National Institute for Health and Care Excellence

Final

Post-traumatic stress disorder

[B] Evidence reviews for psychological, psychosocial and other non-pharmacological interventions for the treatment of PTSD in children and young people

NICE guideline NG116

Evidence reviews

December 2018

Final

These evidence reviews were developed by the National Guideline Alliance hosted by the Royal College of Obstetricians and Gynaecologists

Disclaimer

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or service users. The recommendations in this guideline are not mandatory and the guideline does not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or their carer or guardian.

Local commissioners and/or providers have a responsibility to enable the guideline to be applied when individual health professionals and their patients or service users wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with compliance with those duties.

NICE guidelines cover health and care in England. Decisions on how they apply in other UK countries are made by ministers in the Welsh Government, Scottish Government, and Northern Ireland Executive. All NICE guidance is subject to regular review and may be updated or withdrawn.

ISBN: 978-1-4731-3181-1

Contents

Psychological, psychosocial and other non-pharmacological interventions for the treatment of PTSD in children and young people

This evidence report contains information on 1 review relating to the treatment of PTSD.

- Review question 1.2 For children and young people with clinically important post-traumatic stress symptoms, what are the relative benefits and harms of psychological, psychosocial or other non-pharmacological interventions targeted at PTSD symptoms?

Review question For children and young people with clinically important post-traumatic stress symptoms, what are the relative benefits and harms of psychological, psychosocial or other non-pharmacological interventions targeted at PTSD symptoms?

Summary of the protocol (PICO table)

Please see Table 1 for a summary of the Population, Intervention, Comparison and Outcome (PICO) characteristics of this review.

Table 1: Summary of the protocol (PICO table)

Population	Children and young people (under 18 years) with clinically important post-traumatic stress symptoms (more than one month after a traumatic event), defined by a diagnosis of PTSD according to DSM, ICD or similar criteria (including PTSD for children 6 years and younger) or clinically-significant PTSD symptoms as indicated by baseline scores above threshold on a validated scale
Intervention	**Psychological interventions** (psychological interventions listed below are examples of interventions which may be included either alone or in combination and delivered to the child or young person and/or a parent or carer in an individual or group format): • Trauma-focused cognitive behavioural therapies (CBT), including cognitive therapy, cognitive processing therapy, compassion focused therapy, exposure therapy/prolonged exposure (PE), virtual reality exposure therapy (VRET), imagery rehearsal therapy, mindfulness-based cognitive therapy (MBCT) and narrative exposure therapy for traumatized children and adolescents (KidNET) • Non-trauma-focused CBT, including stress inoculation training (SIT) • Psychologically-focused debriefing (including single session debriefing) • Eye movement desensitisation and reprocessing (EMDR) • Hypnotherapy • Psychodynamic therapies, including traumatic incident reduction (TIR) • Counselling, including non-directive/supportive/person-centred counselling • Human givens therapy • Combined somatic and cognitive therapies, including thought field therapy (TFT) and emotional freedom technique (EFT) • Parent training/family interventions, including behavioural family therapy (such as Child and Family Traumatic Stress Intervention [CFTSI]) • Play therapy

	Psychosocial interventions (psychosocial interventions listed below are examples of interventions which may be included either alone or in combination): • Meditation • Mindfulness-based stress reduction (MBSR) • Nature-assisted therapies (including ecotherapy, horticultural therapy, therapeutic horticulture and nature-based therapy) • Supported employment (including individual placement and support [IPS] supported employment and Veterans Health Administration Vocational Rehabilitation Programme [VRP]) • Practical support (including financial and housing) • Psychoeducational interventions • Peer support (including self-help groups and support groups) **Other non-pharmacological interventions** (other non-pharmacological interventions listed below are examples of interventions which may be included either alone or in combination): • Acupuncture (including classical acupuncture, electroacupuncture, auricular acupuncture, laser acupuncture and acupoint stimulation [such as acupressure, moxibustion and tapping]) • Exercise (including anaerobic [such as heavy weight training, sprinting, high-intensity interval training] and aerobic [such as running/jogging, swimming, cycling and walking] exercise, both supervised and unsupervised) • Repetitive transcranial magnetic stimulation (rTMS) • Yoga (including all types of yoga)
Comparison	• Any other intervention • Treatment as usual • Waitlist • Placebo
Outcome	**Critical outcomes**: • Efficacy (PTSD symptoms/diagnosis/response/remission /relapse) • Acceptability of the intervention (discontinuation for any reason used as a proxy) **Important outcomes**: • Dissociative symptoms • Personal/social/educational functioning (including global functioning/functional impairment) • Sleeping difficulties • Quality of life • Symptoms of a coexisting condition (including anxiety, depression and emotional and behavioural problems)

For full details see review protocol in Appendix A.

Methods and processes

This evidence review was developed using the methods and processes as described in Developing NICE guidelines: the manual; see the methods chapter for further information.

Declarations of interest were recorded according to NICE's 2014 and 2018 conflicts of interest policies.

Psychological interventions for the treatment of PTSD in children and young people

Introduction

A significant proportion of children and young people exposed to potentially traumatic events will develop clinically significant symptoms of PTSD, and these symptoms may fulfil the diagnostic criteria for PTSD (Alisic 2014). Furthermore, research demonstrates that children and young people who have PTSD six months after the traumatic event(s) occurred are very unlikely to recover without intervention (Hiller 2016). This chapter, which informed and steered the recommendations made in the updated guideline, reviews research evidence which examines the impact of psychological, psychosocial and other non-pharmacological interventions on PTSD symptoms.

Psychological interventions will be considered as classes of intervention (trauma-focused CBT; non-trauma-focused CBT; psychologically-focused debriefing; eye movement desensitisation and reprocessing [EMDR]; hypnotherapy; psychodynamic therapies; counselling; combined somatic and cognitive therapies; parent training/family interventions; play therapy; self-help [without support]) and form the subsections below.

Evidence for humans given therapy was also searched for, but none was found.

Trauma-focused cognitive behavioural therapies (CBT): clinical evidence

Included studies

Eighty-seven studies of trauma-focused CBT for the treatment of PTSD in children and young people were identified for full-text review. Of these 87 studies, 28 RCTs (N=2301) were included. Some of these 87 RCTs were three- or four-armed trials and as such were included in more than one comparison. There were 8 comparisons for trauma-focused CBT.

For early treatment (intervention initiated 1-3 months post-trauma) of PTSD symptoms, there was evidence for 1 relevant comparison: 1 RCT (N=31) compared trauma-focused CBT with meditation (Catani 2009/ Rockstroh & Schauer 2004 [published paper and protocol]).

For delayed treatment (intervention initiated more than 3 months post-trauma) of PTSD symptoms, 19 RCTs (N=1470) compared trauma-focused CBT with waitlist, TAU or no treatment (Ahrens & Rexford 2002; Al-Hadethe 2015; Auslander 2017; Berger & Gelkopf 2009; Chen 2014; de Roos 2017; Deblinger 1996/ Deblinger 1999 [one study reported across two papers]; Ertl 2011/Neuner 2007 [published paper and protocol]; Goldbeck 2016/ Sachser 2016 [one study reported across two papers]; Jaycox 2009; Jensen 2014/2017 [one study reported across two papers]; King 2000;

Langley 2015; Meiser-Stedman 2010/Meiser-Stedman 2017 [protocol and published paper]; Pityaratstian 2015; Ruf 2010; Shein-Szydlo 2016; Smith 2007; Stein 2003a/Kataoka 2011 [one study reported across two papers]). 8 RCTs (N=718) compared trauma-focused CBT with supportive counselling (Chen 2014; Cohen & Mannarino 1998/Cohen 2005a [one study reported across two papers]; Cohen 2004a/Deblinger 2006 [one study reported across two papers]; Cohen 2011/Cohen 2005b [published paper and protocol]; Ertl 2011/Neuner 2007 [published paper and protocol]; Foa 2013a/McLean 2015a/Capaldi 2016/Kaczkurkin 2016/Zandberg. 2016 [one study reported across five papers]; Ford 2012; Gilboa-Schechtman & Foa 2004/Gilboa-Schechtman 2010 [protocol and published paper]). 2 RCTs (N=151) compared trauma-focused CBT with EMDR (de Roos 2017; Diehle 2015/Lindauer 2009 [published paper and protocol]). 1 RCT (N=60) compared trauma-focused CBT with emotional freedom technique (EFT) (Al-Hadethe 2015). 1 RCT (N=36) compared a combined trauma-focused CBT and parent training intervention with waitlist (King 2000). 1 RCT (N=100) compared trauma-focused CBT with parent training (CBT with parent-only) (Deblinger 1996/1999 [one study reported across two papers]). 1 RCT (N=159) compared trauma-focused CBT in addition to a psychoeducational group with a psychoeducational group-only (Layne 2008).

Sub-analyses were possible for the trauma-focused CBT versus waitlist, TAU or no treatment, and trauma-focused CBT versus supportive counselling comparisons, comparing effects by multiplicity of trauma, specific intervention, format, age range, diagnostic status at baseline, and trauma type.

Excluded studies

Fifty-nine studies were reviewed at full text and excluded from this review. The most common reasons for exclusion were the paper was a systematic review with no new useable data and any meta-analysis results not appropriate to extract, or a subgroup or secondary analysis of an RCT already included, or the study was unpublished (registered on clinical trials.gov and author contacted for full trial report but not provided).

Studies not included in this review with reasons for their exclusions are provided in Appendix K.

Summary of clinical studies included in the evidence review

See also the study selection flow chart in appecdix C, forest plots in appendix E and study evidence tables in appendix D.

Table 2, Table 3, Table 4 and Table 5 provide brief summaries of the included studies and evidence from these are summarised in the clinical GRADE evidence profiles below (Table 6, Table 7, Table 8, Table 9, Table 10, Table 11, Table 12 and Table 13).

See also the study selection flow chart in Appendix C, forest plots in Appendix E and study evidence tables in Appendix D.

