



All therapies for children and adolescents

Introduction

Traumatic events are highly prevalent in childhood and adolescence. PTSD is often chronic and has immense personal and social costs, and the prognosis for recovery without adequate treatment is poor. Therefore, early and effective treatment is important.

Method

We have included only systematic reviews (systematic literature search, detailed methodology with inclusion/exclusion criteria) published in full text, in English, from the year 2010 that report results separately for people with PTSD. Reviews were identified by searching the databases MEDLINE, EMBASE, and PsycINFO. When multiple copies of review topics were found, only the most recent and comprehensive version was included. We prioritised reviews with pooled data for inclusion.

Review reporting assessment was guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) checklist that describes a preferred way to present a meta-analysis¹. Reviews with less than 50% of items checked have been excluded from the library. Note that early reviews may have been guided by less stringent reporting checklists than the PRISMA, and that some reviews may have been limited by journal guidelines.

Evidence was graded using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) Working Group approach where high quality evidence such as that gained from randomised controlled trials (RCTs) may be downgraded to moderate or low if review and study quality is limited, if there is inconsistency in results, indirect comparisons, imprecise or sparse data and high probability of reporting bias. It may also be downgraded if risks associated with the intervention or other matter under review are high. Conversely, low quality evidence such as that gained from observational studies may be upgraded if effect

sizes are large or if there is a dose dependent response. We have also taken into account sample size and whether results are consistent, precise and direct with low associated risks (see end of table for an explanation of these terms)². The resulting table represents an objective summary of the available evidence, although the conclusions are solely the opinion of staff of NeuRA (Neuroscience Research Australia).

Results

We found ten systematic reviews that met our inclusion criteria³⁻¹².

- Moderate quality evidence found medium to large improvements in PTSD symptoms with psychological treatments post-treatment, which remained for over six months. Compared to treatment as usual or active controls, there were small to medium-sized improvements. Depression and anxiety also improved, although to a lesser extent. Studies of older children, those with more females, and higher-quality studies reported the largest effect sizes. Individual treatments showed larger effect sizes than group treatments. Treatments that involved caretakers showed larger effect sizes than those involving children/adolescents alone. Studies with more treatment time reported larger effect sizes than shorter treatments. There were no influencing effects of trauma type.
- For individual therapies, moderate to low quality evidence found large effects of reduced PTSD symptom severity compared to waitlist/no treatment with (in descending order of effect); cognitive therapy for PTSD (individual trauma-focussed cognitive behavioural therapy), combined somatic/cognitive therapies, child-parent psychotherapy, combined trauma-focussed cognitive behavioural therapy plus parent training, meditation, narrative exposure, exposure/prolonged exposure, play therapy,



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Cohen trauma-focussed cognitive behavioural therapy/cognitive processing therapy, and eye movement desensitisation and reprocessing. At 1-4 months post-treatment, combined somatic/cognitive therapies, Cohen trauma-focussed cognitive behavioural therapy/cognitive processing therapy, combined trauma-focussed cognitive behavioural therapy plus parent training, and narrative exposure all continued to show large effects. There were no significant improvements in symptoms with parent training alone, supportive counselling, or family therapy.

- Moderate to low quality evidence found cognitive therapy for PTSD (a form of individual trauma-focused cognitive behavioural therapy), was the most cost-effective intervention. Narrative exposure was the next best option. Eye movement desensitisation and reprocessing, parent training, and group trauma-focussed cognitive behavioural therapy were less cost-effective, and family therapy and supportive counselling were the least cost-effective options.
- For children in low and middle-income settings, moderate to low quality evidence found improvements in PTSD symptoms post-treatment with any psychosocial therapy and at follow up. Most improvements were found in the children aged 15-18 years, in non-displaced children, and in children living in smaller households (<6 members). Depression, functioning, hope, coping, and social support also improved. Interventions delivered by trained, non-specialist lay health workers improved PTSD symptoms, depression, and functioning in children in these settings.
- Moderate quality evidence found a large relationship between improvements in functioning and improvements in post-traumatic stress symptoms after psychological treatments. There was no relationship between changes in functioning and depression symptoms.
- Moderate to low quality evidence found a medium-sized improvement in PTSD symptoms with school-based interventions (cognitive behavioural therapy, play/art, eye movement desensitisation and reprocessing, or mind-body skills).



