatzisarantis (2016)	82	Australia	CRIES- 13 UCLA - screening	Depression (DSRS) SDQ	3 (no follow up for control group)	**Teaching Recovery Techniques** (psychologists) 8 sessions (1 hour) 4-5 students per group	10 - 17	Cluster Randomised Trial (waiting list)	(**UCLA 4-38**) Mild to moderate level of PTSD Exclude clinical PTSD (UCLA > 38)	Mass conflict
Barron, Abdallah & Heltne (2015)	139	Palestine	CRIES- 13 EWSQ (exposure)	Depression (DSRS)	N/A	**Teaching Recovery Techniques** (counsellors in pairs), 5 sessions (2 hours – inferred from manual) 10 students per group	11-15 (13.5)	Randomised Control Trial (waiting list)	**CRIES-13 >17** =inclusion criteria	Mass conflict
Langley, Gonzalez & Sugar (2015)	74	USA (Los Angeles)	UCLA PTSD Reaction Index	Depression (CDI) Anxiety (SCARED-C) SDQ	6	**Bounce Back** (school-based clinicians) 10 group sessions (50-60 min) 2-3 individual sessions (30-50 min) 4-6 children per group	(7.65)	Randomised Block Design (waiting list)	(**UCLA > 20)** Inclusion: clinically sig. PTSD moderate or higher	Multiple (Excluded sexual abuse)
Qouta et al., (2012)	482	Palestine	CRIES-13	Depression (DSRS) SDQ	6	**Teaching Recovery Techniques** (psychologists) 8 sessions (2 hours) 15 children per group	10-13 (11.29)	Cluster Randomised Trial (waiting list)	Clinically sig. PTSD (CRIES >20): 64% interv, and 43% control;	Mass conflict

Publication	Number of participants in analyses	Country (city)	PTSD outcome measure	Secondary outcomes reported	Follow-up in months	Type of treatment (Delivered by), Number of sessions (time per session) Group size	Age in years: range (mean)	Study design (control group)	PTSD diagnosis at pre-treatment (%)	Type of trauma
Jaycox, Langley, Stein et al. (2009)	76	USA (Los Angeles)	CPSS	Depression (CDI) SDQ	Not specified (control group received treatment before follow-up)	**Support for Students Exposed to Trauma** (teachers or counsellors) 10 sessions (about 45min)	6th and 7th grade (11.5)	Randomised Block Design (waiting list)	**CPSS >11** Inclusion criteria: PTSD moderate symptoms	Multiple
Layne et al., 2008	159	Bosnia	UCLA	Depression (DSRS)	4 (attrition greater than 40%)	**Trauma and Grief Component Therapy** (school counsellors) 17 to 20 sessions (60 to 90 min) 6-10 students per group	13 - 18 (15.9)	Randomised Control Trial (active control-alternative intervention)	Severe symptoms of PTSD + sig. trauma exposure (exact criteria not reported)	Mass conflict
Stein, Jaycox et al., (2003)	126	USA (Los Angeles)	CPSS	Depression (CDI)	6 (control group received treatment before follow-up)	**Cognitive-Behavioural Group Intervention for Trauma in Schools** (psychiatric social workers) 10 sessions (class period – about 45min) 5-8 students per group	6th grade (11.)	Randomised Control Trial (waiting list)	**CPSS > 14** Clinical range of PTSD	Multiple

Note. CRIES = Children's Revised Impact of Events Scale; UCLA = UCLA Posttraumatic Stress Disorder Reaction Index; CPSS = Child PTSD Symptom Scale; DSRS = Depression Self-Rating Scale for children, CDI = Children's Depression Inventory; SCARED = Screen for Child Anxiety related Disorders, SDQ = Strengths and Difficulties Questionnaire

Assessment of evidence quality.

Weight of evidence.

Gough's (2007) Weight of Evidence (WoE) Framework was used to critically analyse the studies selected for this review. The framework consists of three assessment stages:

1. Methodological quality (WoE A)
2. Methodological relevance to the review question (WoE B)
3. Relevance to the review topic (WoE C)

WoE A was determined using Kratochwill (2003) criteria and coding protocol for group-based designs, which was adapted to fit the purpose for this review (see the Appendices for an example of a completed protocol, justification of amendments to the protocol, and summary of WoE A).

WoE B was determined using the Cochrane Collaboration tool for assessing risk of bias in randomised trials (Higgins et al., 2011). Figure 2 summarises WoE B (see Appendix E for details of how ratings were assigned).

WoE C was determined using relevance criteria designed by the author (see Appendix F for details of ratings and how they were assigned)

A summary rating- WoE D was calculated as an average of WoE A, B and C. See Table 3 for summary of WoE ratings.

Data synthesis

Data was collected and analysed for both immediate and for follow-up primary outcomes. One study reported and analysed their data for boys and girls separately (Qouta et al., 2012). This study has been split here into Qouta et al. (2012a) (girls data)

and Qouta et al. (2012b) (boys data) and used separately in the meta-analysis. When standard deviations were reported only at baseline (Stein et al., 2003), the same standard deviations were used for pre and post intervention in the meta-analysis.

Data for secondary outcomes (depression symptoms) was collected and analysed as above.

Table 3

Summary of Weight of Evidence Ratings (Based on Gough, 2007)

Study	Methodological quality (WoE A)	Methodological relevance (WoE B)	Study topic relevance (WoE C)	Overall Weight of Evidence (WoE D)
Barron, Abdallah, & Heltne, 2016	Medium (1.75)	Low (1)	Medium (2)	**Medium** (1.6)
Ooi et al., 2016	Medium (1.5)	Low (1)	Medium (1.6)	**Low** (1.4)
Langley, Gonzalez, Sugar, Solis, & Jaycox, 2015	Medium (2.25)	Low (1)	Medium (2.3)	**Medium** (1.9)
Qouta, Palosaari, Diab, & Punamaki, 2012	Medium (1.75)	Low (1)	High (2.7)	**Medium** (1.8)
Jaycox et al., 2009	Medium (2)	Low (1)	Medium (2.3)	**Medium** (1.8)
Layne et al., 2008	Medium (1.75)	Low (1)	Medium (2.3)	**Medium** (1.7)
Stein et al., 2003	Medium (2.25)	Low (1)	High (3)	**Medium** (2.1)

Results

Description of studies.

Results of the search.

The initial database search yielded 618 studies, of which 116 were removed as duplicates (see Figure 1 for Search flow diagram). 40 articles were identified for a full-text review, seven studies were finally included (see Table 4 for Characteristics of included studies) and 33 were excluded (see Appendix B for a list with rationale for exclusion). See Table 4 for Characteristics of included studies.

Settings.

Three of the included studies were conducted in the United States (Jaycox et al., 2009; Langley et al., 2015; Stein et al., 2003); two were carried out in Palestine (Barron et al., 2016; Qouta et al., 2012); one in Australia (Ooi et al., 2016); and one in Bosnia (Layne et al., 2008).

Participants.

A total of 1141 participants were included in the meta-analysis. The age of participants ranged from five (Langley et al., 2015) to 18 years (Layne et al., 2008). Although, Langley et al. (2015) was the only study that included children below the age of 10. Therefore, the conclusions of this report can be more appropriately generalised to the adolescent population. Participants were screened for treatment on the basis of PTSD symptoms resulting from various traumatic experiences, most common being mass conflict (Barron et al., 2016; Layne et al., 2008; Ooi et al., 2016; Qouta et al., 2012). The other studies targeted multiple trauma (Jaycox et al., 2009; Langley et al., 2015; Stein et

al., 2003). However, Langley et al. (2015) excluded children who reported sexual abuse as primary trauma, referring those children forward for individual treatment through the school. In all trials, it was unclear whether traumatic events were ongoing at the time of the study. This is a limitation for all included studies. The efficacy of interventions immediately after therapy and at follow-up could depend on whether the children or adolescents were re-experiencing traumatic events; however, such information was not reported.

Screening procedures and reported baseline symptoms.

For the present review, only studies which screened participants for exposure to traumatic events or PTSD symptoms were included. Five studies included participants only if they scored in the clinical range (moderate or higher) for PTSD symptoms. To be included, participants had to score at least 17 on Children's Revised Impact of Events Scale (CRIES) in Barron et al. (2016), and 20 in Qouta et al. (2012). Participants needed to score at least 20 on the UCLA Posttraumatic Stress Disorder Reaction Index (RI) in Langley et al. 2015, at least 14 on the Child PTSD Symptom Scale (CPSS) in Stein et al. (2003), and at least 11 in Jaycox et al. (2009) on the same scale. Layne et al. (2008), reported for participants to require severe symptoms of PTSD on the RI, however did not specify what exact score was needed. One study excluded participants with clinical level of PTSD (Ooi et al., 2016), only including participants with scores between 4 to 38 on the RI, which might have introduced bias into the sample because the current review is interested in therapy effect on already existing PTSD as opposed to preventative intervention. This potential bias is reflected in WoE C. Finally, Qouta et al. (2012) considered a score of at least 20 on the CRIES to be in the clinical range.

However, despite randomisation the intervention group had 64% participants in the clinical range, in contrast with 43% of participants in the clinical range in the waiting list control group. This potential bias is also reflected in WoE C.