Table 2: Summary of included studies: Trauma-focused CBT for early treatment (1-3 months)

Comparison	Trauma-focused CBT versus meditation
Total no. of studies (N randomised)	1 (31)

Comparison	Trauma-focused CBT versus meditation
Study ID	Catani 2009/Rockstroh 2004
Country	Sri Lanka
Diagnostic status	Clinically important PTSD symptoms (scoring above a threshold on validated scale)
Mean months since onset of PTSD	NR
Mean age (range)	11.9 (8-14)
Sex (% female)	45
Ethnicity (% BME)	NR
Coexisting conditions	NR
Mean months since traumatic event	Mean NR (study carried out within the first months after the tsunami disaster in Sri Lanka)
Type of traumatic event	Natural disaster: Tsunami disaster in Sri Lanka
Single or multiple incident index trauma	Single
Lifetime experience of trauma	Mean number of traumas 4.6. 81% identified the tsunami as the worst traumatic event experienced but 68% had also been affected by traumatic war experiences
Intervention details	Narrative exposure therapy for traumatized children and adolescents (KidNET)
Intervention format	Individual
Intervention intensity	6x thrice-weekly 60-90-min sessions (6-9 hours)
Comparator	Meditation-relaxation, sessions containing meditation and relaxation techniques including 'inner peace meditation', 'uchchadana mantra chanting', 'progressive muscle relaxation', 'ice cream body relaxation', and 'inner light meditation'
Intervention length (weeks)	2

NR – Not reported

Table 3: Summary of included studies: Trauma-focused CBT for delayed treatment (>3 months)-part 1

Comparison	Trauma-focused CBT versus waitlist, TAU or no treatment
Total no. of studies (N randomised)	19 (1470)
Study ID	Ahrens 2002[1] Al-Hadethe 2015[2] Auslander 2017[3] Berger 2009[4] Chen 2014[5] de Roos 2017[6] Deblinger 1996/1999[7] Ertl 2011/Neuner 2007[8] Goldbeck 2016/Sachser 2016[9] Jaycox 2009[10] Jensen 2014/2017[11] King 2000[12] Langley 2015[13]

Comparison	Trauma-focused CBT versus waitlist, TAU or no treatment
	Meiser-Stedman 2010/2017[14] Pityaratstian 2015[15] Ruf 2010[16] Shein-Szydlo 2016[17] Smith 2007[18] Stein 2003a/Kataoka 2011[19]
Country	US[1,3,7,10,13,19] Iraq[2] Sri Lanka[4] China[5] Netherlands[6] Uganda[8] Germany[9,16] Norway[11] Australia[12] UK[14,18] Thailand[15] Mexico[17]
Diagnostic status	PTSD diagnosis according to ICD/DSM criteria[1,2,8,14,15,16,17] Clinically important PTSD symptoms (scoring above a threshold on validated scale)[3,4,5,6,7,9,10,11,12,13,18,19]
Mean months since onset of PTSD	NR
Mean age (range)	16.4 (15-18)[1] Mean NR (16-19)[2] 14.6 (12-18)[3] Mean NR (9-14)[4] 14.5 (range NR)[5] 13.1 (8-18)[6] 9.8 (7-13)[7] 18.4 (12-25)[8] 13 (7-17)[9] 11.5 (range NR)[10] 15.1 (10-18)[11] 11.4 (5-17)[12] 7.7 (6-11)[13] 13.3 (8-17)[14] 12.3 (10-15)[15] 11.4 (7-16)[16] 14.9 (12-18)[17] 13.9 (range NR)[18] 11 (range NR)[19]
Sex (% female)	0[1,2] 100[3] 48[4] 68[5] 57[6] 83[7]

Comparison	Trauma-focused CBT versus waitlist, TAU or no treatment
	55[8] 72[9] 51[10] 80[11] 69[12] 50[13,18] 72[14,15] 46[16] 64[17] 56[19]
Ethnicity (% BME)	40[1] NR[2,4,5,6,8,9,11,12,15,16,17,19] 78[3] 28[7] 96[10] 73[13] 14[14] 54[18]
Coexisting conditions	52% stated they had experienced a head injury that led to loss of consciousness; 40% stated that they had been diagnosed with ADD or ADHD in the past[1] NR[2,3,4,5,8,10,11,13,15,16,19] 54% had one or more co-morbid disorder (assessed with ADIS-C)[6] 29% major depression; 30% oppositional defiant disorder; 20% ADHD; 11% separation anxiety; 6% conduct disorder; 5% specific phobia; 1% OCD[7] 34% >1 comorbid DSM-IV disorder: Depressive disorders (20%); Anxiety disorders (10%); ADHD (6%); Disruptive behaviour disorders (4%)[9] For 69% who met DSM-IV criteria for full PTSD (N=25): 16% with full PTSD had no other Axis I diagnoses, 36% had one comorbid diagnosis, 40% had two comorbid diagnoses, and 8% had three comorbid diagnoses. The comorbid diagnoses included dysthymia (28%), oppositional defiant disorder (28%), separation anxiety disorder (24%), generalized anxiety disorder (20%), conduct disorder (12%), major depression (8%), attention-deficit/hyperactivity disorder (8%), and specific phobia (8%)[12] 86% comorbid anxiety disorder; 55% comorbid affective disorder; 52% comorbid behavioural disorder[14] 14% anxiety disorder; 28% depression[17] 79% had any comorbidity[18]
Mean months since traumatic event	NR[1,2,3,10,11,13,17,19] NR (around 24 months)[4] 24[5] 16.5[6] Mean NR (for 66% the last sexually abusive incident occurred in the 6 months prior to initial assessment, 16% 6 months to 2 years before initial assessment, and 18% 2 more years before the evaluation)[7]

Comparison	Trauma-focused CBT versus waitlist, TAU or no treatment
	80.5[8] NR (inclusion criteria >3 months) [9] 54.5[12] 3.9[14] >48[15] Mean NR (37.25 months in exile) [16] Mean NR (median: 8.65; range: 3.3-64 months) [18]
Type of traumatic event	Mixed: Adolescent offenders incarcerated in a youth facility. 68% had documented trauma histories (as documented in their charts from collateral sources ranging from Social Rehabilitation Service investigations, child protective services reports, hospital reports, etc.) [1] Unclear (no details reported) [2] Mixed: Girls involved in child welfare who had histories of abuse and neglect. Girls with histories of sexual abuse were included[3] Natural disaster: Tsunami (Sri Lanka, December 26 2004) - 84% present and physically hurt during the tsunami; 12% present during the tsunami, but were not hurt; 4% not personally exposed to the tsunami[4] Natural disaster: Adolescents who had lost at least one parent in the Sichuan, China, Earthquake[5] Mixed: Physical abuse/assault (23%); Sexual abuse (26%); Accident/injury of a loved one (19%); Traumatic loss (18%); Disaster/other (13%)[6] Childhood sexual abuse: Contact sexual abuse. 18% experienced 1 sexually abusive incident, 47% 2-10 episodes, 22% 11-50 episodes, and 13% >50 abusive incidents[7] Child soldiers: The duration of abduction ranged from several hours to 7.42 years, with a median of 2.47 months. The likelihood of an event being indicated as the worst if present was highest for being forced to kill (55%), followed by witnessed killing (31%) and seeing someone being mutilated or seeing dead bodies (13%)[8] Mixed: Interpersonal trauma (77%); accidental (23%). The most frequently reported traumatic index events were experiences of sexual abuse, sexual assaults, physical violence, or witnessing domestic violence[9] Exposure to non-sexual violence: Experience of severe violence in the prior year[10] Mixed: 59% violence or threats of violence outside the family context, 46% physical abuse within the family, 43% witnessing violence within the family, 28% witnessing violence outside the family, 28% sexual abuse outside the family, 21% severe accident, 16% extremely painful or frightening medical procedures, 11% robbery or assault, 8% sexual abuse within the family, 6% natural disaster, 5% kidnapping, and 31% other frightening or overwhelming experiences[11] Childhood sexual abuse: In the majority of cases, the offenders were male adults known to the child. Nearly all of the children had experienced multiple episodes of sexual abuse involving penetration offenses and other forms of sexual abuse[12]

Comparison	Trauma-focused CBT versus waitlist, TAU or no treatment
	Mixed: Witnessed/ know of family member arrested (31%); Witnessed physical violence (26%); Victim of physical violence (25%); Witnessed or heard about neighbourhood or school violence (25%); Separated from parent(s) (e.g., deportation, deployment, hospitalization) (22%); Witnessed a serious accident (18%); Threatened by someone (violence) (18%); Someone close to child very sick or hurt badly (16%); Serious Illness/hospitalization of loved one (15%)[13] Motor Vehicle Collision: Motor vehicle collision (52%); Assault (24%); Medical emergency (3%); House fire (3%); Other (17%)[14] Natural disaster: Tsunami in Thailand - 50% saw tsunami with own eyes; 36% lost family member; 64% lost friend; 25% lost home; 28% sustained injury[15] Witnessing war as a civilian: Violent attacks against their parents or other family members at home (73%) were the most common trauma type reported. These assaults were mainly conducted by soldiers or other organized militant groups (58%). Other traumatic experiences included witnessing physical attacks against non-family members outside of the house (50%), accidents (46%), violence against the child at home (35%, most of these were by militant forces, 27%), assaults against the child outside of the home (35%), living in a place of war (35%), seeing dead bodies (35%), painful or scary medical treatments (27%), hearing about the violent death of a beloved person (27%), earthquakes (19%), other natural disasters (12%), and sexual abuse (8%)[16] Mixed: Street Children in Mexico City - 56% were victims of sexual abuse,47% of physical abuse, 18% of witnessing a violent event, and 17% of death of a family member[17] Motor Vehicle Collision: Motor vehicle accident (50%); Assault (38%); Witnessed violence (13%)[18] Exposure to non-sexual violence: 76% any violence involving a gun or knife. Number of violent events experienced: 2.8; Number of violent events witnessed: 5.95[19]
Single or multiple incident index trauma	Multiple[1,3,7,8,9,11,12,13,16,17,19] Unclear[2] Single[4,5,6,10,14,15,18]
Lifetime experience of trauma	29% had experienced multiple traumas[1] NR[2,3,5,6,7,10,13,15,19] 89% had been exposed to a major traumatic incident not related to the tsunami[4] Other than abduction, the most common traumatic event types reported by 81 or more of the 85 participants were exposure to a war zone, witnessing someone being killed, witnessing abduction, witnessing physical assault, and assaults with weapons[8] Number of traumatic events: 6.35 (SD=3.70) [9] Mean 3.6 different types of traumas (SD=1.8, range=1–10) [11] Mean number of abusive episodes: 7.6 (SD=3.8; range 1-33)[12] 38% had experienced previous trauma[14] Mean number of traumatic event types: 4.4[16]