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Gutermann J, Schreiber F, Matulis S, Schwartzkopff L, Deppe J, Steil R

Psychological Treatments for Symptoms of Posttraumatic Stress Disorder in Children, Adolescents, and Young Adults: A Meta-Analysis

Clinical Child and Family Psychology Review 2016; 19: 77-93

[View review abstract online](#)

<p>Comparison</p>	<p>Effectiveness of psychological therapies (mostly CBT, psychoeducation, EMDR, and trauma-focussed therapies, also non-trauma-focussed therapies, mediation/relaxation, supportive therapy, psychodynamic therapies, stress management and hypnotherapy) vs. no treatment/waitlist or treatment as usual/other active control conditions for PTSD symptoms in children and young adults (up to 25 years old).</p>
<p>Summary of evidence</p>	<p>Moderate quality evidence (large samples, mostly inconsistent, precise, indirect) found a large effect of improved PTSD symptoms with psychological treatments pre- to post-treatment. Compared to untreated or waitlist controls, there was also a large improvement in PTSD symptoms post-treatment. Compared to treatment as usual or active controls, there was a small to medium-sized improvement in PTSD symptoms post-treatment. Depression and anxiety symptoms also showed improvements, though to a lesser extent.</p> <p>Studies with older patients, more females, and higher-quality studies reported the largest effect sizes. Individual treatments showed larger effect sizes than group treatments. Treatments that involved caretakers showed larger effect sizes than those involving children/adolescents alone. Studies with more treatment time reported larger effect sizes than shorter treatments. There were no moderating effects of trauma type.</p> <p>CBT, EMDR, and relaxation/meditation showed largest effect sizes in pre-post analyses. Within CBT interventions, cognitive- or exposure-based CBT had the largest effect sizes and CBT focussing on coping and skills showed smallest effect sizes. EMDR showed small effect sizes in the analysis vs. untreated/waitlist groups. In the analysis vs. treatment as usual/active controls, CBT and EMDR showed medium effect sizes. Within RCTs, CBT and psychoeducational interventions showed medium effect sizes, and EMDR showed small effect sizes.</p>
<p>PTSD symptoms</p>	



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65 uncontrolled studies, N = 3,881, 70 controlled studies, N = 7,333

Large effect of improved PTSD symptoms with psychological treatments pre to post-treatment;

$g = 0.89$, 95%CI 0.81 to 0.96, $p < 0.0001$, $I^2 = 92\%$

Depression and anxiety symptoms showed medium-sized improvements.

Studies with older patients and higher-quality studies reported the largest effect sizes.

Individual treatments showed significantly larger effect sizes than group treatments.

Treatments that involved caretakers showed significantly larger effect sizes than those involving children/adolescents alone.

CBT, EMDR, and relaxation/meditation showed largest effect sizes. Cognitive- or exposure-based CBT interventions had the largest effect sizes. CBT studies focussing on coping and skills showed smaller effect sizes.

Compared to untreated or waitlist controls, there was also a large improvement in PTSD symptoms post-treatment;

$g = 0.89$, 95%CI 0.69 to 1.09, $p < 0.0001$, $I^2 = 89\%$

Depression and anxiety symptoms showed medium-sized improvements.

Compared to treatment as usual or active controls, there was a small to medium-sized improvement in PTSD symptoms post-treatment;

$g = 0.45$, 95%CI 0.34 to 0.56, $p < 0.0001$, $I^2 = 29\%$

Depression and anxiety symptoms showed small to medium-sized improvements.

Studies with a larger percentage of female participants and studies with more treatment time reported larger effect sizes.

CBT showed large effect sizes, while EMDR showed small effect sizes in the analysis vs. untreated/waitlist groups. In the analysis vs. treatment as usual/active controls, CBT and EMDR showed medium effect sizes. Within RCTs, CBT and psychoeducational interventions showed medium effect sizes, and EMDR showed small effect sizes.