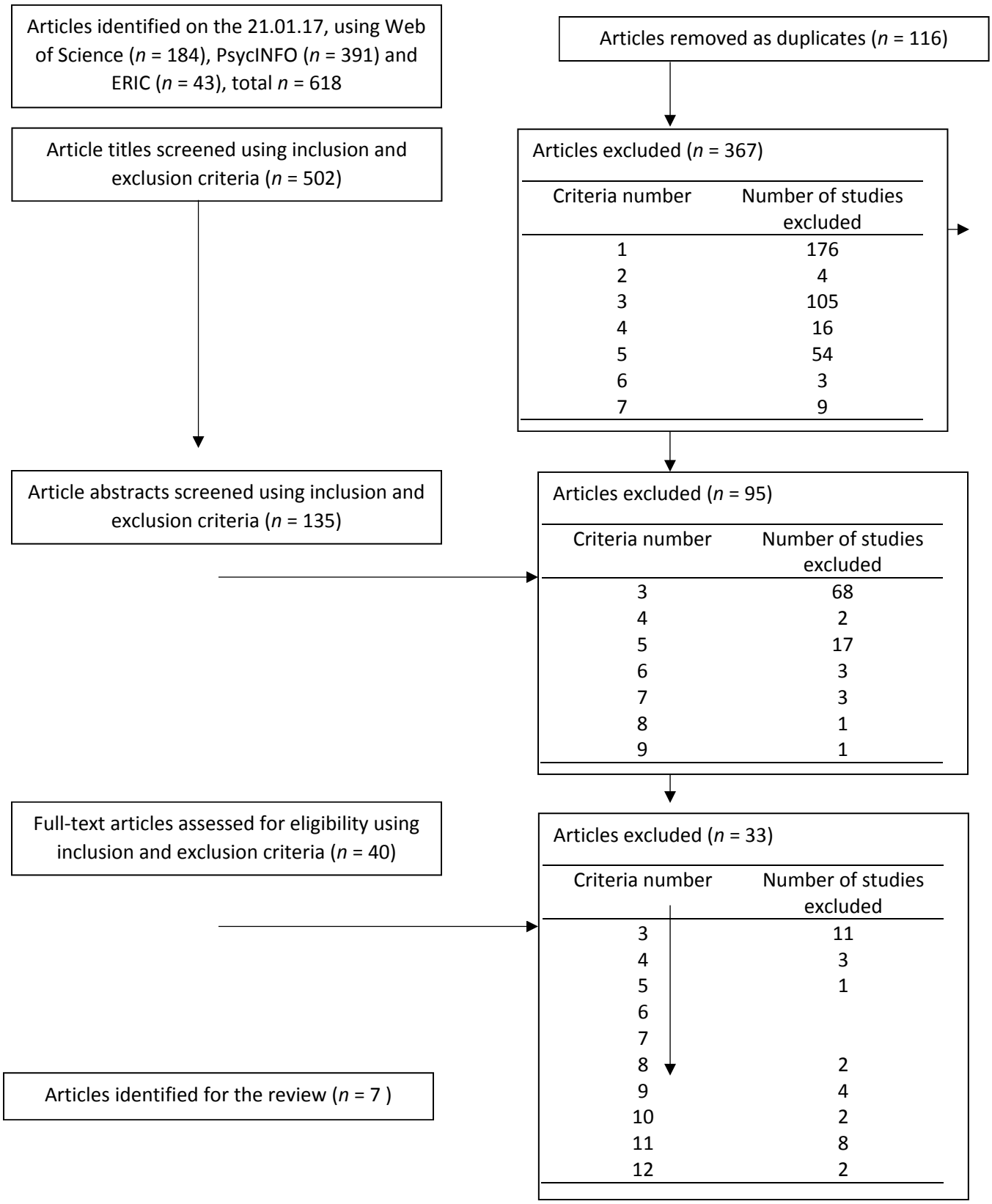
Articles identified on the 21.01.17, using Web of Science (n = 184), PsycINFO (n = 391) and ERIC (n = 43), total n = 618
Articles removed as duplicates (n = 116)
Article titles screened using inclusion and exclusion criteria (n = 502)
Articles excluded (n = 367)
Criteria number
Number of studies excluded
1 176
2 4
3 105
4 16
5 54
6 3
7 9
Article abstracts screened using inclusion and exclusion criteria (n = 135)
Articles excluded (n = 95)
Criteria number
Number of studies excluded
3 68
4 2
5 17
6 3
7 3
8 1
9 1
Full-text articles assessed for eligibility using inclusion and exclusion criteria (n = 40)
Articles excluded (n = 33)
Criteria number
Number of studies excluded
3 11
4 3
5 1
6
7
8 2
9 4
10 2
11 8
12 2
Articles identified for the review (n = 7)

Figure 1. Study selection process

Interventions.

Most included trials compared group psychological therapy to waiting list controls. Only one study used an active group control (Layne et al., 2008), which provided tier one, classroom skills-based psychoeducation. Lack of an active control group is an issue because conclusions may not be drawn about the effectiveness of an intervention relative to another intervention, only relative to no intervention at all. Therefore, studies without an active control group received lower ratings in WoE A.

The current review focused on group interventions, however one study also offered two to three individual sessions on top of ten group sessions (Langley et al., 2015). This meant the positive results could not be purely attributed to the group modality in this case, and therefore this study was less relevant to the review question, as reflected in WoE C.

All the interventions in the included trials were delivered by psychologists (Ooi et al., 2016; Qouta et al., 2012) or by counsellors and psychiatric social workers (Barron et al., 2016; Jaycox et al., 2009; Langley et al., 2015; Layne et al., 2008; Stein et al., 2003). Although, some of the groups were run by a trained teacher in Jaycox et al. (2009). The number of therapeutic sessions ranged from five (Barron et al., 2016) to 20 (Layne et al., 2008), each session lasting between 40 minutes up to two hours, with between four to 15 children per group.

Design.

All included studies employed randomised designs (see Table 2 for inclusion and exclusion criteria). Studies varied very slightly in the methodological rigour, as reflected by all overall WoE A ratings describing 'Medium' quality (see Appendix D for details). Follow-up data was considered highly relevant to the current review question as it allows the evaluation of long-term effectiveness of an intervention, this was reflected in both WoE A and C ratings. All studies but one (Barron et al., 2016) provided at least some follow-up data. In three studies, although follow-up data was provided, by the time it was collected the waiting list control group had already received the intervention (Jaycox et al., 2009; Ooi et al., 2016; Stein et al., 2003), making the data difficult to compare. Layne et al. (2008) provided four month follow-up data for both groups, however more than half the participants were lost to attrition at that point. Although, post-hoc analysis suggested that attrition rates were not systematically related to the experimental condition, rather students with higher baseline PTSD symptom scores were more likely to complete the follow-up stage. Due to the lack of high quality follow-up data from most studies, follow-up data was not used in current the meta-analysis.

Risk of bias in included studies (WoE B).

The Cochrane Collaboration tool for assessing risk of bias in randomised trials (Higgins et al., 2011) was used. See Figure 2 for a graphical representation of the judgements made regarding all risk of bias items for each included study. For more details about how these judgements were made see Appendix B.

Overall, the lowest risk of bias for all included studies was from incomplete data and selective reporting. Attrition was only considered as posing high risk in one study (Layne et al., 2008), where 21% of participants were lost and no 'intent to treat' analysis was

carried out to compensate for this loss. The risk was unclear in one study (Ooi et al., 2016), where attrition was 16% and it was unclear whether this was accounted for in the data analysis.

The highest risk of bias came from the lack of blinding of participants and personnel and lack of blinding of outcome assessment. None of the included studies were able to control for these biases, therefore participants were likely to be aware whether they were assigned to an intervention or a control group.

The risks of bias from random sequence generation and allocation concealment were mixed, with three studies presenting low risk (Langley et al., 2015; Ooi et al., 2016; Stein et al., 2003) due to the use of random number generators and blinded statisticians.

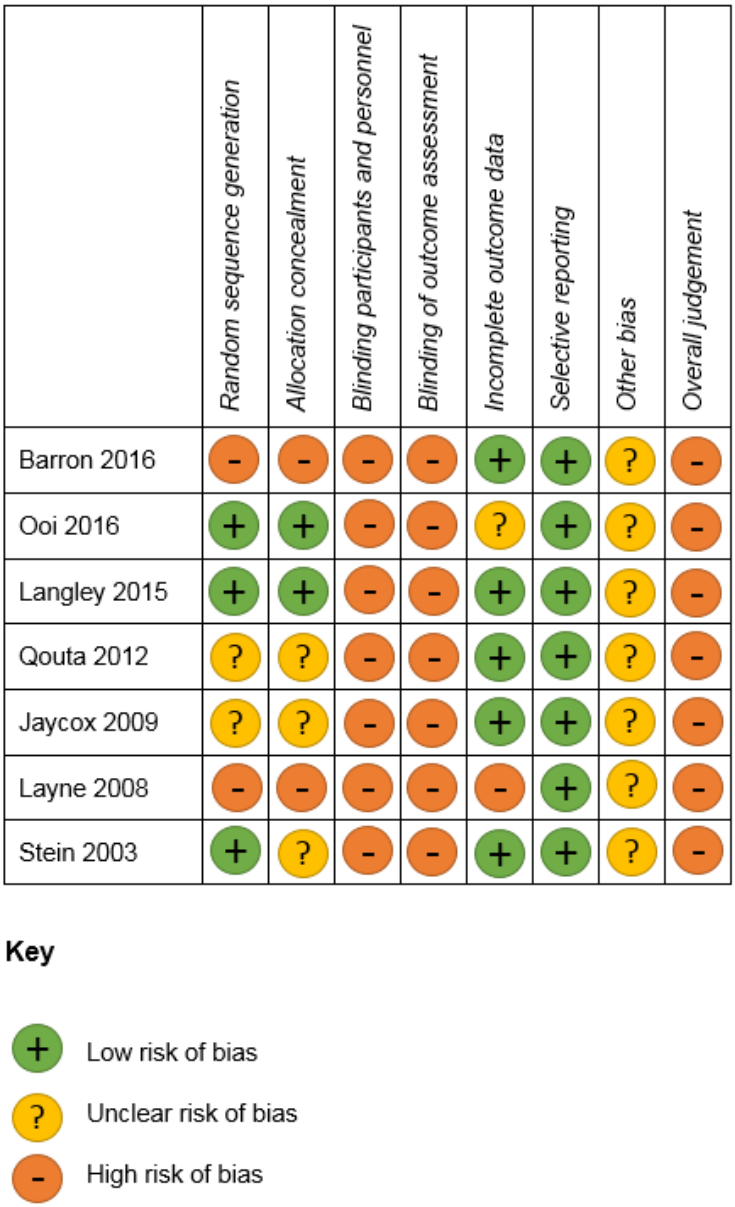

Figure 2. Risk of bias summary: review author's judgements regarding bias items for all included studies.