Comparison	Trauma-focused CBT versus waitlist, TAU or no treatment
	35% reported more than one type of traumatic event[17] 29% prior exposure to trauma[18]
Intervention details	Cohen TF-CBT/Cognitive processing therapy: Cognitive processing therapy (following the manual by Resick & Schnicke 1993) [1] Narrative exposure therapy for traumatized children and adolescents (KidNET) following protocol of Neuner (2008) [2,16] GAIN (Girls Aspiring Toward Independence); an adapted form of CBITS (Cognitive Behavioural Intervention for Trauma in Schools), developed with input from focus groups, caregivers and other involved stakeholders[3] ERASE Stress Sri Lanka (ES-SL; following manual of Berger & Manasra, 2005) [4] Adapted Teaching Recovery Techniques group CBT intervention (Smith, Dyregrov, Yule 1999) [5] Cognitive behavioural writing therapy (CBWT; following manual by Van der Oord 2010) [6] Exposure therapy (following manual by Deblinger & Heflin, 1996)[7,12] Narrative Exposure Therapy (kidNET) adapted for the field[8] Cohen TF-CBT/Cognitive processing therapy (according to Cohen's 2006 manual) with parallel or conjoint sessions with child and caregiver[9,11] Support for Students Exposed to Trauma (SSET) adapted from the Cognitive Behavioural Intervention for Trauma in Schools (CBITS) programme[10] Bounce Back, Trauma-focused CBT intervention in school setting and involving caregivers[13] Cognitive Therapy for PTSD (CT-PTSD), based upon the treatment manual from Smith (2010) [14] Brief group CBT, Teaching Recovery Techniques (TRT; Smith 1999), adapted to span 3 days and sessions made longer to accommodate content[15] Cohen TF-CBT/Cognitive processing therapy: CBT for Trauma in Street Children[17] Cognitive therapy based on protocol from Ehlers (2000) with adaptations (Yule 2005) for children[18] Cognitive behavioural intervention for trauma in schools (CBITS; following manual of Jaycox 2003) [19]
Intervention format	Individual[1,2,6,7,8,12,14,16,17] Group[3,4,5,10,13,15,19] Individual/Family[9,11,18]
Intervention intensity	8x 1-hour sessions (8 hours) [1] 4x biweekly 60-90 min sessions (4-6 hours) [2] 10x 90 min sessions (plus pre- and post-intervention 'parties'), plus 2x supportive adult sessions[3] 12x weekly 90-min sessions (18 hours in total) [4] 6x weekly 1-hour sessions (6 hours) [5] 6x weekly 45-min sessions (4.5 hours). Mean attended 5.4 (SD=0.78) sessions[6] 12x weekly 45-min sessions (9 hours) [7] 8x thrice-weekly 90-120-min sessions (12-16 hours) [8]

Comparison	Trauma-focused CBT versus waitlist, TAU or no treatment
	12x weekly 90-min sessions (18 hours). 86% completed at least 8 sessions and 76% completed the full 12 sessions[9] 10x 45-min sessions (7.5 hours) [10] 12-15x sessions (length of session NR) [11] 20x weekly 50-min sessions (16.7 hours) [12] 10x 50-60min child group sessions, 2-3x 30-50min child sessions and 1-3x 30-50min caregiver sessions[13] 10x weekly 90-min sessions (15 hours). Mean attended 8.3 sessions (SD=2.2) [14] 3x 2-hour sessions (6 hours) [15] 8x weekly sessions (length of sessions NR) [16] 12x weekly 1-hour sessions (12 hours) [17] 10x weekly sessions (length of session NR) [18,19]
Comparator	Waitlist[1,4,6,8,9,10,12,13,14,15,16,17,18,19] No treatment[2,5] TAU: Any care required other than the experimental intervention[3] TAU: Community control, parents and children were given information about symptom patterns and encouraged to access therapy, and child protection workers or the victim witness coordinator were asked to assist with referrals[7] TAU: Clinician asked to provide the treatment they felt would be effective. All participants received individual treatment (no group treatment), but in 55% of the cases, parents were also involved in the therapy process[11]
Intervention length (weeks)	8[1,16] 2[2] 13[3,13] 12[4,7,9,17] 6[5,6] 3[8] 10[10,14,18,19] NR[11] 20[12] 0.4[15]

ADHD, Attention Deficit Hyperactivity Disorder; NR, not reported; TAU, Treatment as usual; TF-CBT, trauma-focused CBT; PTSD, Post-traumatic stress disorder; OCD, Obsessive Compulsive Disorder; SSET, Support for Students Exposed to Trauma; CT-PTSD, Cognitive Therapy Post-traumatic stress disorder; TRT, Teaching Recovery Techniques; CBT, Cognitive Behavioural Therapy.
[1]Ahrens 2002; [2]Al-Hadethe 2015; [3]Auslander 2017; [4]Berger 2009; [5]Chen 2014; [6]de Roos 2017; [7]Deblinger 1996/1999; [8]Ertl 2011/Neuner 2007; [9]Goldbeck 2016/Sachser 2016; [10]Jaycox 2009; [11]Jensen 2014/2017; [12]King 2000; [13]Langley 2015; [14]Meiser-Stedman 2010/2017; [15]Pityaratstian 2015; [16]Ruf 2010; [17]Shein-Szydlo 2016; [18]Smith 2007; [19]Stein 2003a/Kataoka 2011

Table 4: Summary of included studies: Trauma-focused CBT for delayed treatment (>3 months)-part 2

Comparison	Trauma-focused CBT versus supportive counselling	Trauma-focused CBT versus EMDR	Trauma-focused CBT versus EFT
Total no. of studies (N randomised)	8 (718)	2 (151)	1 (60)
Study ID	Chen 2014[1] Cohen 1998/2005a[2] Cohen 2004a/ Deblinger 2006[3] Cohen 2011/2005b[4] Ertl 2011/Neuner 2007[5] Foa 2013a/McLean 2015a/Capaldi 2016/Kaczkurkin 2016/Zandberg 2016[6] Ford 2012[7] Gilboa-Schechtman 2004/2010[8]	de Roos 2017[9] Diehle 2015/Lindauer 2009[10]	Al-Hadethe 2015
Country	China[1] US[2,3,4,6,7] Uganda[5] Israel[8]	Netherlands	Iraq
Diagnostic status	Clinically important PTSD symptoms (scoring above a threshold on validated scale) [1,2,4,7] PTSD diagnosis according to ICD/DSM criteria[3,5,6,8]	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	PTSD diagnosis according to ICD/DSM criteria
Mean months since onset of PTSD	NR	NR	NR
Mean age (range)	14.5 (range NR) [1] 11.1 (7-15) [2] 10.8 (8-14) [3] 9.6 (7-14) [4] 18.4 (12-25) [5] 15.3 (13-18) [6] 14.7 (13-17) [7] 14.1 (12-18) [8]	13.1 (8-18) [9] 12.9 (8-18) [10]	Mean NR (16-19)
Sex (% female)	68[1] 69[2] 79[3] 51[4] 55[5] 100[6,7] 63[8]	57[9] 62[10]	0

Comparison	Trauma-focused CBT versus supportive counselling	Trauma-focused CBT versus EMDR	Trauma-focused CBT versus EFT
Ethnicity (% BME)	NR[1,5,8] 41[2] 40[3] 44[4] 82[6] 75[7]	NR	NR
Coexisting conditions	NR[1,2,3,4,5] 57% had ≥1 comorbid psychiatric diagnoses[6] 34% major depressive disorder, 26% oppositional defiant disorder, 23% conduct disorder, and 13% attention deficit hyperactivity disorder[7] 81% ≥ 1 comorbid disorder: 50% had one additional internalizing disorder, 13% had an additional externalizing disorder, and 16% had internalizing and externalizing disorders[8]	54% had one or more co-morbid disorder (assessed with ADIS-C) [9] NR[10]	NR
Mean months since traumatic event	24[1] Mean NR (inclusion criteria within 6 months) [2] 12.3[3] NR (IPV duration: 5% <2 years, 19% 2-5 years, 77% >5 years) [4] 80.5[5] 40.5[6] NR[7] 18.5[8]	16.5[9] NR[10]	NR
Type of traumatic event	Natural disaster: Adolescents who had lost at least one parent in the Sichuan, China, Earthquake[1] Childhood sexual abuse: Contact sexual abuse perpetrated by someone at least 5 years older than the participants (36% single episode, 21% 2-5 abuse occasions, 8% 6-10 times, 33% were abused more than 10 times; 2% unknown) [2]	Mixed: Physical abuse/assault (23%); Sexual abuse (26%); Accident/injury of a loved one (19%); Traumatic loss (18%); Disaster/other (13%)[9] Mixed: 63% Single-event index trauma. Single event traumas: accidents (23 %), sexual assault (17 %); threat (with weapon) (13 %); kidnapping (10 %); serious illness (7 %); or other (30 %).	Unclear (details NR)

Comparison	Trauma-focused CBT versus supportive counselling	Trauma-focused CBT versus EMDR	Trauma-focused CBT versus EFT
	Childhood sexual abuse: Contact sexual abuse[3] Domestic violence: Children exposed to intimate partner violence[4] Child soldiers: The duration of abduction ranged from several hours to 7.42 years, with a median of 2.47 months. The likelihood of an event being indicated as the worst if present was highest for being forced to kill (55%), followed by witnessed killing (31%) and seeing someone being mutilated or seeing dead bodies (13%)[5] Childhood sexual abuse[6] Mixed: Trauma exposure was extensive, including 97% to a traumatic accident, disaster, or illness; 88% to physical assault or abuse; 81% to traumatic community violence; 78% to traumatic family violence; 44% to sexual assault or abuse; 41% to traumatic emotional abuse; and 29% to traumatic bullying[7] Mixed: Terrorist attack (13%); motor vehicle accident (42%); non-sexual assault (0.5%); sexual assault (21%); Other (18%)[8]	Multiple-event traumas: exposure to domestic violence (44 %) and sexual assault (39 %) and other (17 %)[10]	
Single or multiple incident index trauma	Single[1,8] Multiple[2,3,4,5,6,7]	Single	Unclear
Lifetime experience of trauma	NR[1,2,6,7,8] Mean 2.66 (SD 1.61) traumatic events in	NR[9] Mean types of prior trauma 6.5[10]	NR

Comparison	Trauma-focused CBT versus supportive counselling	Trauma-focused CBT versus EMDR	Trauma-focused CBT versus EFT
	addition to sexual abuse[3] Mean number of trauma types: 3.7[4] Other than abduction, the most common traumatic event types reported by 81 or more of the 85 participants were exposure to a war zone, witnessing someone being killed, witnessing abduction, witnessing physical assault, and assaults with weapons[5]		
Intervention details	Adapted Teaching Recovery Techniques group CBT intervention (Smith, Dyregrov, Yule 1999) [1] Cohen TF-CBT/Cognitive processing therapy: Sexual Abuse-Specific Cognitive-Behavioural Therapy (SAS-CBT; Cohen 2000) [2] Narrative exposure therapy (based on protocol from Deblinger & Heflin 1996) [3] Cohen TF-CBT/Cognitive processing therapy [4] Narrative Exposure Therapy (kidNET) adapted for the field[5] Prolonged exposure–A program (Foa 2008) [6] Cohen TF-CBT/Cognitive processing therapy: TARGET intervention (Trauma Affect Regulation: Guide for Education and Therapy; Ford & Russo, 2006) [7] Adapted prolonged exposure therapy for adolescents (PE-A) [8]	Cognitive behavioural writing therapy (CBWT; following manual by Van der Oord 2010) [9] Cohen TF-CBT/Cognitive processing therapy (following protocol by Cohen 2008) [10]	Narrative exposure therapy for traumatized children and adolescents (KidNET) following protocol of Neuner (2008)
Intervention format	Group[1] Individual/Family[2,3,4]	Individual[9] Individual/Family[10]	Individual