There were no moderating effects of trauma type.

Risks	There were no differences in drop-out rates.
Consistency in results[‡]	Mostly inconsistent
Precision in results[§]	Precise
Directness of results	Indirect; mixed treatment and/or control conditions.

Gutermann J, Schwartzkopff L, Steil R

Meta-analysis of the Long-Term Treatment Effects of Psychological Interventions in Youth with PTSD Symptoms



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<p>Clinical Child and Family Psychology Review 2017; 20: 422-34 View review abstract online</p>	
<p>Comparison</p>	<p>Long-term effectiveness of psychological therapies (mostly CBT, psychoeducation, EMDR, and trauma-focussed therapies, also mediation/relaxation, supportive therapy, and psychodynamic therapies) vs. no treatment/waitlist or treatment as usual/other active control conditions for PTSD symptoms in children and young adults (up to 25 years old).</p>
<p>Summary of evidence</p>	<p>Moderate quality evidence (large samples, inconsistent, precise, indirect) found large improvements in PTSD symptoms with psychological treatments for over six months post-treatment. Compared to untreated or waitlist controls, there were medium-sized improvements for over six months post-treatment, and small to medium-sized effects when compared to treatment as usual or active controls.</p>
<p>PTSD symptoms</p>	
<p>23 uncontrolled studies, N = 1,408, 24 controlled studies, N = 2,359 <i>Large effects of improved PTSD symptoms with psychological treatments pre-treatment to both follow-up periods;</i></p> <p>13 studies <6 months: $g = 0.99$, 95%CI 0.83 to 1.16, $p < 0.0001$, $I^2 = 82\%$ 10 studies ≥ 6 months: $g = 1.24$, 95%CI 1.04 to 1.45, $p < 0.0001$, $I^2 = 92\%$</p> <p><i>Compared to untreated or waitlist controls, there were medium-sized improvements in PTSD symptoms for both follow-up periods;</i></p> <p>5 studies <6 months: $g = 0.50$, 95%CI 0.13 to 0.89, $p = 0.006$, I^2 not reported 6 studies ≥ 6 months: $g = 0.62$, 95%CI 0.33 to 0.91, $p < 0.0001$, I^2 not reported</p> <p><i>Compared to treatment as usual or active controls, there were small to medium-sized improvements in PTSD symptoms for both follow-up periods;</i></p> <p>6 studies <6 months: $g = 0.38$, 95%CI 0.03 to 0.74, $p = 0.036$, I^2 not reported 7 studies ≥ 6 months: $g = 0.38$, 95%CI 0.08 to 0.67, $p = 0.012$, I^2 not reported</p> <p>Data from RCTs only (both follow-up periods combined) showed smaller improvements in PTSD symptoms.</p> <p>There were no moderating effects of whether caretakers were involved in the treatment.</p>	
<p>Consistency in results</p>	<p>Inconsistent</p>
<p>Precision in results</p>	<p>Precise</p>
<p>Directness of results</p>	<p>Indirect; mixed treatment and/or control conditions.</p>



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Lenz AS, Luo Y

Differential estimation of treatment effect between clinician-administered and self-reported PTSD assessments

Journal of Counselling and Development 2019; 97: 3-14

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Comparison	Effectiveness of trauma-focussed therapies vs. no treatment, and differences between clinician-assessed PTSD outcomes and self-report PTSD outcomes.
Summary of evidence	Moderate to low quality evidence (unclear sample size, direct) found a large effect of reduced PTSD symptom severity with trauma-focussed therapies compared to no treatment. Children and adolescents may self-report more benefit than their clinicians.
PTSD symptoms	
<p><i>A large effect showed trauma-focussed therapies improved PTSD symptoms more than no treatment;</i></p> <p>2 studies, N not reported, $g = -1.00$</p> <p>Self-reported assessment by children/adolescents were slightly larger than clinician-rated assessments ($g = -1.35$ vs. $g = -0.90$).</p>	
Consistency in results	Not reported
Precision in results	Not reported
Directness of results	Direct