Outcomes.

A total of seven studies examined the efficacy of group school-based interventions as compared to control group at post-treatment. Qouta et al. (2012) reported their data separately for boys and for girls due to significant baseline differences between those two groups. For this reason, in this meta-analysis the data from Qouta et al. (2012) was

treated as two separate studies: Qouta et al. (2012a) (girls' data) and Qouta et al. (2012b) (boys' data). Effect sizes (ESs) were computed using the standardised mean difference (SMD) because studies included in this review used a variety of measures to assess the same outcome. SMD is computed by dividing the difference in mean outcome between groups by the standard deviation (SD) of outcome among participants. The post-intervention means and SDs were used. One study, only provided SDs at baseline (Stein et al., 2003), in which case these baseline SD scores were used to compute the post intervention effect size in the meta-analysis.

The meta-analysis was conducted using a random effects model in the 'metafor' package (Viechtbauer, 2010) using the R statistical software (2016). The ESs were automatically adjusted for potential bias resulting from small sample sizes, by multiplying ESs with a correction factor c(*m*), where *m* represents the degrees of freedom (Hedges, 1981).

$$c(m) = 1 - \frac{3}{4m - 1}$$

The mean ES was medium (SMD = -.42) for PTSD symptoms, and very small, not statistically significant effect (SMD = -.11) for depression symptoms (see figures 3 and 4 for forest plots of ESs). The findings presented should be caveated by the overall Medium quality ratings for WoE D (see Table 3).

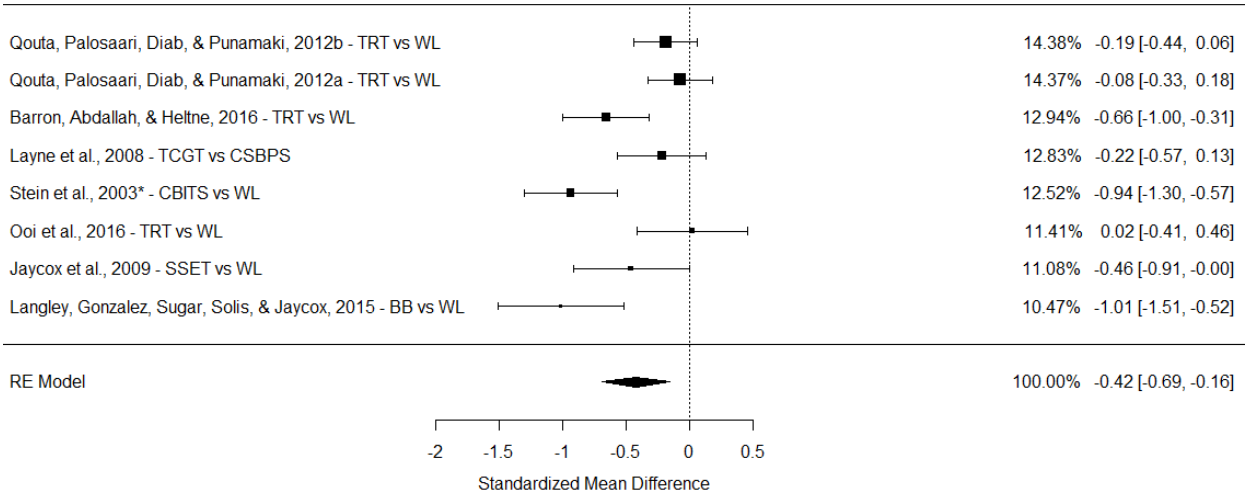

Figure 3. Forest plot of effect sizes comparing experimental condition to control conditions at post-treatment for PTSD outcomes.

Note: WL = waiting list; TRT = Teaching Recovery Techniques; CBITS = Cognitive-Behavioural Intervention for Trauma in Schools; BB = Bounce Back; TCGT = Trauma and Grief Component Therapy; SSET = Support for Students Exposed to Trauma; Qouta, Palosaari, Diab, & Punamaki, 2012a = female sample; Qouta, Palosaari, Diab, & Punamaki, 2012b = male sample

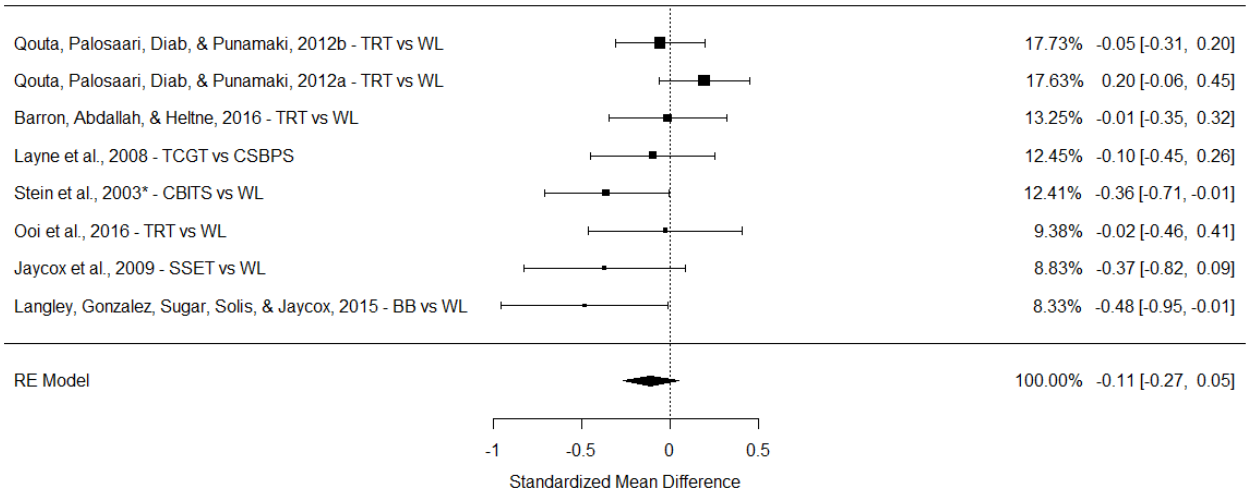

Figure 4**.** *Forest plot of effect sizes comparing experimental condition to control conditions at post-treatment for depression outcomes.*

Note: WL = waiting list; TRT = Teaching Recovery Techniques; CBITS = Cognitive-Behavioural Intervention for Trauma in Schools; BB = Bounce Back; TCGT = Trauma and Grief Component Therapy; SSET = Support for Students Exposed to Trauma; Qouta, Palosaari, Diab, & Punamaki, 2012a = female sample; Qouta, Palosaari, Diab, & Punamaki, 2012b = male sample

Conclusion and Recommendations

The current review set out to assess the efficacy of group school-based interventions for children and adolescents with symptoms of PTSD. The systematic literature search had identified seven studies, which had met the inclusion criteria. The average effect size was medium (SMD = -.42) with a range of .02 to -1.01. The results of the meta-analysis suggest that school-based group interventions can be effective at lowering PTSD symptoms, compared to waiting list control conditions. However, the efficacy to lower depression symptoms was small and not statistically significant (SMD = -.11).

The quality and relevance of evidence were assessed using Gough's (2007) framework. All studies included in this review were assigned an overall rating of medium, apart from one (Ooi et al., 2016), which was rated as low. As part of the Gough's framework, the Cochrane Collaboration tool for assessing risk of bias in randomised trials was used (Higgins et al., 2011). All studies were rated as being at high risk of bias. In all studies, the participants were most likely aware they were in the experimental group. Only one study included an active as opposed to waiting list control group (Layne et al., 2008), which posed further difficulties to formulating a definitive conclusion. In addition, the longevity of effectiveness could not be assessed due to the lack of follow-up data in most studies.

Findings of this review may be contrasted with findings of a recent meta-analysis, which found a large effect size (g = .83), when comparing experimental conditions to waitlist controls (Morina et al., 2016). Although, the studies analysed by Morina et al. 2016 included both 1:1 and group interventions. In contrast with the current meta-analysis, they found a small effect size (g = .23) when comparing Classroom Based Interventions

(CBI) to waitlist controls. Morina et al. (2016), have noted a large heterogeneity between interventions, with effect sizes at post-treatment ranging from -.05 to 2.71 when comparted to waitlist. They concluded the most likely explanatory factor for the wide range in effect sizes was the format of the intervention (group as opposed to one-to-one). This conclusion is only partially supported by the current meta-analysis, because although the range of effect sizes reported here is smaller than that reported by Morina et al. (2016), it is still a relatively large range (.02 to -1.01), despite only including group-based interventions.

Four of the reviewed studies included participants affected by mass conflict and the other three included participants presenting multiple types of trauma. The study (Langley et al., 2015), which had excluded participants who had been sexually abused, had the highest effect size (SMD = -1.01). In addition, Langley et al. (2015) also differed in the age of participants included in their study, as it was the only study, which focused on participants younger than 10 years old. As pointed out by Morina et al. (2016), the nature and longevity of trauma may influence the efficacy of interventions. By the nature of mass conflict, those exposed to war would have experienced prolonged, multiple types of trauma, including sexual assault. This might in part explain the gender differences found in one of the included studies (Qouta et al., 2012), whereby the intervention reduced the proportion of clinically significant posttraumatic stress symptoms only among boys. Rape is often used as a weapon of war, and violence against women during mass conflict is frequently reported. This is a factor, which has not been focused on in the reviewed literature, and might explain some of the existing gender differences in the response to treatment.