Comparison	Trauma-focused CBT versus supportive counselling	Trauma-focused CBT versus EMDR	Trauma-focused CBT versus EFT
	Individual[5,6,7,8]		
Intervention intensity	6x weekly 1-hour sessions (6 hours) [1] 12x sessions of 90 mins (45mins child, 45mins carer; 18 hours in total) [2] 12x 90-min sessions (9x 45-min for parent and 45-min for child and 3x 30-min joint parent-child session + 30-min for parent and 30-min for child; total 18 hours). Mean attended sessions 10.5 (SD=2.9) [3] 8x 90-min sessions (45-min for child and 45-min for parent; 12 hours in total) [4] 8x thrice-weekly 90-120-min sessions (12-16 hours) [5] 14x weekly 60-90 min sessions (14-21 hours). Mean 12 treatment sessions. 90% attended at least 8 sessions[6] 12x 50-min sessions (10 hours). Mean attended sessions 7 (SD=4.2). 67% at least 5 sessions[7] 12-15x weekly 60-90min sessions (12-22.5 hours). Mean number of sessions 13 and mean therapist hours per patient were 16.8[8]	6x weekly 45-min sessions (4.5 hours). Mean attended 5.4 (SD=0.78) sessions[9] 8x weekly 1-hour sessions (8 hours) [10]	4x biweekly 60-90 min sessions (4-6 hours)
Comparator	General support provided on an individual basis adopting counselling techniques such as listening, reflection, and empathy[1] Nondirective supportive therapy (NST) [2] Client Centred Therapy (CCT; based on	Eye movement desensitisation and reprocessing (EMDR) based on the standard protocol from Shapiro (2001) with age-appropriate modifications suggested by Tinker and Wilson (1999) and Greenwald (1999) [9]	Emotional Freedom Technique (EFT)

Comparison	Trauma-focused CBT versus supportive counselling	Trauma-focused CBT versus EMDR	Trauma-focused CBT versus EFT
	unpublished treatment manual) [3,6] Child-centred therapy[4] Needs-based intervention[5] Manualized relational therapy[7] Time-limited Dynamic Psychotherapy for Adolescents (TLDP-A)[8]	Eye movement desensitisation and reprocessing (EMDR; following Dutch protocol for EMDR for children and adolescents; Beer & de Roos, 2008) [10]	
Intervention length (weeks)	6[1] 12[2,3,7] 8[4] 3[5] 14[6] 15[8]	6[9] 8[10]	2

CBT, Cognitive Behavioural Therapy; EMDR, Eye Movement Desensitisation and Reprocessing; EFT, Emotional Freedom Techniques; PTSD – Post-traumatic stress disorder; NR, Not relevant; ICD/ DSM, International Classification of Disease/ Diagnostic and Statistical Manual of Mental Disorders; SAS-CBT, Sexual abuse specific cognitive behavioural therapy.
[1]Chen 2014; [2]Cohen 1998/2005a; [3]Cohen 2004a/Deblinger 2006; [4]Cohen 2011/2005b; [5]Ertl 2011/Neuner 2007; [6]Foa 2013a/McLean 2015a/Capaldi 2016/Kaczkurkin 2016/Zandberg 2016; [7]Ford 2012; [8]Gilboa-Schechtman 2004/2010; [9]de Roos 2017; [10]Diehle 2015/Lindauer 2009

Table 5: Summary of included studies: Trauma-focused CBT for delayed treatment (>3 months)-part 3

Comparison	Trauma-focused CBT + parent training versus waitlist	Trauma-focused CBT versus parent training (CBT with parent-only)	Trauma-focused CBT (+ psychoeducational group) versus psychoeducational group
Total no. of studies (N randomised)	1 (36)	1 (100)	1 (159)
Study ID	King 2000	Deblinger 1996/1999	Layne 2008
Country	Australia	US	Bosnia
Diagnostic status	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Clinically important PTSD symptoms (scoring above a threshold on validated scale)
Mean months since onset of PTSD	NR	NR	NR
Mean age (range)	11.4 (5-17)	9.8 (7-13)	16 (13-19)
Sex (% female)	69	83	64
Ethnicity (% BME)	NR	28	NR

Comparison	Trauma-focused CBT + parent training versus waitlist	Trauma-focused CBT versus parent training (CBT with parent-only)	Trauma-focused CBT (+ psychoeducational group) versus psychoeducational group
Coexisting conditions	For 69% who met DSM-IV criteria for full PTSD (N=25): 16% with full PTSD had no other Axis I diagnoses, 36% had one comorbid diagnosis, 40% had two comorbid diagnoses, and 8% had three comorbid diagnoses. The comorbid diagnoses included dysthymia (28%), oppositional defiant disorder (28%), separation anxiety disorder (24%), generalized anxiety disorder (20%), conduct disorder (12%), major depression (8%), attention-deficit/hyperactivity disorder (8%), and specific phobia (8%)	29% major depression; 30% oppositional defiant disorder; 20% ADHD; 11% separation anxiety; 6% conduct disorder; 5% specific phobia; 1% OCD	NR
Mean months since traumatic event	54.5	Mean NR (for 66% the last sexually abusive incident occurred in the 6 months prior to initial assessment, 16% 6 months to 2 years before initial assessment, and 18% 2 more years before the evaluation)	NR
Type of traumatic event	Childhood sexual abuse: In the majority of cases, the offenders were male adults known to the child such as the biological father, stepfather, family friend, neighbour, or teacher. Nearly all of the children had experienced multiple episodes of sexual abuse involving penetration offenses and other forms of sexual abuse	Childhood sexual abuse: Contact sexual abuse. 18% experienced 1 sexually abusive incident, 47% 2-10 episodes, 22% 11-50 episodes, and 13% >50 abusive incidents	Witnessing war as a civilian: Approximately 73% of the students participating reported experiencing direct life threat arising from close proximity to exploding shells or rifle fire, 36% reported witnessing during the war violent death or serious injury, 12% reported witnessing torture, and 46% reported the serious injury of a person to whom they were close,

Comparison	Trauma-focused CBT + parent training versus waitlist	Trauma-focused CBT versus parent training (CBT with parent-only)	Trauma-focused CBT (+ psychoeducational group) versus psychoeducational group
			14% reported the violent death during the war of a nuclear family member, and 73% reported the violent death of at least one person to whom they were close
Single or multiple incident index trauma	Multiple	Multiple	Multiple
Lifetime experience of trauma	Mean number of abusive episodes: 7.6 (SD=3.8; range 1-33)	NR	NR
Intervention details	Exposure therapy + parent training	Exposure therapy (following manual by Deblinger & Heflin, 1996)	Trauma and Grief Component Therapy for Adolescents (TGCT)
Intervention format	Individual/Family	Individual	Group
Intervention intensity	20x weekly 50-min sessions (16.7 hours)	12x weekly 45-min sessions (9 hours)	17-20x 60-90 min sessions (17-25.5 hours)
Comparator	Waitlist	Parent training (CBT with parent only)	Psychoeducational group. Students in both the treatment and comparison conditions received a tier 1 classroom-based psychoeducation and skills intervention, which was implemented throughout the school year
Intervention length (weeks)	20	12	20

PTSD – Post-traumatic stress disorder; NR, Not relevant; DSM, Diagnostic and Statistical Manual of Mental Disorders; OCD, Obsessive Compulsive Disorder; ADHD, Attention Deficit Hyperactivity Disorder; TGCT, Trauma and Grief Component Therapy for Adolescents.

See appendix D for full evidence tables.

Quality assessment of clinical studies included in the evidence review

The clinical evidence profiles for this review (trauma-focused CBT for the treatment of PTSD in children and young people) are presented in Table 6, Table 7, Table 8, Table 9, Table 10, Table 11, Table 12 and Table 13.

Table 6: Summary clinical evidence profile: Trauma-focused CBT versus meditation for early treatment (1-3 months)

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Meditation	Corresponding risk Trauma-focused CBT			
PTSD symptomatology clinician-rated at 1-month follow-up CPTS–RI change score Follow-up: mean 1 months		The mean PTSD symptomatology clinician-rated at 1-month follow-up in the intervention groups was 0.15 standard deviations lower (0.85 lower to 0.56 higher)		31 (1 study)	low[1]
PTSD symptomatology clinician-rated at 6-month follow-up CPTS–RI change score Follow-up: mean 6 months		The mean PTSD symptomatology clinician-rated at 6-month follow-up in the intervention groups was 0.12 standard deviations higher (0.6 lower to 0.83 higher)		30 (1 study)	low[1]
Diagnosis at 1-month follow-up Number of people who met criteria for a diagnosis of PTSD Follow-up: mean 1 months	333 per 1000	250 per 1000 (83 to 760)	RR 0.75 (0.25 to 2.28)	31 (1 study)	low[1]
Diagnosis at 6-month follow-up Number of people who met criteria for a diagnosis of PTSD Follow-up: mean 6 months	286 per 1000	189 per 1000 (51 to 697)	RR 0.66 (0.18 to 2.44)	30 (1 study)	low[1]
Discontinuation Number of	0	0	Not estimable	31 (1 study)	moderate[2]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Meditation	Corresponding risk Trauma-focused CBT			
participants lost to follow-up Follow-up: mean 1 months					

CBT=cognitive behavioural therapy; CI=confidence interval; PTSD=post-traumatic stress disorder; RR=risk ratio; SMD=standard mean difference; CPTS-RI=Child Post-Traumatic Stress-Reaction Index.
[1] 95% CI crosses line of no effect and thresholds for both clinically important benefit and harm
[2] OIS not met (events<300)

Table 7: Summary clinical evidence profile: Trauma-focused CBT versus waitlist, TAU or no treatment for delayed treatment (>3 months)

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Waitlist, TAU or no treatment	Corresponding risk Trauma-focused CBT			
PTSD symptomatology self-rated at endpoint SPTSS/CPSS/CRIES/CRTI/UCLA PTSD-RI/CPTS–RI change score Follow-up: 0.4-13 weeks		The mean PTSD symptomatology self-rated at endpoint in the intervention groups was 1.21 standard deviations lower (1.59 to 0.83 lower)		872 (13 studies)	very low[1,2]
PTSD symptomatology self-rated at 1-3 month follow-up IES/SPTSS/CRIES/ UCLA PTSD-RI/CPTS-RI change score Follow-up: 1-3 months		The mean PTSD symptomatology self-rated at 1-3 month follow-up in the intervention groups was 1.28 standard deviations lower (1.68 to 0.87 lower)		301 (5 studies)	low[1,3]