Mavranezouli I, Megnin-Viggars O, Daly C, Dias S, Stockton S, Meiser-Stedman R, Trickey D, Pilling S

Research Review: Psychological and psychosocial treatments for children and young people with post-traumatic stress disorder: a network meta-analysis

Journal of Child Psychology and Psychiatry, and Allied Disciplines 2020; 61: 18-29

[View review abstract online](#)



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Comparison	Effectiveness of psychological therapies vs. waitlist/no treatment for PTSD symptoms in children and adolescents (up to 18 years old).
Summary of evidence	<p>Moderate to low quality evidence (large overall sample, small individual samples, unclear consistency, imprecise, indirect) found large effects of reduced PTSD symptom severity compared to waitlist/no treatment with (in descending order of effect); cognitive therapy for PTSD (individual trauma-focussed CBT), combined somatic/cognitive therapies, child-parent psychotherapy, combined trauma-focussed CBT plus parent training, meditation, narrative exposure, exposure/prolonged exposure, play therapy, Cohen trauma-focussed CBT/cognitive processing therapy, and EMDR. At 1-4 months post-treatment, combined somatic/cognitive therapies, Cohen trauma-focussed CBT/cognitive processing therapy, combined trauma-focussed CBT plus parent training, and narrative exposure all continued to show large effects.</p>
PTSD symptoms	
<p style="text-align: center;">Network meta-analysis included 29 RCTs, N = 1,960</p> <p>Most of the individual interventions included small samples (n<100). Only Cohen trauma-focussed CBT/cognitive processing therapy, group CBT, and supportive counselling had samples >100 (349, 171, and 180 respectively).</p> <p style="text-align: center;"><i>The following therapies showed large effects of improved PTSD symptoms post-treatment compared to waitlist/no treatment (in descending order of effect);</i></p> <p>Cognitive therapy for PTSD (a form of individual trauma-focussed CBT): SMD = -2.94, 95%CrI -3.94 to -1.95</p> <p style="padding-left: 40px;">Combined somatic/cognitive therapies: SMD = -2.14, 95%CrI -3.34 to -0.92</p> <p style="padding-left: 40px;">Child-parent psychotherapy: SMD = -2.16, 95%CrI -4.02 to -0.26</p> <p style="padding-left: 40px;">Combined trauma-focussed CBT and parent training: SMD = -1.79, 95%CrI -3.15 to -0.45</p> <p style="padding-left: 40px;">Meditation: SMD = -1.67, 95%CrI -2.94 to -0.41</p> <p style="padding-left: 40px;">Narrative exposure: SMD = -1.49, 95%CrI -2.25 to -0.74</p> <p style="padding-left: 40px;">Exposure/prolonged exposure: SMD = -1.34, 95%CrI -2.15 to -0.51</p> <p style="padding-left: 40px;">Play therapy: SMD = -1.35, 95%CrI -2.48 to -0.20</p> <p style="padding-left: 40px;">Cohen trauma-focussed CBT/cognitive processing therapy: SMD = -1.17, 95%CrI -1.78 to -0.54</p> <p style="padding-left: 40px;">EMDR: SMD = -0.99, 95%CrI -1.76 to -0.23</p> <p style="padding-left: 40px;">Group CBT: SMD = -0.91, 95%CrI -1.48 to -0.34</p> <p>Compared to waitlist/no treatment, there were no significant improvements in symptoms with parent training alone, supportive counselling, and family therapy.</p> <p style="text-align: center;">At 1-4 months follow-up, combined somatic/cognitive therapies, Cohen trauma-focussed</p>	



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CBT/cognitive processing therapy, combined trauma-focussed CBT plus parent training, and narrative exposure all showed large effects. The results for parent training alone, supportive counselling, and EMDR were not significant.	
Consistency in results	Authors report no inconsistency between direct and indirect evidence. Consistency between individual study results is unclear.
Precision in results	Imprecise
Directness of results	Indirect; network meta-analysis