Implications for research

More evidence is needed to evaluate the effectiveness of group school-based interventions for PTSD in children and adolescents. Future studies should aim to reduce bias by double-blinding participants and families and use active control groups. In addition, follow-up data needs to be collected both short and long-term to be able to evaluate the longevity of the intervention effect. Potential causes for possible gender and age differences in the response to group intervention could be investigated. Finally, the overall lack of high quality randomised trials in the topic area (only seven could be located) means comparisons are difficult to make, due to the lack of statistical power. Given more studies, one could investigate whether group-based therapies are more effective when they include social components and capitalise on the 'group' modality, as opposed to interventions, which include the same components as one-to-one therapies.

Implications for practice

Although, some evidence was found for the effectiveness of group school-based interventions in reducing PTSD symptoms in children and adolescents, the overall medium to low quality of research does not allow for conclusive recommendations. The effectiveness of this modality has been shown to be lower than individual therapy, when compared with results from recent meta-analysis (Morina et al., 2016). However, it is possible that at times when 1:1 intervention is not available, group interventions will need to be considered, in which case there is evidence to show the potential short-term effectiveness of a medium magnitude. In such case, the type of trauma might be of relevance, whereby victims of sexual assault may be less likely to benefit from group-support, although more evidence is needed to fully support such a claim.

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Appendix A: Studies Included in this Review

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Appendix B: Studies Excluded from this Review

Reason for Exclusion	Excluded study
Exclusion criteria 3: Studies did not employ a randomised design	Brown, E. J., Mcquaid, J., Ali, R., Winnick-gelles, A., & Harbor, G. (2006). Matching Interventions to Children's Mental Health Needs: Feasibility and Acceptability of a Pilot School-Based Trauma Intervention Program. *Education and Treatment of Children, 29*(2), 257-286. Chilcote, R. L. (2007). Art Therapy with Child Tsunami Survivors in Sri Lanka. *Art Therapy*, *24*(4), 156–162. http://doi.org/10.1080/07421656.2007.10129475 Ehntholt, K. A., Smith, P. A., & Yule, W. (2005). School-based cognitive-behavioural therapy group intervention for refugee children who have experienced war-related trauma. *Clinical Child Psychology and Psychiatry*, *10*(2), 235-250 Goenjian, A. K., Walling, D., Steinberg, A. M., Karayan, I., Najarian, L. M., & Pynoos, R. (2005). A prospective study of posttraumatic stress and depressive reactions among treated and untreated adolescents 5 years after a catastrophic disaster. *American Journal of Psychiatry*, *162*(12), 2302–2308. http://doi.org/10.1176/appi.ajp.162.12.2302 Goodkind, J. R., Lanoue, M. D., & Milford, J. (2010). Adaptation and implementation of cognitive behavioral intervention for trauma in schools with American Indian youth. *Journal of Clinical Child and Adolescent Psychology*, *39*(6), 858–72. http://doi.org/10.1080/15374416.2010.517166 Hasanovic, M., Srabovic, S., Rasidovic, M., Sehovic, M., Hasanbasic, E., Husanovic, J., & Hodzic, R. (2009). Psychosocial assistance to students with posttraumatic stress disorder in primary and secondary schools in post-war Bosnia Herzegovina. *Psychiatr Danub*, *21*(4), 463–473. Jaycox, L. H., Cohen, J. A., Mannarino, A. P., Walker, D. W., Langley, A. K., Gegenheimer, K. L., … Schonlau, M. (2010). Children's Mental Health Care Following Hurricane Katrina: A Field Trial of Trauma-Focused Psychotherapies. *Journal of Traumatic Stress*, *23*(2), 223–231. http://doi.org/10.1002/jts.20518 Karam, E. G., Fayyad, J., Nasser Karam, A., Cordahi Tabet, C., Melhem, N., Mneimneh, Z., & Dimassi, H. (2008). Effectiveness and specificity of a classroom-based group intervention in children and adolescents exposed to war in Lebanon. *World Psychiatry, 7*(2), 103–109. http://doi.org/10.1002/j.2051-5545.2008.tb00170.x Layne, C. M., Saltzman, W. R., Savjak, N., Popovic, T., Mušić, M., Djapo, N., … Houston, R. (2001). Trauma/Grief-Focused Group Psychotherapy: School-Based Postwar Intervention With Traumatized Bosnian Adolescents. *Group Dynamics: Theory, Research and Practice*, *5*(4), 277–290. Morsette, A., van den Pol, R., Schuldberg, D., Swaney, G., & Stolle, D. (2012). Cognitive behavioral treatment for trauma symptoms in American Indian youth: preliminary findings and issues in evidence-based practice and reservation culture. *Advances in School Mental Health Promotion*, *5*(1), 51–62. http://doi.org/10.1080/1754730X.2012.664865

	Wolmer, L., Laor, N., Dedeoglu, C., Siev, J., & Yazgan, Y. (2005). Teacher-mediated intervention after disaster: a controlled three-year follow-up of children's functioning. *Journal of Child Psychology and Psychiatry*, *46*(11), 1161–1168. http://doi.org/10.1111/j.1469-7610.2005.00416.x
Exclusion criteria 4: Participants were not children between the ages 5-18	Baum, N. L., Cardozo, B. L., Pat-Horenczyk, R., Ziv, Y., Blanton, C., Reza, A., … Brom, D. (2013). Training Teachers to Build Resilience in Children in the Aftermath of War: A Cluster Randomized Trial. *Child & Youth Care Forum*, *42*(4, SI), 339–350. http://doi.org/10.1007/s10566-013-9202-5 Gelkopf, M., Hasson-Ohayon, I., Bikman, M., & Kravetz, S. (2013). Nature adventure rehabilitation for combat-related posttraumatic chronic stress disorder: A randomized control trial. *Psychiatry Research*, *209*(3), 485–493. http://doi.org/10.1016/j.psychres.2013.01.026 Wang, X., Lan, C., Chen, J., Wang, W., Zhang, H., & Li, L. (2015). Creative arts program as an intervention for PTSD: a randomized clinical trial with motor vehicle accident survivors. *International Journal of Clinical and Experimental Medicine*, *8*(8), 13585–13591.
Exclusion criteria 5: Intervention aimed at increasing resilience (not PTSD symptom reduction)	Wolmer, L., Hamiel, D., Barchas, J. D., Slone, M., & Laor, N. (2011). Teacher-Delivered Resilience-Focused Intervention in Schools With Traumatized Children Following the Second Lebanon War. *Journal of Traumatic Stress*, *24*(3), 309–316. http://doi.org/10.1002/jts.
Exclusion criteria 8: no PTSD outcomes were reported	Powell, T. M., & Bui, T. (2016). Supporting Social and Emotional Skills After a Disaster: Findings from a Mixed Methods Study. *School Mental Health, 8*(1), 106–119. http://doi.org/10.1007/s12310-016-9180-5 Tol, W. A., Komproe, I. H., Jordans, M. J. D., Gross, A. L., Susanty, D., Macy, R. D., & de Jong, J. T. V. M. (2010). Mediators and Moderators of a Psychosocial Intervention for Children Affected by Political Violence. *Journal of Consulting and Clinical Psychology*, *78*(6), 818–828. http://doi.org/10.1037/a0021348
Exclusion criteria 9: Intervention formed part of a multi-layer programme	Beehler, S., Birman, D., & Campbell, R. (2012). The Effectiveness of Cultural Adjustment and Trauma Services (CATS): Generating Practice-Based Evidence on a Comprehensive, School-Based Mental Health Intervention for Immigrant Youth. *American Journal of Community Psychology*, *50*(1–2), 155–168. http://doi.org/10.1007/s10464-011-9486-2 Ellis, B. H., Miller, A. B., Abdi, S., Barrett, C., Blood, E. a, & Betancourt, T. S. (2013). Multi-tier mental health program for refugee youth. *Journal of Consulting and Clinical Psychology*, *81*(1), 129–140. http://doi.org/10.1037/a0029844 Tol, W. A., Komproe, I. H., Jordans, M. J., Ndayisaba, A., Ntamutumba, P., Sipsma, H., ... & de Jong, J. T. (2014). School-based mental health intervention for children in war-affected Burundi: a cluster randomized trial. *BMC medicine*, *12*(1), 56.

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Exclusion criteria 10: Not original data or sample sizes not reported (not enough study design details provided for quality assessment)	Chemtob, C., Nakashima, J., & Hamada, R. (2002). Psychosocial intervention for postdisaster trauma symptoms in elementary school children: a controlled community field study. *Archives of Pediatrics & Adolescent Medicine*, *156*(3), 211–216. http://doi.org/10.1001/archpedi.156.3.211 Kangaslampi, S., Punamaki, R.-L., Qouta, S. R., Diab, M., & Peltonen, K. (2016). Psychosocial Group Intervention Among War-Affected Children: An Analysis of Changes in Posttraumatic Cognitions. *Journal of Traumatic Stress*, 546–555. http://doi.org/10.1002/jts.
Exclusion criteria 11: Participants not screened for either trauma or PTSD	Berger, R., & Gelkopf, M. (2009). School-based intervention for the treatment of tsunami-related distress in children: A quasi-randomized controlled trial. *Psychotherapy and Psychosomatics*, *78*(6), 364–371. http://doi.org/10.1159/000235976 Berger, R., Gelkopf, M., & Heineberg, Y. (2012). A teacher-delivered intervention for adolescents exposed to ongoing and intense traumatic war-related stress: A quasi-randomized controlled study. *Journal of Adolescent Health*, *51*(5), 453–461. http://doi.org/10.1016/j.jadohealth.2012.02.011 Berger, R., Gelkopf, M., Heineberg, Y., & Zimbardo, P. (2016). A School-Based Intervention for Reducing Posttraumatic Symptomatology and Intolerance During Political Violence. *Journal of Educational Psychology*, *108*(6), 761–771. http://doi.org/10.1037/edu0000066 Berger, R., Pat-Horenczyk, R., & Gelkopf, M. (2007). School-Based Intervention for Prevention and Treatment of Elementary-Students' Terror-Related Distress in Isreal: A Quasi-Randomized Controlled Trial. *Journal of Traumatic Stress*, *20*(4), 541–551. http://doi.org/10.1002/jts.Gelkopf, M., & Berger, R. (2009). A school-based, teacher-mediated prevention program (ERASE-Stress) for reducing terror-related traumatic reactions in Israeli youth: a quasi-randomized controlled trial. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, *50*(8), 962–971. http://doi.org/10.1111/j.1469-7610.2008.02021.xJordans, M. J. D., Komproe, I. H., Tol, W. A., Kohrt, B. A., Luitel, N. P., MacY, R. D., & De Jong, J. T. V. M. (2010). Evaluation of a classroom-based psychosocial intervention in conflict-affected Nepal: A cluster randomized controlled trial. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, *51*(7), 818–826. http://doi.org/10.1111/j.1469-7610.2010.02209.x Tol, W., Komproe, I. H., Jordans, M. J. D., Vallipuram, A., Sipsma, H., Sivayokan, S., … de Jong, J. T. (2012). Outcomes and moderators of a preventive school-based mental health intervention for children affected by war in Sri Lanka: A cluster randomized trial. *World Psychiatry*, *11*(2), 114–122. http://doi.org/10.1016/j.wpsyc.2012.05.008