PTSD symptomatology self-rated at 6-month follow-up SPTSS change score Follow-up: mean 6 months		The mean PTSD symptomatology self-rated at 6-month follow-up in the intervention groups was 0.55 standard deviations lower (1.19 lower to 0.09 higher)		39 (1 study)	very low[1,4]
PTSD symptomatology self-rated at 12-18 month follow-up CPSS/SPTSS change score Follow-up: 12-18 months		The mean PTSD symptomatology self-rated at 12-18 month follow-up in the intervention groups was 0.6 standard deviations lower (1.16 to 0.04 lower)		114 (2 studies)	very low[1,3,5]
PTSD symptomatology clinician-rated at endpoint CAPS/K-SADS-E: PTSD/ADIS-C:PTSD/CPTSDI; change score Follow-up: 8-20 weeks		The mean PTSD symptomatology clinician-rated at endpoint in the intervention groups was 1.47 standard deviations lower (2.03 to 0.9 lower)		409 (7 studies)	low[2]
PTSD symptomatology clinician-rated at 3-month follow-up CAPS/K-SADS-E: PTSD/ADIS-C:PTSD change score Follow-up: mean 3 months		The mean PTSD symptomatology clinician-rated at 3-month follow-up in the intervention		113 (3 studies)	low[1,3]

		groups was 0.75 standard deviations lower (1.14 to 0.37 lower)			
PTSD symptomatology clinician-rated at 6-month follow-up CAPS/K-SADS-E: PTSD Follow-up: mean 6 months		The mean PTSD symptomatology clinician-rated at 6-month follow-up in the intervention groups was 0.69 standard deviations lower (1.12 to 0.25 lower)		89 (2 studies)	moderate[3]
PTSD symptomatology clinician-rated at 12-month follow-up CAPS/K-SADS-E: PTSD/ADIS-C:PTSD/CPTSDI; change score Follow-up: mean 12 months		The mean PTSD symptomatology clinician-rated at 12-month follow-up in the intervention groups was 0.63 standard deviations lower (1.09 to 0.16 lower)		88 (2 studies)	moderate[3]
PTSD symptomatology clinician-rated at 2-year follow-up K-SADS-E: PTSD change score Follow-up: mean 2 years		The mean PTSD symptomatology clinician-rated at 2-year follow-up in the intervention groups was 0.22 standard deviations lower (0.9 lower to 0.46 higher)		35 (1 study)	low[1,4]

Remission at endpoint Number of people no longer meeting diagnostic criteria for PTSD Follow-up: 8-12 weeks	407 per 1000	712 per 1000 (541 to 936)	RR 1.75 (1.33 to 2.3)	277 (5 studies)	moderate[3]
Remission at 1-3 month follow-up Number of people no longer above threshold on a scale for PTSD or meeting diagnostic criteria for PTSD Follow-up: 1-3 months	91 per 1000	666 per 1000 (258 to 1000)	RR 7.33 (2.84 to 18.91)	90 (2 studies)	moderate[6]
Remission at 12-18 month follow-up Number of people no longer meeting diagnostic criteria for PTSD/scoring above clinical threshold on a validated scale Follow-up: 12-18 months	324 per 1000	385 per 1000 (275 to 541)	RR 1.19 (0.85 to 1.67)	213 (2 studies)	moderate[4]
Response at endpoint Number of people showing clinically significant improvement, based on reliable change indices [RCI]/rated as 'much/very much improved' on CGI Follow-up: 10-13 weeks	98 per 1000	525 per 1000 (161 to 1000)	RR 5.35 (1.64 to 17.39)	203 (3 studies)	very low[1,5,6]
Anxiety symptoms at endpoint HADS-A/SCARED/RCMAS/SCAS/BAI change score Follow-up: 2-20 weeks		The mean anxiety symptoms at endpoint in the intervention groups was 0.81 standard deviations lower (1.23 to 0.4 lower)		554 (8 studies)	very low[1,5]
Anxiety symptoms at 3-month follow-up		The mean anxiety symptoms		63 (2 studies)	very low[1,5,7]

HADS-A/RCMAS change score Follow-up: mean 3 months		at 3-month follow-up in the intervention groups was 0.34 standard deviations lower (1.18 lower to 0.5 higher)			
Anxiety symptoms at 6-month follow-up HADS-A change score Follow-up: mean 6 months		The mean anxiety symptoms at 6-month follow-up in the intervention groups was 0.87 standard deviations lower (1.53 to 0.21 lower)		39 (1 study)	very low[1,3]
Anxiety symptoms at 12-18 month follow-up HADS-A/SCARED change score Follow-up: 12-18 months		The mean anxiety symptoms at 12-18 month follow-up in the intervention groups was 0.76 standard deviations lower (1.22 to 0.3 lower)		114 (2 studies)	low[1,3]
Depression symptoms at endpoint HADS-D/CES-D/CDI/MFQ/DSRS/ BDI change score Follow-up: 2-20 weeks		The mean depression symptoms at endpoint in the intervention groups was 0.72 standard deviations lower (1.03 to 0.41 lower)		834 (13 studies)	low[1,5]
Depression symptoms at 1-3 month follow-up BDI/HADS-D/CES-		The mean depression symptoms at 1-3		379 (7 studies)	low[1,3]

D/CDI/MINI:Depression /DSRS change score Follow-up: 1-3 months		month follow-up in the intervention groups was 0.62 standard deviations lower (0.87 to 0.36 lower)			
Depression symptoms at 6-month follow-up HADS-D/CDI/MINI:Depression change score Follow-up: mean 6 months		The mean depression symptoms at 6-month follow-up in the intervention groups was 0.48 standard deviations lower (0.84 to 0.13 lower)		129 (3 studies)	low[1,3]
Depression symptoms at 12-18 month follow-up HADS-D/CDI/MINI:Depression/MFQ change score Follow-up: 12-18 months		The mean depression symptoms at 12-18 month follow-up in the intervention groups was 0.5 standard deviations lower (0.78 to 0.22 lower)		203 (4 studies)	low[1,3]
Depression symptoms at 2 year follow-up CDI change score Follow-up: mean 2 years		The mean depression symptoms at 2 year follow-up in the intervention groups was 0.17 standard deviations lower (0.83 lower to 0.5 higher)		36 (1 study)	very low[1,7]
Emotional and behavioural problems at endpoint		The mean emotional and behavioural		476 (5 studies)	low[1]

SDQ-A/CBCL change score Follow-up: 6-13 weeks		problems at endpoint in the intervention groups was 0.58 standard deviations lower (0.79 to 0.36 lower)			
Emotional and behavioural problems at 18-month follow-up SDQ change score Follow-up: mean 18 months		The mean emotional and behavioural problems at 18-month follow-up in the intervention groups was 2.83 lower (4.79 to 0.87 lower)		75 (1 study)	low[1,3]
Emotional and behavioural problems-Externalizing at endpoint CBCL Externalizing change score Follow-up: 12-20 weeks		The mean emotional and behavioural problems-externalizing at endpoint in the intervention groups was 0.25 standard deviations lower (0.67 lower to 0.16 higher)		210 (3 studies)	very low[1,4]
Emotional and behavioural problems-Externalizing at 3-month follow-up CBCL Externalizing change score Follow-up: mean 3 months		The mean emotional and behavioural problems-externalizing at 3-month follow-up in the intervention groups was 0.77 standard deviations lower		56 (2 studies)	low[1,3]

		(1.32 to 0.21 lower)			
Emotional and behavioural problems-Externalizing at 6-month follow-up CBCL Externalizing change score Follow-up: mean 6 months		The mean emotional and behavioural problems-externalizing at 6-month follow-up in the intervention groups was 0.82 standard deviations lower (1.57 to 0.07 lower)		32 (1 study)	low[1,3]
Emotional and behavioural problems-Externalizing at 12-month follow-up CBCL Externalizing change score Follow-up: mean 12 months		The mean emotional and behavioural problems-externalizing at 12-month follow-up in the intervention groups was 0.7 standard deviations lower (1.44 lower to 0.04 higher)		32 (1 study)	low[1,4]
Emotional and behavioural problems-Externalizing at 2-year follow-up CBCL Externalizing change score Follow-up: mean 2 years		The mean emotional and behavioural problems-externalizing at 2-year follow-up in the intervention groups was 1.41 standard deviations lower (2.22 to 0.61 lower)		32 (1 study)	low[1,3]
Emotional and behavioural problems-		The mean emotional and		178 (2 studies)	very low[1,3]

Internalizing at endpoint CBCL Internalizing change score Follow-up: 12-20 weeks		behavioural problems-internalizing at endpoint in the intervention groups was 0.61 standard deviations lower (1.03 to 0.2 lower)			
Emotional and behavioural problems-Internalizing at 3-month follow-up CBCL Internalizing change score Follow-up: mean 3 months		The mean emotional and behavioural problems-internalizing at 3-month follow-up in the intervention groups was 0.71 standard deviations lower (1.54 lower to 0.12 higher)		24 (1 study)	low[1,4]
Quality of life KIDSCREEN-27: Global HRQoL T-scores/ILK; change score Follow-up: 6-12 weeks Better indicated by higher values		The mean quality of life in the intervention groups was 0.33 standard deviations higher (0.06 to 0.6 higher)		219 (2 studies)	very low[1,3]
Functional impairment at endpoint CAPS: Functional impairment/SAS-SR-Y change score Follow-up: 10-13 weeks		The mean functional impairment at endpoint in the intervention groups was 1.56 standard deviations lower (3.14 lower to 0.02 higher)		95 (2 studies)	very low[1,2,4]

Functional impairment at 3-month follow-up CAPS: Functional impairment; change score Follow-up: mean 3 months		The mean functional impairment at 3-month follow-up in the intervention groups was 0.96 standard deviations lower (1.24 to 0.68 lower)		220 (2 studies)	very low[1,3,5]
Functional impairment at 6-month follow-up CAPS: Functional impairment; change score Follow-up: mean 6 months		The mean functional impairment at 6-month follow-up in the intervention groups was 0.45 standard deviations lower (0.99 lower to 0.1 higher)		54 (1 study)	low[1,4]
Functional impairment at 12-month follow-up CAPS: Functional impairment; change score Follow-up: mean 12 months		The mean functional impairment at 12-month follow-up in the intervention groups was 1.28 standard deviations lower (1.88 to 0.69 lower)		53 (1 study)	low[1,3]
Global functioning at endpoint CGAS/fCPSS/GAF change score Follow-up: 10-20 weeks Better indicated by higher values		The mean global functioning at endpoint in the intervention groups was 1.25 standard deviations higher (0.65 to 1.85 higher)		321 (4 studies)	very low[1,3,5]

Global functioning at 3-month follow-up GAF; change score Follow-up: mean 3 months Better indicated by higher values		The mean global functioning at 3-month follow-up in the intervention groups was 1.35 standard deviations higher (0.45 to 2.25 higher)		24 (1 study)	low[1,3]
Global functioning at 18-month follow-up fCPSS change score Follow-up: mean 18 months Better indicated by higher values		The mean global functioning at 18-month follow-up in the intervention groups was 0.1 standard deviations higher (0.35 lower to 0.56 higher)		75 (1 study)	low[1,4]
Discontinuation Number of participants lost to follow-up for any reason Follow-up: 0.4-20 weeks	75 per 1000	98 per 1000 (70 to 137)	RR 1.3 (0.93 to 1.83)	1255 (18 studies)	moderate[8]