Mavranezouli I, Megnin-Viggars O, Trickey D, Meiser-Stedman R, Daly C, Dias S, Stockton S, Pilling S

Cost-effectiveness of psychological interventions for children and young people with post-traumatic stress disorder

Journal of Child Psychology and Psychiatry, and Allied Disciplines 2020; 61: 699-710

[View review abstract online](#)

Comparison	Cost-effectiveness of psychological therapies for children and adolescents with PTSD.
Summary of evidence	Moderate to low quality evidence (imprecise, direct) found cognitive therapy for PTSD (a form of individual trauma-focused CBT), was the most cost-effective intervention. Narrative exposure was the next best option. EMDR, parent training, and group trauma-focussed CBT were less cost-effective and family therapy and supportive counselling were the least cost-effective.

Cost-effectiveness

Authors conclude that cognitive therapy for PTSD (a form of individual trauma-focused CBT), was the most cost-effective intervention. Narrative exposure was the next best option. EMDR, parent training, and group trauma-focussed CBT were less cost-effective and family therapy and supportive counselling were the least cost-effective.

Cost and effectiveness (remission at end of treatment vs. no treatment) of individual interventions

Cognitive therapy for PTSD

10 x 90 min individual sessions = £1,520pp

OR = 204.50, 95%CrI 34.36 to 1,271.56, $p < 0.05$

Narrative exposure

6 x 60 min individual sessions = £608pp



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OR = 15.14, 95%CrI 3.99 to 59.20, $p < 0.05$

Cohen trauma-focussed CBT/cognitive processing therapy

12 x 60 min individual/family sessions = £1,216pp

OR = 8.43, 95%CrI 2.74 to 26.05, $p < 0.05$

Play therapy

20 x 30 min individual sessions = £1,014pp

OR = 11.52, 95%CrI 1.51 to 90.65, $p < 0.05$

Exposure/prolonged exposure

14 x 60 min individual sessions = £1,419pp

OR = 11.42, 95%CrI 2.65 to 50.55, $p < 0.05$

EMDR

8 x 45 min individual sessions = £608pp

OR = 6.09, 95%CrI 1.52 to 24.80, $p < 0.05$

Parent training

12 x 45 min individual sessions = £912pp

OR = 5.83, 95%CrI 0.49 to 66.95, $p > 0.05$

Group CBT

10 x 60 min group sessions with one therapist and six participants per group plus 1 x 60 min individual orientation meeting = £270pp

OR = 5.21, 95%CrI 1.87 to 14.60, $p < 0.05$

Supportive counselling

12 x 75 min individual sessions = £1,520pp

OR = 2.97, 95%CrI 0.84 to 10.64, $p > 0.05$

Family therapy

4 x 75 min group sessions with one therapist and six families per group, plus 2 hrs of individual contact = £287pp

OR = 1.96, 95%CrI 0.22 to 19.03, $p > 0.05$

Consistency in results	Not reported
Precision in results	Imprecise
Directness of results	Direct

Morina N, Malek M, Nickerson A, Bryant RA

Psychological interventions for post-traumatic stress disorder and



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depression in young survivors of mass violence in low- and middle-income countries: meta-analysis

British Journal of Psychiatry 2017; 210: 247-54

[View review abstract online](#)

Comparison	Effectiveness of active psychological therapies (various) vs. control conditions (various) for young survivors of mass violence in low- and middle-income countries.
Summary of evidence	Moderate quality evidence (large sample, inconsistent, mostly precise, indirect) found a large improvement in PTSD symptoms with active psychological treatments following treatment and at follow-up (up to 12 months). These effects were smaller when compared to control conditions. Depression and functioning also improved.
PTSD symptoms	
<p><i>Active treatments for PTSD yielded a large effect pre-post treatment;</i> 22 RCTs, N = 4,512, $g = 1.15$, 95%CI 0.82 to 1.48, $p < 0.05$, $I^2 = 97\%$</p> <p><i>There was also a large pre-post treatment effect at follow-up (3-12 months);</i> 16 RCTs, $g = 1.28$, 95%CI 0.98 to 1.57, $p < 0.05$, I^2 not reported</p> <p><i>There was a medium-sized effect at post-treatment when compared to control conditions;</i> 16 RCTs, $g = 0.57$, 95%CI 0.27 to 0.88, $p < 0.05$, $I^2 = 95\%$</p> <p><i>There was a small pre-post treatment effect at follow-up when compared to control conditions;</i> 9 RCTs, $g = 0.23$, 95%CI 0.05 to 1.41, $p < 0.05$, I^2 not reported</p> <p>The effects were similar when active treatments were compared to waitlist controls. Depression and functioning also improved with treatment.</p>	
Consistency in results	Inconsistent
Precision in results	Mostly precise
Directness of results	Indirect; mixed treatment and/or control conditions.