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Exclusion criteria 12: Comparison group had the same intervention + or - component	Salloum, A., & Overstreet, S. (2012). Grief and trauma intervention for children after disaster: Exploring coping skills versus trauma narration. *Behaviour Research and Therapy*, *50*(3), 169–179. http://doi.org/10.1016/j.brat.2012.01.001 Santiago, C. D., Lennon, J. M., Fuller, A. K., Brewer, S. K., & Kataoka, S. H. (2014). Examining the Impact of a Family Treatment Component for CBITS: When and for Whom Is It Helpful? *Journal of Family Psychology*, *28*(4), 560–570. http://doi.org/10.1037/a0037329

Appendix C: Amendments to the Coding Protocol and Rationale

An adapted version of Kratchowill's (2003) coding protocol was used for the purpose of this review. The original protocol was designed to support School Psychologists in making evidence-based decisions for their practice. The amendments were made to fit the current purpose of the protocol, which is to assess study's methodological quality. The rationale for amendments is outlined in the table below.

Feature excluded	Rationale
B7 Qualitative research methods	The review focused on quantitative studies only, see inclusion criteria.
C Significance of Primary/Secondary Outcomes	This will be evaluated in other sections of the review through effect sizes, themes and tabulating with WoE D.
D Educational/Clinical Significance	This will be evaluated as part of the review.
E Identifiable Components	This will be evaluated as part of the review.
G Replication	The interventions were not replicated within the same studies, thus not applicable.
H Site of Implementation	The review focused on school-based interventions only, see inclusion criteria.
Descriptive or Supplemental Criteria	The information is presented in the 'Mapping-table' of the current review.

Appendix D: Weight of Evidence A Criteria and Application

Summary of WoE A criteria extracted from 'Task Force on Evidence-Based Interventions in School Psychology' (Kratchowill, 2003)

Key feature	Summary of criteria		
	Strong evidence (3)	**Promising evidence (2)**	**Weak evidence (1)**
Measurement	• Reliability coefficient of at least .85 for the primary outcome and for the current population under study • Multimethod and • Multisource (when appropriate)	• Reliability coefficient of at least .70 for the primary outcome and for the current population under study. • Multimethod and/or • Multisource (when appropriate)	• Reliability coefficient of at least .50 for the primary outcome and for the current population under study.
Comparison group	• "Active" comparison • Initial group equivalency (random assignment of participants) • Change agents were counterbalanced, as well as the study must meet the criteria for equivalent mortality and low attrition at post, and if applicable, at follow-up.	• "No intervention group" type of comparison • At least two of the following: • (1) counterbalancing of change agents, • (2) group equivalence established, or • (3) equivalent mortality with low attrition.	• Comparison group and at least one of the following: • (1) counterbalancing of change agents, • (2) group equivalence established, or • (3) equivalent mortality with low attrition.
Implementation fidelity	• At least two of the following: • (1) ongoing supervision/consultation, • (2) coding sessions, or • (3) audio/video tapes and • Use of a manual.	• At least one of the following: • (1) ongoing supervision/consultation, • (2) coding sessions, or • (3) audio/video tapes and • Use of a manual.	• At least one of the following: • (1) ongoing supervision/consultation, • (2) coding sessions, or • (3) audio/video tapes or • Use of a manual.
Follow up assessment	• Follow up assessments over multiple intervals, with all participants that were included in the original sample • Using similar measures used to analyse data from primary outcomes.	• Follow up assessments at least once, with the majority of participants that were included in the original sample, • Using similar measures used to analyse data from primary outcomes.	• Follow up assessments at least once, with some participants from the original sample.

Application of WoE A Criteria to Studies

Study	Quality ratings assigned				Overall WoE A (average scores)
	Measures (0-3)	Comparison Group (0-3)	Implementation fidelity (0-3)	Follow-up assessment (0-3)	
Barron, Abdallah & Heltne (2016)	2	2	3	0	**Medium** (1.75)
Ooi et al., (2016)	2	1	2	1	**Medium** (1.5)
Langley et al., (2015)	2	2	3	2	**Medium** (2.25)
Qouta et al., (2012)	1	1	2	2	**Medium** (1.5)
Jaycox et al., (2009)	1	2	3	2	**Medium** (2)
Layne et al., (2008)	3	1	2	1	**Medium** (1.75)
Stein at al., (2003)	2	2	3	2	**Medium** (2.25)

Appendix E: Weight of Evidence B - Risk of Bias Assessment

Approach to formulating summary assessments of risk of bias for each important outcome (across domains) within and across trials (table sourced from Higgins et al., 2011) (WoE B criteria)

Risk of bias	Interpretation	Within a trial	Across trials
Low risk of bias	Bias, if present, is unlikely to alter the results seriously	Low risk of bias for all key domains	Most information is from trials at low risk of bias
Unclear risk of bias	A risk of bias that raises some doubt about the results	Low or unclear risk of bias for all key domains	Most information is from trials at low or unclear risk of bias
High risk of bias	Bias may alter the results seriously	High risk of bias for one or more key domains	The proportion of information from trials at high risk of bias is sufficient to affect the interpretation of results

Risk of bias for each study included in the review (Application of WoE B Criteria to Studies)

Study	Bias	Authors judgement	Support for judgement
Barron, Abdallah, & Heltne, 2016	Random sequence generation	High risk	Quote: "School counsellors randomly allocated adolescents to TRT and wait list groups by tossing a coin for each participant." Pg. 963
	Allocation concealment	High risk	Counsellors identified participant allocation (see above).
	Blinding participants and personnel	High risk	No measures taken to blind trial participants and researchers from knowledge of which intervention a participant received.
	Blinding of outcomes assessment	High risk	Self-report measure used. Participants were probably aware they received an intervention.
	Incomplete outcome data	Low risk	Losses to follow-up were disclosed (10%). Intent-to-treat (ITT) analysis was carried out; quote: "(n = 154: 79 TRT and 75 wait list). A conservative estimate of treatment was" Pg. 962

	Selective reporting	Low risk	All prespecified outcomes were reported: EWSQ, CRIES-13, DSRS, ADES
	Other bias	Unclear risk	
	Overall judgement	High risk	High risk of bias for one or more key domains
Ooi et al., 2016	Random sequence generation	Low risk	Quote: "Each school in a pair was randomly allocated into either the intervention or WL control condition using a computer generated random number by the statistical supervisor of this study (RK) who was not at all involved in the clinical aspects of this study" Pg. "3
	Allocation concealment	Low risk	Generated by supervisor who was not involved in clinical aspects of the study (see above).
	Blinding participants and personnel	High risk	Quote: "Given that parents were not blinded from treatment allocation, demand characteristics and social desirability could not be ruled out from the data." Pg.12
	Blinding of outcomes assessment	High risk	Self-report measure used. Participants were probably aware they received an intervention.
	Incomplete outcome data	Unclear risk	Losses to follow-up were disclosed (16%). It is unclear whether appropriate measures were taken to account for attrition.
	Selective reporting	Low risk	All prespecified outcomes were reported: CRIES-13, DSRS, HSCL-37A, SDQ, UCLA RI
	Other bias		
	Overall judgement	High risk	High risk of bias for one or more key domains
Langley, Gonzalez, Sugar, Solis, & Jaycox, 2015	Random sequence generation	Low risk	Quote: "Randomization was conducted separately within each school and was stratified by grade and gender by the blinded study statistician using a standard table of random assignment (Cochran, 1977, p. 19)." Pg. 855
	Allocation concealment	Low risk	Generated by blinded statistician (see above).
	Blinding participants and personnel	High risk	No measures taken to blind trial participants and researchers from knowledge of which intervention a participant received.

	Blinding of outcomes assessment	High risk	Self-report measure used. Participants were probably aware they received an intervention.
	Incomplete outcome data	Low risk	Low attrition rate (9.5%). Quote: “There was no evidence of differential attrition by treatment group or school.” Pg.858
	Selective reporting	Low risk	All prespecified outcomes were reported.
	Other bias	Unclear risk	
	Overall judgement	High risk	High risk of bias for one or more key domains
Qouta, Palosaari, Diab, & Punamaki, 2012	Random sequence generation	Unclear risk	Not specified how randomisation was carried out
	Allocation concealment	Unclear risk	Description of allocation is not included
	Blinding participants and personnel	High risk	No measures taken to blind trial participants and researchers from knowledge of which intervention a participant received.
	Blinding of outcomes assessment	High risk	Self-report measure used. Participants were probably aware they received an intervention.
	Incomplete outcome data	Low risk	0% Attrition post intervention
	Selective reporting	Low risk	All prespecified outcomes were reported: PDEQ, CRIES-13, DSRS, SDQ
	Other bias	Unclear risk	
	Overall judgement	High risk	High risk of bias for one or more key domains
Jaycox et al., 2009	Random sequence generation	Unclear risk	Not specified how randomisation was carried out
	Allocation concealment	Unclear risk	Description of allocation is not included
	Blinding participants and personnel	High risk	No measures taken to blind trial participants and researchers from knowledge of which intervention a participant received.