ADIS-C=Anxiety Disorder Interview Schedule-Child version: BAI=Beck Anxiety Index; BDI=Beck Depression Inventory; CAPS=Clinician Administered PTSD Symptom; CBCL=Child Behavioural Checklist; CBT=cognitive behavioural therapy; CDI=Children's Depression Inventory; CES-D=Centre for Epidemiological Studies-Depression; CGAS= Children's Global Assessment Scale; CGI=Clinical Global Impression; CI=confidence interval; CPSS=Child PTSD Symptom Scale; CPTS-RI=Child Post-Traumatic Symptom-Reaction Index; CRIES=Children's Revised Impact of Event Scale; CRTI=Children's Response to Trauma Inventory; DSRS=Depression Self-Rating Scale; GAF=Global Assessment of Functioning; HRQoL=Health-Related Quality of Life; KIDSCREEN-27=Health-related quality of life questionnaire for children, young people and their parents ; K-SADS-E=Kiddie Schedule for Affective Disorders and Schizophrenia-Epidemiological; HADS-A/D=Hospital Anxiety and Depression Scale-Anxiety/Depression; ILK=an instrument to measure quality of life in children and adolescents; MFQ=Mood and Feeling Questionnaire; PTSD=post-traumatic stress disorder; RCMAS=Revised Children's Manifest Anxiety Scale; RR=risk ratio; SAS-SR=Social Adjustment Scale-Self Report; SCARED=Screen for Child Anxiety Related Disorders; SCAS=Spence Children's Anxiety Scale; SDQ =Strength and Difficulties Questionnaires; SMD=standard mean difference; SPTSS=Screen for Post-Traumatic Stress Symptoms; TAU=treatment as usual; UCLA PTSD-RI=UCLA PTSD-Reaction Index

[1] *Risk of bias is high or unclear across multiple domains*

[2] *Considerable heterogeneity (I2>80%)*

[3] *OIS not met (N<400)*

[4] *95% CI crosses both line of no effect and threshold for clinically important benefit*

[5] *Substantial heterogeneity (I2=>50%)*

[6] *OIS not met (events<300)*

[7] *95% CI crosses line of no effect and thresholds for both clinically important benefit and harm*

[8] *95% CI crosses both line of no effect and threshold for clinically important harm*

Table 8: Summary clinical evidence profile: Trauma-focused CBT versus supportive counselling for delayed treatment (>3 months)

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Supportive counselling	Corresponding risk Trauma-focused CBT			
PTSD symptomatology self-rated at endpoint CRIES/TSCC-PTSD/UCLA PTSD-RI/CPSS change score Follow-up: 6-15 weeks		The mean PTSD symptomatology self-rated at endpoint in the intervention groups was 0.49 standard deviations lower (0.71 to 0.26 lower)		325 (5 studies)	low[1,2]
PTSD symptomatology self-rated at 3-month follow-up CRIES change score Follow-up: mean 3 months		The mean PTSD symptomatology self-rated at 3-month follow-up in the intervention groups was 1.58 standard deviations lower (2.62 to 0.55 lower)		20 (1 study)	very low[1,2]
PTSD symptomatology self-rated at 6-month follow-up TSCC-PTSD/VCPSS change score Follow-up: mean 6 months		The mean PTSD symptomatology self-rated at 6-month follow-up in the intervention groups was 0.7 standard deviations lower (1.29 to 0.11 lower)		120 (2 studies)	very low[1,2,3]
PTSD symptomatology self-rated at 12-17 month follow-up TSCC-PTSD/CPSS change score Follow-up: 12-17 months		The mean PSTD symptomatology self-rated at 12-17 month follow-up in the intervention groups was 0.69 standard deviations lower		181 (3 studies)	low[1,2]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Supportive counselling	Corresponding risk Trauma-focused CBT			
		(0.99 to 0.39 lower)			
PTSD symptomatology clinician-rated at endpoint K-SADS-PL: PTSD/CPSS-I/CAPS; change score Follow-up: 8-14 weeks		The mean PTSD symptomatology clinician-rated at endpoint in the intervention groups was 0.71 standard deviations lower (1.1 to 0.31 lower)		231 (3 studies)	moderate[2]
PTSD symptomatology clinician-rated at 3-month follow-up CAPS change score Follow-up: mean 3 months		The mean PTSD symptomatology clinician-rated at 3-month follow-up in the intervention groups was 0.25 standard deviations lower (0.81 lower to 0.31 higher)		50 (1 study)	moderate[4]
PTSD symptomatology clinician-rated at 6-month follow-up CAPS change score Follow-up: mean 6 months		The mean PTSD symptomatology clinician-rated at 6-month follow-up in the intervention groups was 0.43 standard deviations lower (1 lower to 0.13 higher)		49 (1 study)	moderate[4]
PTSD symptomatology clinician-rated at 12-month follow-up CAPS/CPSS-I change score Follow-up: mean 12 months		The mean PTSD symptomatology clinician-rated at 12-month follow-up in the intervention groups was		109 (2 studies)	moderate[2]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Supportive counselling	Corresponding risk Trauma-focused CBT			
		0.89 standard deviations lower (1.28 to 0.49 lower)			
Remission at endpoint Number of people no longer meeting diagnostic criteria for PTSD Follow-up: 8-15 weeks	376 per 1000	628 per 1000 (470 to 839)	RR 1.67 (1.25 to 2.23)	208 (4 studies)	moderate[5]
Remission at 6-month follow-up Number of people no longer meeting diagnostic criteria for PTSD Follow-up: mean 6 months	263 per 1000	632 per 1000 (276 to 1000)	RR 2.4 (1.05 to 5.49)	38 (1 study)	moderate[5]
Remission at 12-month follow-up Number of people no longer meeting diagnostic criteria for PTSD Follow-up: mean 12 months	500 per 1000	780 per 1000 (585 to 1000)	RR 1.56 (1.17 to 2.08)	118 (2 studies)	moderate[5]
Response at endpoint Number of people showing clinically significant improvement (based on RCI) Follow-up: mean 14 weeks	267 per 1000	741 per 1000 (395 to 1000)	RR 2.78 (1.48 to 5.22)	61 (1 study)	moderate[5]
Response at 12-month follow-up Number of people showing clinically significant improvement (based on RCI) Follow-up: mean 12 months	400 per 1000	708 per 1000 (432 to 1000)	RR 1.77 (1.08 to 2.9)	61 (1 study)	moderate[5]
Dissociative symptoms at endpoint TSCC-Dissociation		The mean dissociative symptoms at endpoint in the		82 (1 study)	low[1,4]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Supportive counselling	Corresponding risk Trauma-focused CBT			
change score Follow-up: mean 12 weeks		intervention groups was 0.27 standard deviations lower (0.71 lower to 0.16 higher)			
Dissociative symptoms at 6-month follow-up TSCC-Dissociation change score Follow-up: mean 6 months		The mean dissociative symptoms at 6-month follow-up in the intervention groups was 0.7 standard deviations lower (1.15 to 0.25 lower)		82 (1 study)	low[1,2]
Dissociative symptoms at 12-month follow-up TSCC-Dissociation change score Follow-up: mean 12 months		The mean dissociative symptoms at 12-month follow-up in the intervention groups was 0.49 standard deviations lower (0.93 to 0.05 lower)		82 (1 study)	low[1,2]
Anxiety symptoms at endpoint STAI-State/SCARED/TSCC:Anxiety change score Follow-up: 8-12 weeks		The mean anxiety symptoms at endpoint in the intervention groups was 0.29 standard deviations lower (0.48 to 0.1 lower)		433 (4 studies)	moderate[1]
Anxiety symptoms at 6-month follow-up STAI-State change score Follow-up: mean 6 months		The mean anxiety symptoms at 6-month follow-up in the intervention groups was 0.3 standard deviations lower		233 (2 studies)	very low[1,3,4]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Supportive counselling	Corresponding risk Trauma-focused CBT			
		(0.82 lower to 0.22 higher)			
Anxiety symptoms at 12-month follow-up STAI-State change score Follow-up: mean 12 months		The mean anxiety symptoms at 12-month follow-up in the intervention groups was 0.17 standard deviations lower (0.51 lower to 0.17 higher)		237 (2 studies)	low[1,4]
Depression symptoms at endpoint BDI/CES-D/CDI/TSCC:Depression change score Follow-up: 6-15 weeks		The mean depression symptoms at endpoint in the intervention groups was 0.41 standard deviations lower (0.67 to 0.16 lower)		552 (7 studies)	moderate[1]
Depression symptoms at 3-month follow-up CES-D/MINI:Depression change score Follow-up: mean 3 months		The mean depression symptoms at 3-month follow-up in the intervention groups was 0.46 standard deviations lower (2.26 lower to 1.33 higher)		70 (2 studies)	very low[1,6,7]
Depression symptoms at 6-month follow-up BDI/CDI/MINI:Depression change score Follow-up: mean 6 months		The mean depression symptoms at 6-month follow-up in the intervention groups was 0.3 standard deviations lower (0.74 lower to 0.13 higher)		320 (4 studies)	very low[1,3,4]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Supportive counselling	Corresponding risk Trauma-focused CBT			
Depression symptoms at 12-17 month follow-up BDI/CDI/MINI:Depression change score Follow-up: 12-17 months		The mean depression symptoms at 12-17 month follow-up in the intervention groups was 0.34 standard deviations lower (0.74 lower to 0.07 higher)		384 (5 studies)	very low[1,3,4]
Emotional and behavioural problems-Internalizing at endpoint CBCL Internalizing change score Follow-up: mean 12 weeks		The mean emotional and behavioural problems-internalizing at endpoint in the intervention groups was 0.08 standard deviations lower (0.33 lower to 0.16 higher)		261 (2 studies)	low[1,2]
Emotional and behavioural problems-Internalizing at 6-month follow-up CBCL Internalizing change score Follow-up: mean 6 months		The mean emotional and behavioural problems-internalizing at 6-month follow-up in the intervention groups was 0.17 standard deviations higher (0.19 lower to 0.53 higher)		224 (2 studies)	low[1,8]
Emotional and behavioural problems-Internalizing at 12-month follow-up CBCL Internalizing change score Follow-up: mean 12 months		The mean emotional and behavioural problems-internalizing at 12-month follow-up in the intervention groups was 0.02 standard deviations higher		228 (2 studies)	low[1,2]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Supportive counselling	Corresponding risk Trauma-focused CBT			
		(0.24 lower to 0.28 higher)			
Emotional and behavioural problems-Externalizing at endpoint CBCL Externalizing change score Follow-up: mean 12 months		The mean emotional and behavioural problems-externalizing at endpoint in the intervention groups was 0.15 standard deviations lower (0.4 lower to 0.09 higher)		261 (2 studies)	low[1,2]
Emotional and behavioural problems-Externalizing at 6-month follow-up CBCL Externalizing change score Follow-up: mean 6 months		The mean emotional and behavioural problems-externalizing at 6-month follow-up in the intervention groups was 0.04 standard deviations higher (0.22 lower to 0.31 higher)		224 (2 studies)	low[1,2]
Emotional and behavioural problems-Externalizing at 12-month follow-up CBCL Externalizing change score Follow-up: mean 12 months		The mean emotional and behavioural problems-externalizing at 12-month follow-up in the intervention groups was 0.18 standard deviations higher (0.27 lower to 0.62 higher)		228 (2 studies)	very low[1,3,8]
Behaviour problems at endpoint CBCL total score; change score Follow-up: 8-12 weeks		The mean behaviour problems at endpoint in the intervention groups was 0.11 standard deviations lower		385 (3 studies)	low[1,2]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Supportive counselling	Corresponding risk Trauma-focused CBT			
		(0.31 lower to 0.09 higher)			
Behaviour problems at 6-month follow-up CBCL total score; change score Follow-up: mean 6 months		The mean behaviour problems at 6-month follow-up in the intervention groups was 0.08 standard deviations higher (0.18 lower to 0.34 higher)		224 (2 studies)	low[1,2]
Behaviour problems at 12-month follow-up CBCL total score; change score Follow-up: mean 12 months		The mean behaviour problems at 12-month follow-up in the intervention groups was 0.04 standard deviations higher (0.32 lower to 0.41 higher)		228 (2 studies)	low[1,2]
Functional impairment at 3-month follow-up CAPS: Functional impairment; change score Follow-up: mean 3 months		The mean functional impairment at 3-month follow-up in the intervention groups was 0.43 standard deviations lower (1 lower to 0.13 higher)		50 (1 study)	low[1,4]
Functional impairment at 6-month follow-up CAPS: Functional impairment; change score Follow-up: mean 6 months		The mean functional impairment at 6-month follow-up in the intervention groups was 0.01 standard deviations higher (0.55 lower to 0.57 higher)		49 (1 study)	very low[1,7]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Supportive counselling	Corresponding risk Trauma-focused CBT			
Functional impairment at 12-month follow-up CAPS: Functional impairment; change score Follow-up: mean 12 months		The mean functional impairment at 12-month follow-up in the intervention groups was 1.12 standard deviations lower (1.73 to 0.5 lower)		48 (1 study)	low[1,2]
Global functioning at endpoint CGAS; change score Follow-up: 14-15 weeks Better indicated by higher values		The mean global functioning at endpoint in the intervention groups was 1.08 standard deviations higher (0.65 to 1.5 higher)		99 (2 studies)	low[1,2]
Global functioning at 6-month follow-up CGAS; change score Follow-up: mean 6 months Better indicated by higher values		The mean global functioning at 6-month follow-up in the intervention groups was 1.05 standard deviations higher (0.37 to 1.73 higher)		38 (1 study)	low[1,2]
Global functioning at 12-month follow-up CGAS; change score Follow-up: mean 12 months Better indicated by higher values		The mean global functioning at 12-month follow-up in the intervention groups was 1 standard deviations higher (0.47 to 1.54 higher)		61 (1 study)	low[1,2]
Discontinuation Number of participants lost to follow-up for any	287 per 1000	224 per 1000 (175 to 290)	RR 0.78 (0.61 to 1.01)	678 (8 studies)	Moderate[4]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Supportive counselling	Corresponding risk Trauma-focused CBT			
reason Follow-up: 3-15 weeks					