Pfefferbaum B, Nitiema P, Newman E

The Effect of Interventions on Functional Impairment in Youth Exposed to Mass Trauma: a Meta-Analysis

Journal of Child and Adolescent Trauma 2020; 13: 127-40



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View review abstract online	
Comparison	Relationship between improvement in functioning and post-traumatic stress symptoms in youth (<18 years) exposed to mass trauma.
Summary of evidence	Moderate quality evidence (unclear sample size, precise, direct) found a large relationship between improvements in functioning and improvements in post-traumatic stress symptoms after psychological treatments. There was no relationship between changes in functioning and depression symptoms.
Functional impairment and post-traumatic stress symptoms	
<p><i>A large effect showed improvements in functioning were related to improvements in post-traumatic stress symptoms;</i></p> <p>The number of studies in this analysis is not reported, $r = 0.90$, 95%CI 0.66 to 0.97, $p < 0.0001$</p> <p>There was no relationship between changes in functioning and depression symptoms.</p>	
Consistency in results	Not reported
Precision in results	Precise
Directness of results	Direct

Purgato M, Gross AL, Betancourt T, Bolton P, Bonetto C, Gastaldon C, Gordon J, O'Callaghan P, Papola D, Peltonen K, Punamaki RL, Richards J, Staples JK, Unterhitzberger J, van Ommeren M, de Jong J, Jordans MJD, Tol WA, Barbui C

Focused psychosocial interventions for children in low-resource humanitarian settings: a systematic review and individual participant data meta-analysis

The Lancet Global Health 2018; 6: e390-e400

[View review abstract online](#)

Comparison	<p>Effectiveness of focussed psychosocial therapies vs. waitlist for PTSD symptoms in children and adolescents (0-18 years) in low and middle-income humanitarian settings.</p> <p>Interventions included a youth readiness intervention, creative play, a mind-body skills group program, class-based interventions, a family focused intervention, teaching recovery techniques, a sport for development intervention, and emotional writing and positive writing.</p>
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<p>Summary of evidence</p>	<p>Moderate to low quality evidence (large samples, inconsistent, precise, indirect) found small improvements in PTSD symptoms, but not depression and anxiety, post-treatment and at follow up (≥6 weeks) with psychosocial therapies. Most improvements were found in children aged 15-18 years, in non-displaced children, and in children living in smaller households (<6 members). Functioning, hope, coping, and social support also improved.</p>
<p>PTSD symptoms</p>	
<p><i>A small effect showed significant improvement in PTSD symptoms with psychological therapies between 0-4 weeks after treatment;</i></p> <p>8 RCTs, N = 2,355, SMD = -0.33, 95%CI -0.52 to -0.14, <i>p</i> = 0.0006, I² = 80%</p> <p><i>At ≥6 weeks follow-up, a small effect was found;</i></p> <p>6 RCTs, N = 1,808, SMD = -0.21, 95%CI -0.42 to -0.01, <i>p</i> < 0.05, I² = 78%</p> <p>There was a stronger improvement in PTSD symptoms in children aged 15–18 years, in non-displaced children, and in children living in smaller households (<6 members).</p> <p>Functioning, hope, coping, and social support also improved with psychological therapies. There were no significant differences between psychological therapies and waitlist in depression or anxiety symptoms.</p>	
<p>Consistency in results</p>	<p>Inconsistent</p>
<p>Precision in results</p>	<p>Precise</p>
<p>Directness of results</p>	<p>Indirect; mixed treatment conditions.</p>