	Blinding of outcomes assessment	High risk	Self-report measure used. Participants were probably aware they received an intervention.
	Incomplete outcome data	Low risk	0% Attrition post intervention. Missing values were imputed.
	Selective reporting	Low risk	All prespecified outcomes were reported: CPSS, CDI
	Other bias	Unclear risk	
	Overall judgement	High risk	High risk of bias for one or more key domains
Layne et al., 2008	Random sequence generation	High risk	"Students meeting the inclusion criteria were then randomly assigned to either the treatment or the comparison condition at their school by the participating school counsellors (who randomly drew names of program-eligible students out of a box)" pg. 1051
	Allocation concealment	High risk	Counsellors drew the names (see above)
	Blinding participants and personnel	High risk	Quote: "Neither the counsellors nor participating students were blinded to students` experimental condition." Pg. 1051
	Blinding of outcomes assessment	High risk	Self-report measure used. Participants were probably aware they received an intervention.
	Incomplete outcome data	High risk	21% attrition rate post-treatment. Did not carry out intent-to-treat analysis.
	Selective reporting	Low risk	All prespecified outcomes were reported: RI, DSRS, UCLA-GI
	Other bias	High risk	Quote: "The exposure of group members to TGCT treatment components in both group and classroom settings makes it challenging to contrast the two active treatment conditions and their respective effects" pg. 1060
	Overall judgement	High risk	High risk of bias for one or more key domains
Stein et al., 2003	Random sequence generation	Low risk	Quote: "A central office was used to randomly assign students to an early intervention group (n=61) or to a wait- list delayed intervention group (n=65) using random numbers generated by the clinician-researchers, using Microsoft Excel 2001." Pg. 603

Allocation concealment	Unclear risk	Description of allocation is not specific enough to conclude risk
Blinding participants and personnel	High risk	Quote: “none of the informants (students, parents, or teachers) were blinded to the treatment condition.” Pg. 610
Blinding of outcomes assessment	High risk	Self-report measure used. Participants were aware they received an intervention (see above).
Incomplete outcome data	Low risk	Low attrition rate (4%) immediately post intervention.
Selective reporting	Low risk	All prespecified outcomes were reported
Other bias	Unclear risk	One of the inclusion criteria required the school clinician to make a judgement whether the child ‘did not appear too disruptive to participate in a group therapy intervention session’.
Overall judgement	High risk	High risk of bias for one or more key domains

Appendix F: Weight of Evidence C Criteria and Application

Summary of criteria for WoE C

Key feature	Summary of rating requirements for WoE C		
	High (3)	**Medium (2)**	**Low (1)**
Follow-up data available	Follow-up after 3 months (with attrition less than 30%)	Follow-up after 1 month (with attrition less than 20%)	Follow-up with at least some data available
Number of 1:1 sessions	No 1:1 sessions, only group sessions	A single 1:1 session was offered as part of the intervention	Up to three 1:1 sessions were offered as part of the intervention
PTSD diagnosis at baseline	Only participants with moderate to severe PTSD symptoms were included	Some participants with moderate to severe PTSD symptoms were included	Participants with moderate to severe symptoms were excluded

Application of WoE C Criteria to Studies

Study	WoE C ratings – topic relevance			Overall WoE C
	Follow-up data (0-3)	Number of 1:1 sessions	PTSD diagnosis at baseline	
Barron, Abdallah & Heltne (2016)	Very low (0)	High (3)	High (3)	**Medium** (2)
Ooi et al., (2016)	Low (1)	High (3)	Low (1)	**Medium** (1.6)
Langley et al., (2015)	High (3)	Low (1)	High (3)	**Medium** (2.3)
Qouta et al., (2012)	High (3)	High (3)	Medium (2)	**High** (2.7)
Jaycox et al., (2009)	Low (1)	High (3)	High (3)	**Medium** (2.3)
Layne et al., (2008)	Low (1)	High (3)	High (3)	**Medium** (2.3)
Stein at al., (2003)	High (3)	High (3)	High (3)	**High** (3)

Appendix G: Example of a Completed Coding Protocol

Coding Protocol: Group-Based Design

Domain:

- [x] **School- and community-based intervention programs for social and behavioral problems**
- [ ] **Academic intervention programs**
- [ ] **Family and parent intervention programs**
- [ ] **School-wide and classroom-based programs**
- [ ] **Comprehensive and coordinated school health services**

Name of Coder(s):

Date: 01/31/17

M / D / Y

Full Study Reference in APA format: Barron, I., Abdallah, G., & Heltne, U. (2016). Randomized Control Trial of Teaching Recovery Techniques in Rural Occupied Palestine: Effect on Adolescent Dissociation. *Journal of Aggression, Maltreatment and Trauma*, *25*(9), 955–973. http://doi.org/10.1080/10926771.2016.1231149

Intervention Name (description from study): Teaching Recovery Techniques ("Group-delivered program, based on CBT, focuses specifically on children's symptoms of PTSD. The five sessions help students to understand the causes of trauma and recognize signs and symptoms. Adolescents are taught a range of coping skills to stop flashbacks and other intrusive images, sounds, or smells. Student hyperarousal is addressed through stabilization and relaxation techniques and phobic avoidance behavior is gradually desensitized through use of relaxation with anxiety and anger hierarchies. It is recommended the program is delivered by counselors in pairs, a presenter and a counselor who supports activities, to groups of 10 adolescents.")

Study ID Number (Unique Identifier): 1

Type of Publication: (Check one)

- [ ] **Book/Monograph**
- [x] **Journal article**
- [ ] **Book chapter**
- [ ] **Other (specify):**

I. General Characteristics

A. General Design Characteristics

A1. Random assignment designs (if random assignment design, select one of the following)

A1.1 [x] Completely randomized design
A1.2 [ ] Randomized block design (between-subjects variation)
A1.3 [ ] Randomized block design (within-subjects variation)
A1.4 [ ] Randomized hierarchical design

Randomised by coin toss

~~A2. Nonrandomized designs (if nonrandom assignment design, select one of the following)~~

~~A2.1 [ ] Nonrandomized design~~
~~A2.2 [ ] Nonrandomized block design (between-participants variation)~~
~~A2.3 [ ] Nonrandomized block design (within-participants variation)~~
~~A2.4 [ ] Nonrandomized hierarchical design~~
~~A2.5 [ ] Optional coding of Quasi-experimental designs (see Appendix C)~~

A3. Overall confidence of judgment on how participants were assigned (select one of the following)

A3.1 [ ] Very low (little basis)
A3.2 [ ] Low (guess)
A3.3 [ ] Moderate (weak inference)
A3.4 [ ] High (strong inference)
A3.5 [x] Very high (explicitly stated)
A3.6 [ ] N/A
A3.7 [ ] Unknown/unable to code

B. Statistical Treatment/Data Analysis (answer B1 through B6)

B1. Appropriate unit of analysis [x] yes [ ] no
B2. Familywise error rate controlled [ ] yes [ ] no [ ] N/A
B3. Sufficiently large *N= 75 vs 64* [x] yes [ ] no
Statistical Test: ANOVA
2 level: _____
ES: _d = 0.5_____
N required: 393(sm), 64 (med)

B4. Total size of sample (start of the study): 154 N

B5. Intervention group sample size: 79 N

B6. Control group sample size: 75 N

~~**For studies using qualitative research methods, code B7 and B8**~~

~~B7. Coding~~

~~B7.1 Coding scheme linked to study's theoretical-empirical basis (select one)~~ ☐ ~~yes~~ ☐ ~~no~~

~~B7.2 Procedures for ensuring consistency of coding are used (select one)~~ ☐ ~~yes~~ ☐ ~~no~~
~~Describe procedures:~~ _____

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~~B7.3 Progression from abstract concepts to empirical exemplars is clearly articulated (select one)~~ ☐ ~~yes~~ ☐ ~~no~~

~~B8. Interactive process followed (select one)~~ ☐ ~~yes~~ ☐ ~~no~~

~~Describe process:~~
_____
_____

C. Type of Program (select one)

C1. ☐ Universal prevention program
C2. ☐ Selective prevention program
C3. ☐ Targeted prevention program
C4. × Intervention/Treatment
C5. ☐ Unknown

D. Stage of the Program (select one)

D1. ☐ Model/demonstration programs
D2. ☐ Early stage programs
D3. × Established/institutionalized programs
D4. ☐ Unknown

E. Concurrent or Historical Intervention Exposure (select one)

E1. ☐ Current exposure
E2. ☐ Prior exposure
E3. × Unknown

II. Key Features for Coding Studies and Rating Level of Evidence/ Support

(3=Strong Evidence 2=Promising Evidence 1=Weak Evidence 0=No Evidence)

A. Measurement (answer A1 through A4)

A1. Use of outcome measures that produce reliable scores for the majority of primary outcomes. The table for Primary/Secondary Outcomes Statistically Significant allows for listing separate outcomes and will facilitate decision making regarding measurement (select one of the following)

A1.1 × Yes
A1.2 ☐ No
A1.3 ☐ Unknown/unable to code

A2. Multi-method (select one of the following)

A2.1 ☐ Yes
A2.2 × No
A2.3 ☐ N/A
A2.4 ☐ Unknown/unable to code

A3. Multi-source (select one of the following)

A3.1 ☐ Yes
A3.2 × No
A3.3 ☐ N/A
A3.4 ☐ Unknown/unable to code

A4. Validity of measures reported (select one of the following)

A5.1 × Yes validated with specific target group
A5.2 ☐ In part, validated for general population only
A5.3 ☐ No
A5.4 ☐ Unknown/unable to code

Rating for Measurement (select 0, 1, 2, or 3)**:** ☐**3** [×] **2** ☐**1** ☐ **0**