BDI= Beck Depression Inventory; CAPS= Clinician Administered PTSD Symptom; CBCL= Child Behavioural Checklist; CBT=cognitive behavioural therapy; CDI= Children's Depression Inventory; CES-D= Centre for Epidemiological Studies-Depression; CGAS= Children's Global Assessment Scale; CI=confidence interval; CPSS= Child PTSD Symptom Scale; CRIES= Children's Revised Impact of Event Scale; K-SADS= Kiddie Schedule for Affective Disorders and Schizophrenia-Epidemiological; PTSD=post-traumatic stress disorder; RCI=Reliable Change Indecies; RR=risk ratio; SCARED=Screen for Child Anxiety Related Disorders; SMD=standardised mean difference; STAI=State-Trait Anxiety Inventory; TSCC =Trauma Symptom Checklist for Children; UCLA PTSD-RI=UCLA PTSD-Reaction Index

[1] *Risk of bias is high or unclear across multiple domains*
[2] *OIS not met (N<400)*
[3] *Substantial heterogeneity (I2>50%)*
[4] *95% CI crosses both line of no effect and threshold for clinically important benefit*
[5] *OIS not met (events<300)*
[6] *Considerable heterogeneity (I2>80%)*
[7] *95% CI crosses line of no effect and thresholds for both clinically important benefit and harm*
[8] *95% CI crosses both line of no effect and threshold for clinically important harm*

Table 9: Summary clinical evidence profile: Trauma-focused CBT versus eye movement desensitisation and reprocessing (EMDR) for delayed treatment (>3 months)

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Eye movement desensitisation and reprocessing (EMDR)	Corresponding risk Trauma-focused CBT			
PTSD symptomatology self-rated at endpoint CRTI change score Follow-up: mean 6 weeks		The mean PTSD simptomatology self-rated at endpoint in the intervention groups was 0.13 standard deviations lower (0.56 lower to 0.29 higher)		85 (1 study)	very low[1,2]
PTSD symptomatology self-rated at 3-month follow-up CRTI change score Follow-up:		The mean PTSD symptomatology self-rated at 3-month follow-up in the intervention groups was 0.35 standard deviations lower		85 (1 study)	very low[1,2]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Eye movement desensitisation and reprocessing (EMDR)	Corresponding risk Trauma-focused CBT			
mean 3 months		(0.77 lower to 0.08 higher)			
PTSD symptomatology self-rated at 12-month follow-up CRTI change score Follow-up: mean 12 months		The mean PTSD symptomatology self-rated at 12-month follow-up in the intervention groups was 0.24 standard deviations lower (0.66 lower to 0.19 higher)		85 (1 study)	very low[1,2]
PTSD symptomatology clinician-rated CAPS-CA change score Follow-up: mean 8 weeks		The mean PTSD symptomatology clinician-rated in the intervention groups was 0.04 standard deviations higher (0.53 lower to 0.6 higher)		48 (1 study)	low[3]
Emotional and behavioural problems at endpoint SDQ-A change score Follow-up: mean 6 weeks		The mean emotional and behavioural problems at endpoint in the intervention groups was 0.55 standard deviations higher (0.12 to 0.99 higher)		85 (1 study)	very low[1,4]
Emotional and behavioural problems at 3-month follow-up SDQ-A change score Follow-up: mean 3 months		The mean emotional and behavioural problems at 3-month follow-up in the intervention groups was 0.46 standard deviations higher (0.03 to 0.89 higher)		85 (1 study)	very low[1,4]
Emotional and behavioural problems at 12-month follow-up		The mean emotional and behavioural problems at 12-month follow-up in		85 (1 study)	very low[1,4]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Eye movement desensitisation and reprocessing (EMDR)	Corresponding risk Trauma-focused CBT			
SDQ-A change score Follow-up: mean 12 months		the intervention groups was 0.45 standard deviations higher (0.02 to 0.89 higher)			
Quality of life at endpoint KIDSCREEN-27: Global HRQoL T-scores; change score Follow-up: mean 6 weeks Better indicated by higher values		The mean quality of life at endpoint in the intervention groups was 0.23 standard deviations lower (0.66 lower to 0.2 higher)		85 (1 study)	very low[1,5]
Quality of life at 3-month follow-up KIDSCREEN-27: Global HRQoL T-scores; change score Follow-up: mean 3 months Better indicated by higher values		The mean quality of life at 3-month follow-up in the intervention groups was 0.39 standard deviations lower (0.82 lower to 0.04 higher)		85 (1 study)	very low[1,5]
Quality of life at 12-month follow-up KIDSCREEN-27: Global HRQoL T-scores; change score Follow-up: mean 12 months Better indicated by higher values		The mean quality of life at 12-month follow-up in the intervention groups was 0.3 standard deviations lower (0.73 lower to 0.12 higher)		85 (1 study)	very low[1,5]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Eye movement desensitisation and reprocessing (EMDR)	Corresponding risk Trauma-focused CBT			
Discontinuation Number of participants lost to follow-up for any reason Follow-up: 6-8 weeks	118 per 1000	94 per 1000 (36 to 241)	RR 0.8 (0.31 to 2.05)	133 (2 studies)	low[3]

CAPS=Clinician Administered PTSD Symptom;; CBT=cognitive behavioural therapy; CI=confidence interval; CRTI= Children's Response to Trauma Inventory; EMDR=Eye Movement Desensitisation and Reprocessing; HRQoL=Health-Related Quality of Life; KIDSCREEN-27= Health-related quality of life questionnaire for children, young people and their parents; PTSD=post-traumatic stress disorder; RR=risk ratio; SDQ-A= Strength and Difficulties Questionnaires; SMD=standard mean difference.

[1] *Risk of bias is high or unclear across multiple domains*

[2] *95% CI crosses both line of no effect and threshold for clinically important benefit*

[3] *95% CI crosses line of no effect and thresholds for both clinically important benefit and harm*

[4] *OIS not met (N<400)*

[5] *95% CI crosses both line of no effect and threshold for clinically important harm*

Table 10: Summary clinical evidence profile: Trauma-focused CBT versus combined somatic and cognitive therapies for delayed treatment (>3 months)