Rolfesnes ES, Idsoe T

School-based intervention programs for PTSD symptoms: a review and meta-analysis

Journal of Traumatic Stress 2011; 24: 155-65

[View review abstract online](#)

<p>Comparison</p>	<p>Effectiveness of school-based psychosocial therapies (CBT, Play/Art, EMDR, and mind-body skills) for PTSD symptoms in children and adolescents (5-18 years) exposed to natural or man-made disasters.</p>
<p>Summary of evidence</p>	<p>Moderate to low quality evidence (large sample, indirect) found a medium-sized improvement in PTSD symptoms with school-</p>



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	based interventions (CBT, play/art, EMDR, or mind-body skills).
PTSD symptoms	
<i>A medium-sized effect showed significant improvement in PTSD symptoms with school-based therapies;</i> 19 RCTs/quasi experimental studies, N = 4,655, $d = 0.68$	
Consistency in results	Not reported
Precision in results	Not reported
Directness of results	Indirect; mixed treatment conditions.

van Ginneken N, Tharyan P, Lewin S, Rao GN, Meera SM, Pian J, Chandrashekar S, Patel V

Non-specialist health worker interventions for the care of mental, neurological, and substance-abuse disorders in low- and middle-income countries

Cochrane Database of Systematic Reviews: 2013; CD009149

[View review abstract online](#)

Comparison	Effectiveness of non-specialist, lay health worker interventions (mostly to groups in schools) vs. standard care for children with PTSD in low- and middle-income countries.
Summary of evidence	Moderate to low quality evidence (medium to large samples, some inconsistency and imprecision, indirect) found a large improvement in PTSD symptoms in children after non-specialist health worker interventions (up to 6 months post-treatment). Functioning and depression symptoms also improved in children (small effects), with no differences in anxiety symptoms.
PTSD symptoms	
<i>There was a large effect of improved PTSD symptoms in children after non-specialist health worker interventions within 6 months post-treatment;</i> 3 RCTs, N = 298, SMD = -0.89, 95%CI -1.49 to -0.03, $p < 0.01$, $I^2 = 79\%$ <i>There was no significant difference with Classroom-Based Intervention (a specific, manual-based intervention including elements of creative-expressive therapy, co-operative play, and CBT);</i>	



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<p>3 RCTs, N = 1,090, MCD = -0.56, 95%CI -2.82 to 1.70, $p = 0.63$, $I^2 = 82\%$ Functioning and depression was improved in children after any non-specialist intervention within 6 months post-treatment (small effects), however there was no difference in anxiety symptoms.</p>	
Consistency in results	Consistent for adults, inconsistent for children.
Precision in results	Precise for adults, imprecise for children.
Directness of results	Indirect; mixed treatment conditions.

Explanation of acronyms

CBT = cognitive behavioural therapy, CI = confidence interval, CrI = credible interval, d or g = Cohen’s d and Hedges’ g , standardised mean difference, EMDR = eye movement desensitisation and reprocessing, I^2 = the percentage of the variability in effect estimates that is due to heterogeneity rather than sampling error (chance), MCD = mean change difference, N = number of participants, p = statistical probability of obtaining that result, vs. = versus



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Explanation of technical terms

* Bias has the potential to affect reviews of both RCT and observational studies. Forms of bias include; reporting bias – selective reporting of results; publication bias - trials that are not formally published tend to show less effect than published trials, further if there are statistically significant differences between groups in a trial, these trial results tend to get published before those of trials without significant differences; language bias – only including English language reports; funding bias - source of funding for the primary research with selective reporting of results within primary studies; outcome variable selection bias; database bias - including reports from some databases and not others; citation bias - preferential citation of authors. Trials can also be subject to bias when evaluators are not blind to treatment condition and selection bias of participants if trial samples are small¹³.

† Different effect measures are reported by different reviews.