B. Comparison Group

B1. Type of Comparison Group (select one of the following)

B1.1 ☐ Typical contact
B1.2 ☐ Typical contact (other) specify:
B1.3 ☐ Attention placebo
B1.4 ☐ Intervention elements placebo
B1.5 ☐ Alternative intervention
B1.6 ☐ PharmacotherapyB1.1
B1.7 ☐ No intervention
B1.8 × Wait list/delayed intervention
B1.9 ☐ Minimal contact
B1.10 ☐ Unable to identify comparison group

Rating for Comparison Group (select 0, 1, 2, or 3)**:** **3** **×** **2** **1** **0**

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B2. Overall confidence rating in judgment of type of comparison group (select one of the following)

B2.1 ☐ Very low (little basis)
B2.2 ☐ Low (guess)
B2.3 ☐ Moderate (weak inference)
B2.4 ☐ High (strong inference)
B2.5 × Very high (explicitly stated)
B2.6 ☐ Unknown/Unable to code

B3. Counterbalancing of Change Agents (answer B3.1 to B3.3)

B3.1 ☐ By change agent
B3.2 ☐ Statistical
B3.3. ☐ Other

B4. Group Equivalence Established (select one of the following)

B4.1 × Random assignment
B4.2 ☐ Posthoc matched set
B4.3 ☐ Statistical matching
B4.4 ☐ Post hoc test for group equivalence

B5. Equivalent Mortality (answer B5.1 through B5.3)

B5.1 × Low Attrition (less than 20% for Post)
B5.2 ☐ Low Attrition (less than 30% for follow-up)
B5.3 × Intent to intervene analysis carried out
Findings (n = 154: 79 TRT and 75 wait list), ITT=.67

~~**C. Primary/Secondary Outcomes Are Statistically Significant**~~

~~C1. Evidence of appropriate statistical analysis for **primary outcomes** (answer C1.1 through C1.3)~~

~~C1.1 ☐ Appropriate unit of analysis (rate from previous code)~~
~~C1.2 ☐ Familywise/experimenterwise error rate controlled when applicable (rate from previous code)~~
~~C1.3 ☐ Sufficiently large *N* (rate from previous code)~~

~~C2. Percentage of **primary outcomes** that are significant (select one of the following)~~

~~C2.1 ☐ Significant primary outcomes for at least 75% of the total primary outcome measures for each key construct~~

~~C2.2 ☐ Significant primary outcomes for between 50% and 74% of the total primary outcome measures for each key construct~~

~~C2.3 ☐ Significant primary outcomes for between 25% and 49% of the total primary~~

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~~outcome measures for any key construct~~

Rating for Primary Outcomes Statistically Significant (select 0, 1, 2, or 3): **3** **2** **1** **0**

C3. Evidence of appropriate statistical analysis for **secondary outcomes** (answer C3.1 through C3.3)

C3.1 Appropriate unit of analysis
C3.2 Familywise/experimenterwise error rate controlled when applicable (rate from previous code)
C3.3 Sufficiently large *N* (rate from previous code)

C4. Percentage of **secondary outcomes** that are significant (select one of the following)

C4.1

C4.2 Significant secondary outcomes for between 50% and 74% of the total secondary outcome measures for each key construct

C4.3 Significant secondary outcomes for between 25% and 49% of the total secondary outcome measures for any key construct

Rating for Secondary Outcomes Statistically Significant (select 0, 1, 2, or 3): **3** **2** **1** **0**

C5. Overall Summary of Questions Investigated

C5.1 Main effect analyses conducted (select one) yes no

C5.2 Moderator effect analyses conducted (select one) yes no

Specify results: _____

C5.3. Mediator analyses conducted (select one) yes no

Specify results: _____

C. Primary/Secondary Outcomes Statistically Significant (only list $p \leq .05$)

(list primary outcomes first in alphabetical order, followed by secondary outcomes in alphabetical order)

Outcomes	Primary vs. Secondary	Who Changed	What Changed	Source	Treatment Information	Outcome Measure Used	Reliability	ES	(1-_)
Outcome #1:	☐ Primary ☐ Secondary ☐ Unknown	☐ Child ☐ Teacher ☐ Parent/sign. adult ☐ Ecology ☐ Other ☐ Unknown	☐ Behavior ☐ Attitude ☐ Knowledge ☐ Other ☐ Unknown	☐ Self Report ☐ Parent Report ☐ Teacher Report ☐ Observation ☐ Test ☐ Other ☐ Unknown					
Outcome #2	☐ Primary ☐ Secondary ☐ Unknown	☐ Child ☐ Teacher ☐ Parent/sign. Adult ☐ Ecology ☐ Other ☐ Unknown	☐ Behavior ☐ Attitude ☐ Knowledge ☐ Other ☐ Unknown	☐ Self Report ☐ Parent Report ☐ Teacher Report ☐ Observation ☐ Test ☐ Other ☐ Unknown					
Outcome #3:	☐ Primary ☐ Secondary ☐ Unknown	☐ Child ☐ Teacher ☐ Parent/sign. Adult ☐ Ecology ☐ Other ☐ Unknown	☐ Behavior ☐ Attitude ☐ Knowledge ☐ Other ☐ Unknown	☐ Self Report ☐ Parent Report ☐ Teacher Report ☐ Observation ☐ Test ☐ Other ☐ Unknown					
Outcome #4:	☐ Primary ☐ Secondary ☐ Unknown	☐ Child ☐ Teacher ☐ Parent/sign. Adult ☐ Ecology ☐ Other ☐ Unknown	☐ Behavior ☐ Attitude ☐ Knowledge ☐ Other ☐ Unknown	☐ Self Report ☐ Parent Report ☐ Teacher Report ☐ Observation ☐ Test ☐ Other ☐ Unknown					
Outcome #5:	☐ Primary ☐ Secondary ☐ Unknown	☐ Child ☐ Teacher ☐ Parent/sign. Adult ☐ Ecology ☐ Other ☐ Unknown	☐ Behavior ☐ Attitude ☐ Knowledge ☐ Other ☐ Unknown	☐ Self Report ☐ Parent Report ☐ Teacher Report ☐ Observation ☐ Test ☐ Other ☐ Unknown					

Null Findings/Negative Outcomes Associated with the Intervention (listed alphabetically by outcome)

Outcomes	Primary vs. Secondary	Who Was Targeted for Change	What Was Targeted for Change	Source	Note null/negative outcomes	Outcome Measure Used	Reliability	ES
Outcome #1:	Primary Secondary Unknown	Child Teacher Parent/sign. Adult Ecology Other Unknown	Behavior Attitude Knowledge Other Unknown	Self Report Parent Report Teacher Report Observation Test Other Unknown				
Outcome #2	Primary Secondary Unknown	Child Teacher Parent/sign. Adult Ecology Other Unknown	Behavior Attitude Knowledge Other Unknown	Self Report Parent Report Teacher Report Observation Test Other Unknown				
Outcome #3:	Primary Secondary Unknown	Child Teacher Parent/sign. Adult Ecology Other Unknown	Behavior Attitude Knowledge Other Unknown	Self Report Parent Report Teacher Report Observation Test Other Unknown				
Outcome #4:	Primary Secondary Unknown	Child Teacher Parent/sign. Adult Ecology Other Unknown	Behavior Attitude Knowledge Other Unknown	Self Report Parent Report Teacher Report Observation Test Other Unknown				
Outcome #5:	Primary Secondary Unknown	Child Teacher Parent/sign. Adult Ecology Other Unknown	Behavior Attitude Knowledge Other Unknown	Self Report Parent Report Teacher Report Observation Test Other Unknown				

Type of Data Effect Size is Based On	Confidence Rating in ES Computation
(check all that apply) ☐ Means and SDs ☐ *t* - value or *F* - value ☐ Chi-square (*df* = 1) ☐ Frequencies or proportions (dichotomous) ☐ Frequencies or proportions (polytomous) ☐ Other (specify): ☐ Unknown	(select one of the following) ☐ Highly estimated (e.g., only have *N* p value) ☐ Moderate estimation (e.g., have complex but complete statistics) ☐ Some estimation (e.g., unconventional statistics that require conversion) ☐ Slight estimation (e.g., use significance testing statistics rather than descriptives) ☐ No estimation (e.g., all descriptive data is present)

D. Educational/Clinical Significance

Outcome Variables:	Pretest	Posttest	Follow Up
D1. Categorical Diagnosis Data	Diagnostic information regarding inclusion into the study presented: ☐ Yes ☐ No ☐ Unknown	Positive change in diagnostic criteria from pre to posttest: ☐ Yes ☐ No ☐ Unknown	Positive change in diagnostic criteria from posttest to follow up: ☐ Yes ☐ No ☐ Unknown
D2. Outcome Assessed via continuous Variables		Positive change in percentage of participants showing clinical improvement from pre to posttest: ☐ Yes ☐ No ☐ Unknown	Positive change in percentage of participants showing clinical improvement from posttest to follow up: ☐ Yes ☐ No ☐ Unknown
D3. Subjective Evaluation: The importance of behavior change is evaluated by individuals in direct contact with the participant.	Importance of behavior change is evaluated: ☐ Yes ☐ No ☐ Unknown	Importance of behavior change from pre to posttest is evaluated positively by individuals in direct contact with the participant: ☐ Yes ☐ No ☐ Unknown	Importance of behavior change from posttest to follow up is evaluated positively by individuals in direct contact with the participant: ☐ Yes ☐ No ☐ Unknown
D4. Social Comparison: Behavior of participant at pre, post, and follow up is compared to normative data (e.g., a typical peer).	Participant's behavior is compared to normative data ☐ Yes ☐ No ☐ Unknown	Participant's behavior has improved from pre to posttest when compared to normative data: ☐ Yes ☐ No ☐ Unknown	Participant's behavior has improved from posttest to follow up when compared to normative data: ☐ Yes ☐ No ☐ Unknown