Prevalence refers to how many existing cases there are at a particular point in time. Incidence refers to how many new cases there are per population in a specified time period. Incidence is usually reported as the number of new cases per 100,000 people per year. Alternatively some studies present the number of new cases that have accumulated over several years against a person-years denominator. This denominator is the sum of individual units of time that the persons in the population are at risk of becoming a case. It takes into account the size of the underlying population sample and its age structure over the duration of observation.

Reliability and validity refers to how accurate the instrument is. Sensitivity is the proportion of actual positives that are correctly identified

(100% sensitivity = correct identification of all actual positives) and specificity is the proportion of negatives that are correctly identified (100% specificity = not identifying anyone as positive if they are truly not).

Weighted mean difference scores refer to mean differences between treatment and comparison groups after treatment (or occasionally pre to post treatment) and in a randomised trial there is an assumption that both groups are comparable on this measure prior to treatment. Standardised mean differences are divided by the pooled standard deviation (or the standard deviation of one group when groups are homogenous) that allows results from different scales to be combined and compared. Each study's mean difference is then given a weighting depending on the size of the sample and the variability in the data. Less than 0.4 represents a small effect, around 0.5 a medium effect, and over 0.8 represents a large effect¹³.

Odds ratio (OR) or relative risk (RR) refers to the probability of a reduction (< 1) or an increase (> 1) in a particular outcome in a treatment group, or a group exposed to a risk factor, relative to the comparison group. For example, a RR of 0.75 translates to a reduction in risk of an outcome of 25% relative to those not receiving the treatment or not exposed to the risk factor. Conversely, a RR of 1.25 translates to an increased risk of 25% relative to those not receiving treatment or not having been exposed to a risk factor. A RR or OR of 1.00 means there is no difference between groups. A medium effect is considered if $RR > 2$ or < 0.5 and a large effect if $RR > 5$ or < 0.2 ¹⁴. InOR stands for logarithmic OR where a InOR of 0 shows no difference between groups. Hazard ratios measure the effect of an explanatory variable on the hazard or risk of an event.

Correlation coefficients (eg, r) indicate the strength of association or relationship



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between variables. They can provide an indirect indication of prediction, but do not confirm causality due to possible and often unforeseen confounding variables. An r of 0.10 represents a weak association, 0.25 a medium association and 0.40 and over represents a strong association. Unstandardised (b) regression coefficients indicate the average change in the dependent variable associated with a 1 unit change in the independent variable, statistically controlling for the other independent variables. Standardised regression coefficients represent the change being in units of standard deviations to allow comparison across different scales.

limit crosses an effect size of 0.5 in either direction, and for binary and correlation data, an effect size of 0.25. GRADE also recommends downgrading the evidence when sample size is smaller than 300 (for binary data) and 400 (for continuous data), although for some topics, these criteria should be relaxed¹⁵.

‡ Inconsistency refers to differing estimates of effect across studies (i.e. heterogeneity or variability in results) that is not explained by subgroup analyses and therefore reduces confidence in the effect estimate. I^2 is the percentage of the variability in effect estimates that is due to heterogeneity rather than sampling error (chance) - 0% to 40%: heterogeneity might not be important, 30% to 60%: may represent moderate heterogeneity, 50% to 90%: may represent considerable heterogeneity and over this is considerable heterogeneity. I^2 can be calculated from Q (chi-square) for the test of heterogeneity with the following formula¹³;

$$I^2 = \left(\frac{Q - df}{Q} \right) \times 100\%$$

|| Indirectness of comparison occurs when a comparison of intervention A versus B is not available but A was compared with C and B was compared with C that allows indirect comparisons of the magnitude of effect of A versus B. Indirectness of population, comparator and/or outcome can also occur when the available evidence regarding a particular population, intervention, comparator, or outcome is not available and is therefore inferred from available evidence. These inferred treatment effect sizes are of lower quality than those gained from head-to-head comparisons of A and B.

§ Imprecision refers to wide confidence intervals indicating a lack of confidence in the effect estimate. Based on GRADE recommendations, a result for continuous data (standardised mean differences, not weighted mean differences) is considered imprecise if the upper or lower confidence



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