Rating for Educational/Clinical Significance (select 0, 1, 2, or 3): ☐ **3** ☐ **2** ☐ **1** ☐ **0**

E. Identifiable Components (answer E1 through E7)

E1. Evidence for primary outcomes (rate from previous code): ☐ 3 ☐ 2 ☐ 1 ☐ 0
E2. Design allows for analysis of identifiable components (select one) ☐ yes ☐ no

E3. Total number of components:

E4. Number of components linked to primary outcomes:

N

Additional criteria to code descriptively:

E5. Clear documentation of essential components (select one) ☐ yes ☐ no

E6. Procedures for adapting the intervention are described in detail (select one) ☐ yes ☐ no

E7. Contextual features of the intervention are documented (select one) ☐ yes ☐ no

Rating for Identifiable Components (select 0, 1, 2, or 3): ☐ **3** ☐ **2** ☐ **1** ☐ **0**

F. Implementation Fidelity

F1. Evidence of Acceptable Adherence (answer F1.1 through F1.3)

F1.1 × Ongoing supervision/consultation
F1.2 × Coding intervention sessions/lessons or procedures
F1.3 ☐ Audio/video tape implementation (select F1.3.1 or F1.3.2):

F1.3.1 × Entire intervention
F1.3.2 ☐ Part of intervention

F2. Manualization (select all that apply)

F2.1 ☐ Written material involving a detailed account of the exact procedures and the sequence in which they are to be used

F2.2 × Formal training session that includes a detailed account of the exact procedures and the sequence in which they are to be used

F2.3 ☐ Written material involving an overview of broad principles and a description of the intervention phases

F2.4 ☐ Formal or informal training session involving an overview of broad principles and a description of the intervention phases

F3. Adaptation procedures are specified (select one) ☐ yes ☒ no ☐ unknown

Rating for Implementation Fidelity (select 0, 1, 2, or 3): × **3** **2** ☐ **1** ☐ **0** ☐

G. Replication (answer G1, G2, G3, and G4)

G1. ☐ Same Intervention
G2. ☐ Same Target Problem
G3. ☐ Independent evaluation

Rating for Replication (select 0, 1, 2, or 3): ☐ **3** ☐ **2** ☐ **1** ☐ **0**

H. Site of Implementation

H1. School (if school is the site, select one of the following options)

H1.1 ☐ Public

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H1.2 ☐ Private
H1.3 ☐ Charter
H1.4 ☐ University Affiliated
H1.5 ☐ Alternative
H1.6 ☐ Not specified/unknown

H2. Non School Site (if it is a non school site, select one of the following options)

H2.1 ☐ Home
H2.2 ☐ University Clinic
H2.3 ☐ Summer Program
H2.4 ☐ Outpatient Hospital
H2.5 ☐ Partial inpatient/day Intervention Program
H2.6 ☐ Inpatient Hospital
H2.7 ☐ Private Practice
H2.8 ☐ Mental Health Center
H2.9 ☐ Residential Treatment Facility
H2.10 ☐ Other (specify):_____
H2.11 ☐ Unknown/insufficient information provided

Rating for Site of Implementation (select 0, 1, 2, or 3): ☐ **3** ☐ **2** ☐ **1** ☐ **0**

I. Follow Up Assessment

__ Timing of follow up assessment: specify_

__ Number of participants included in the follow up assessment: specify:

☐ Consistency of assessment method used: specify_____

Rating for Follow Up Assessment (select 0, 1, 2, or 3): ☐ **3** **2** ☐ **1** ☒ **0**

III. Other Descriptive or Supplemental Criteria to Consider

A. External Validity Indicators

A1. Sampling procedures described in detail yes no

Specify rationale for selection: _____

Specify rationale for sample size: _____

A1.1Inclusion/exclusion criteria specified yes no

A1.2 Inclusion/exclusion criteria similar to school practice yes no

A1.3 Specified criteria related to concern yes no

A2. Participant Characteristics Specified for Treatment and Control Group

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	Participants from Treatment Group	Grade/age	Gender	Ethnicity or Multi-ethnic	Ethnic Identity	Race(s)	Acculturation	Pri-mary Lan-guage	SES	Family Struc-ture	Locale	Disability	Funct Descri
☐ ☐ ☐ ☐ ☐	Child/Student Parent/caregiver Teacher School Other												
☐ ☐ ☐ ☐ ☐	Child/Student Parent/caregiver Teacher School Other												
☐ ☐ ☐ ☐ ☐	Child/Student Parent/caregiver Teacher School Other												
☐ ☐ ☐ ☐ ☐	Child/Student Parent/caregiver Teacher School Other												

	Participants from Control Group	Grade/age	Gender	Ethnicity or Multi-ethnic	Ethnic Identity	Race(s)	Acculturation	Pri-mary Lan-guage	SES	Family Struc-ture	Locale	Disability	Funct Descri
☐ ☐ ☐ ☐ ☐	Child/Student Parent/caregiver Teacher School Other												
☐ ☐ ☐ ☐ ☐	Child/Student Parent/caregiver Teacher School Other												
☐ ☐ ☐ ☐ ☐	Child/Student Parent/caregiver Teacher School Other												
☐ ☐ ☐ ☐ ☐	Child/Student Parent/caregiver Teacher School Other												

A3. Details are provided regarding variables that:

A3.1 Have differential relevance for intended outcomes ☐ yes ☐ no

Specify: _____

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A3.2 Have relevance to inclusion criteria ☐ yes ☐ no

Specify: _____

A4. Receptivity/acceptance by target participant population (treatment group)

Participants from Treatment Group	**Results (What person reported to have gained from participation in program)**	**General Rating**
☐ Child/Student ☐ Parent/caregiver ☐ Teacher ☐ School ☐ Other		☐ Participants reported benefiting overall from the intervention ☐ Participants reported not benefiting overall from the intervention
☐ Child/Student ☐ Parent/caregiver ☐ Teacher ☐ School ☐ Other		☐ Participants reported benefiting overall from the intervention ☐ Participants reported not benefiting overall from the intervention
☐ Child/Student ☐ Parent/caregiver ☐ Teacher ☐ School ☐ Other		☐ Participants reported benefiting overall from the intervention ☐ Participants reported not benefiting overall from the intervention

A5. Generalization of Effects:

A5.1 Generalization over time

A5.1.1 Evidence is provided regarding the sustainability of outcomes after intervention is terminated ☐ yes ☐ no

Specify: _____

A5.1.2 Procedures for maintaining outcomes are specified ☐ yes ☐ no

Specify: _____

A5.2 Generalization across settings

A5.2.1 Evidence is provided regarding the extent to which outcomes are manifested in contexts
that are different from the intervention context ☐ yes ☐ no

Specify: _____
A5.2.2 Documentation of efforts to ensure application of intervention to other settings ☐ yes ☐ no

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Specify: _____

A5.2.3 Impact on implementers or context is sustained ☐ yes ☐ no

Specify: _____

A5.3 Generalization across persons

Evidence is provided regarding the degree to which outcomes are manifested with participants who are different than the original group of participants for with the intervention was evaluated
☐ yes ☐ no

Specify: _____

B. Length of Intervention (select B1 or B2)

B1. ☐ Unknown/insufficient information provided

B2. ☐ Information provided (if information is provided, specify one of the following:)

B2.1 weeks _____
N

B2.2 months _____
N

B2.3 years _____
N

B2.4 other _____
N

C. Intensity/dosage of Intervention (select C1 or C2)

C1. ☐ Unknown/insufficient information provided

C2. ☐ Information provided (if information is provided, specify both of the following:)

C2.1 length of intervention session _____
N

C2.2 frequency of intervention session _____
N

D. Dosage Response (select D1 or D2)

D1. ☐ Unknown/insufficient information provided

D2. ☐ Information provided (if information is provided, answer D2.1)

D2.1 Describe positive outcomes associated with higher dosage: _____

E. Program Implementer (select all that apply)

E1. ☐ Research Staff
E2. ☐ School Specialty Staff
E3. ☐ Teachers
E4. ☐ Educational Assistants
E5. ☐ Parents
E6. ☐ College Students
E7. ☐ Peers
E8. ☐ Other
E9. ☐ Unknown/insufficient information provided

F. Characteristics of the Intervener

F1. ☐ Highly similar to target participants on key variables (e.g., race, gender, SES)
F2. ☐ Somewhat similar to target participants on key variables
F3. ☐ Different from target participants on key variables

G. Intervention Style or Orientation (select all that apply)

G1. ☐ Behavioral
G2. ☐ Cognitive-behavioral
G3. ☐ Experiential
G4. ☐ Humanistic/interpersonal
G5. ☐ Psychodynamic/insight oriented
G6. ☐ other (specify): _____
G7. ☐ Unknown/insufficient information provided

H. Cost Analysis Data (select G1 or G2)

H1. ☐ Unknown/insufficient information provided

H2. ☐ Information provided (if information is provided, answer H2.1)

H2.1 Estimated Cost of Implementation:_____

I. Training and Support Resources (select all that apply)

I1. ☐ Simple orientation given to change agents
I2. ☐ Training workshops conducted

# of Workshops provided _____
Average length of training _____
Who conducted training (select all that apply)
I2.1 ☐ Project Director
I2.2 ☐ Graduate/project assistants
I2.3 ☐ Other (please specify):
I2.3 ☐ Unknown

I3. ☐ Ongoing technical support
I4. ☐ Program materials obtained
I5. ☐ Special Facilities
I6. ☐ Other (specify):

J. Feasibility

J1. Level of difficulty in training intervention agents (select one of the following)

J1.1 ☐ High
J1.2 ☐ Moderate
J1.3 ☐ Low
J1.4 ☐ Unknown

J2. Cost to train intervention agents (specify if known): _____

J3. Rating of cost to train intervention agents (select one of the following)

J3.1 ☐ High
J3.2 ☐ Moderate
J3.3 ☐ Low
J3.4 ☐ Unknown