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Combined somatic and cognitive therapies	Corresponding risk Trauma-focused CBT			
PTSD symptomatology self-rated at endpoint SPTSS change score Follow-up: mean 2 weeks		The mean PTSD symptomatology self-rated at endpoint in the intervention groups was 0.87 standard deviations higher (0.21 to 1.53 higher)		39 (1 study)	very low[1,2]
PTSD symptomatology self-rated at 3-month follow-up SPTSS		The mean PTSD symptomatology self-rated at 3-month follow-up in the intervention groups was		39 (1 study)	very low[1,2]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Combined somatic and cognitive therapies	Corresponding risk Trauma-focused CBT			
change score Follow-up: mean 3 months		0.8 standard deviations higher (0.15 to 1.46 higher)			
PTSD symptomatology self-rated at 6-month follow-up SPTSS change score Follow-up: mean 6 months		The mean PTSD symptomatology self-rated at 6-month follow-up in the intervention groups was 0.83 standard deviations higher (0.17 to 1.48 higher)		39 (1 study)	very low[1,2]
PTSD symptomatology self-rated at 12-month follow-up SPTSS change score Follow-up: mean 12 months		The mean PTSD symptomatology self-rated at 12-month follow-up in the intervention groups was 0.92 standard deviations higher (0.26 to 1.58 higher)		39 (1 study)	very low[1,2]
Anxiety symptoms at endpoint HADS-A change score Follow-up: mean 2 weeks		The mean anxiety symptoms at endpoint in the intervention groups was 1.01 standard deviations higher (0.34 to 1.68 higher)		39 (1 study)	very low[1,2]
Anxiety symptoms at 3-month follow-up HADS-A change score Follow-up: mean 3 months		The mean anxiety symptoms at 3-month follow-up in the intervention groups was 0.91 standard deviations higher (0.25 to 1.57 higher)		39 (1 study)	very low[1,2]
Anxiety symptoms at 6-month follow-up HADS-A change score		The mean anxiety symptoms at 6-month follow-up in the intervention groups was 0.22 standard		39 (1 study)	very low[1,3]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Combined somatic and cognitive therapies	Corresponding risk Trauma-focused CBT			
Follow-up: mean 6 months		deviations higher (0.41 lower to 0.85 higher)			
Anxiety symptoms at 12-month follow-up HADS-A change score Follow-up: mean 12 months		The mean anxiety symptoms at 12-month follow-up in the intervention groups was 0.09 standard deviations lower (0.71 lower to 0.54 higher)		39 (1 study)	very low[1,4]
Depression symptoms at endpoint HADS-D change score Follow-up: mean 2 weeks		The mean depression symptoms at endpoint in the intervention groups was 1.3 standard deviations higher (0.6 to 1.99 higher)		39 (1 study)	very low[1,2]
Depression symptoms at 3-month follow-up HADS-D change score Follow-up: mean 3 months		The mean depression symptoms at 3-month follow-up in the intervention groups was 0.45 standard deviations higher (0.19 lower to 1.09 higher)		39 (1 study)	very low[1,3]
Depression symptoms at 6-month follow-up HADS-D change score Follow-up: mean 6 months		The mean depression symptoms at 6-month follow-up in the intervention groups was 0.3 standard deviations higher (0.33 lower to 0.93 higher)		39 (1 study)	very low[1,3]
Depression symptoms at 12-month follow-up HADS-D change score Follow-up:		The mean depression symptoms at 12-month follow-up in the intervention groups was 0.66 standard		39 (1 study)	very low[1,2]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Combined somatic and cognitive therapies	Corresponding risk Trauma-focused CBT			
mean 12 months		deviations higher (0.02 to 1.31 higher)			
Discontinuation Number of participants lost to follow-up for any reason Follow-up: mean 2 weeks	0 per 1000	0 per 1000 (0 to 0)	RR 3 (0.13 to 69.52)	40 (1 study)	very low[1,4]

CBT=cognitive behavioural therapy; CI=confidence interval; HADS-A/D= Hospital Anxiety and Depression Scale-Anxiety/Depression; PTSD=post-traumatic stress disorder; RR=risk ratio; SMD=standardised mean difference; SPTSS= Screen for Post-Traumatic Stress Symptoms
[1] Risk of bias is high or unclear across multiple domains
[2] OIS not met (N<400)
[3] 95% CI crosses both line of no effect and threshold for clinically important harm
[4] 95% CI crosses line of no effect and thresholds for both clinically important benefit and harm

Table 11: Summary clinical evidence profile: Trauma-focused CBT + parent training versus waitlist for delayed treatment (>3 months)

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Waitlist	Corresponding risk Trauma-focused CBT + parent training			
PTSD symptomatology clinician-rated at endpoint ADIS-C: PTSD; change score Follow-up: mean 20 weeks		The mean PTSD symptomatology clinician-rated at endpoint in the intervention groups was 1.73 standard deviations lower (2.69 to 0.77 lower)		24 (1 study)	low[1,2]
PTSD symptomatology clinician-rated at 3-month follow-up ADIS-C: PTSD; change score Follow-up: mean 3 months		The mean PTSD symptomatology clinician-rated at 3-month follow-up in the intervention groups was 1.34 standard deviations lower (2.24 to 0.44 lower)		24 (1 study)	low[1,2]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Waitlist	Corresponding risk Trauma-focused CBT + parent training			
Anxiety symptoms at endpoint RCMAS; change score Follow-up: mean 20 weeks		The mean anxiety symptoms at endpoint in the intervention groups was 0.33 standard deviations lower (1.13 lower to 0.48 higher)		24 (1 study)	low[1,3]
Anxiety symptoms at 3-month follow-up RCMAS; change score Follow-up: mean 3 months		The mean anxiety symptoms at 3-month follow-up in the intervention groups was 0.75 standard deviations lower (1.58 lower to 0.09 higher)		24 (1 study)	low[1,3]
Depression symptoms at endpoint CDI; change score Follow-up: mean 20 weeks		The mean depression symptoms at endpoint in the intervention groups was 0.61 standard deviations lower (1.43 lower to 0.21 higher)		24 (1 study)	low[1,3]
Depression symptoms at 3-month follow-up CDI; change score Follow-up: mean 3 months		The mean depression symptoms at 3-month follow-up in the intervention groups was 0.36 standard deviations lower (1.17 lower to 0.45 higher)		24 (1 study)	low[1,3]
Emotional and behavioural problems-Internalizing at endpoint CBCL: Internalizing; change score Follow-up: mean 20 weeks		The mean emotional and behavioural problems-internalizing at endpoint in the intervention groups was 0.45 standard deviations lower (1.26 lower to 0.36 higher)		24 (1 study)	low[1,3]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Waitlist	Corresponding risk Trauma-focused CBT + parent training			
Emotional and behavioural problems-Internalizing at 3-month follow-up CBCL: Internalizing; change score Follow-up: mean 3 months		The mean emotional and behavioural problems-internalizing at 3-month follow-up in the intervention groups was 0.92 standard deviations lower (1.77 to 0.07 lower)		24 (1 study)	low[1,2]
Emotional and behavioural problems-Externalizing at endpoint CBCL: Externalizing; change score Follow-up: mean 20 weeks		The mean emotional and behavioural problems-externalizing at endpoint in the intervention groups was 0.44 standard deviations lower (1.25 lower to 0.37 higher)		24 (1 study)	low[1,3]
Emotional and behavioural problems-Externalizing at 3-month follow-up CBCL: Externalizing; change score Follow-up: mean 3 months		The mean emotional and behavioural problems-externalizing at 3-month follow-up in the intervention groups was 0.88 standard deviations lower (1.73 to 0.04 lower)		24 (1 study)	low[1,2]
Global functioning at endpoint GAF; change score Follow-up: mean 20 weeks Better indicated by higher values		The mean global functioning at endpoint in the intervention groups was 2.02 standard deviations higher (1.01 to 3.04 higher)		24 (1 study)	low[1,2]
Global functioning at 3-month follow-up GAF; change score		The mean global functioning at 3-month follow-up in the intervention groups was		24 (1 study)	low[1,2]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Waitlist	Corresponding risk Trauma-focused CBT + parent training			
Follow-up: mean 3 months Better indicated by higher values		2.04 standard deviations higher (1.02 to 3.06 higher)			
Discontinuation Number of participants lost to follow-up for any reason Follow-up: mean 20 weeks	167 per 1000	250 per 1000 (50 to 1000)	RR 1.5 (0.3 to 7.43)	24 (1 study)	low[4]

ADIS-C= Anxiety Disorder Interview Schedule-Child version; CBT=cognitive behavioural therapy; CBCL= Child Behavioural Checklist; CBT=cognitive behavioural therapy; CDI= Children's Depression Inventory; CI=confidence interval; GAF= Global Assessment of Functioning; PTSD=post-traumatic stress disorder; RCMAS= Revised Children's Manifest Anxiety Scale; RR=risk ratio; SMD=standardised mean difference

[1] Risk of bias is high or unclear across multiple domains

[2] OIS not met (N<400)

[3] 95% CI crosses both line of no effect and threshold for clinically important benefit

[4] 95% CI crosses line of no effect and thresholds for both clinically important benefit and harm

Table 12: Summary clinical evidence profile: Trauma-focused CBT versus parent training (CBT with parent-only) for delayed treatment (>3 months)

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Parent training (CBT with parent-only)	Corresponding risk Trauma-focused CBT			
PTSD symptomatology clinician-rated at endpoint K-SADS-E: PTSD; change score Follow-up: mean 12 weeks		The mean PTSD symptomatology clinician-rated at endpoint in the intervention groups was 0.34 standard deviations lower (0.96 lower to 0.27 higher)		41 (1 study)	low[1,2]
PTSD symptomatology clinician-rated at 3-month follow-up		The mean PTSD symptomatology clinician-rated at 3-month follow-up in the intervention groups was		41 (1 study)	low[1,3]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Parent training (CBT with parent-only)	Corresponding risk Trauma-focused CBT			
K-SADS-E: PTSD; change score Follow-up: mean 3 months		0.12 standard deviations higher (0.49 lower to 0.73 higher)			
PTSD symptomatology clinician-rated at 6-month follow-up K-SADS-E: PTSD; change score Follow-up: mean 6 months		The mean PTSD symptomatology clinician-rated at 6-month follow-up in the intervention groups was 0.25 standard deviations lower (0.87 lower to 0.36 higher)		41 (1 study)	low[1,2]
PTSD symptomatology clinician-rated at 12-month follow-up K-SADS-E: PTSD; change score Follow-up: mean 12 months		The mean PTSD symptomatology clinician-rated at 12-month follow-up in the intervention groups was 0.07 standard deviations higher (0.54 lower to 0.68 higher)		41 (1 study)	very low[1,4]
PTSD symptomatology clinician-rated at 2-year follow-up K-SADS-E: PTSD; change score Follow-up: mean 2 years		The mean PTSD symptomatology clinician-rated at 2-year follow-up in the intervention groups was 0.64 standard deviations higher (0.01 to 1.27 higher)		41 (1 study)	low[1,5]
Emotional and behavioural problems-Externalizing at endpoint CBCL Externalizing change score		The mean emotional and behavioural problems-externalizing at endpoint in the intervention groups was		38 (1 study)	very low[1,4]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Parent training (CBT with parent-only)	Corresponding risk Trauma-focused CBT			
Follow-up: mean 12 weeks		0.13 standard deviations higher (0.51 lower to 0.77 higher)			
Emotional and behavioural problems-Externalizing at 3-month follow-up CBCL Externalizing change score Follow-up: mean 3 months		The mean emotional and behavioural problems-externalizing at 3-month follow-up in the intervention groups was 0.61 standard deviations lower (1.27 lower to 0.04 higher)		38 (1 study)	low[1,2]
Emotional and behavioural problems-Externalizing at 6-month follow-up CBCL Externalizing change score Follow-up: mean 6 months		The mean emotional and behavioural problems-externalizing at 6-month follow-up in the intervention groups was 0.75 standard deviations lower (1.41 to 0.09 lower)		38 (1 study)	low[1,5]
Emotional and behavioural problems-Externalizing at 12-month follow-up CBCL Externalizing change score Follow-up: mean 12 months		The mean emotional and behavioural problems-externalizing at 12-month follow-up in the intervention groups was 0.79 standard deviations lower (1.45 to 0.12 lower)		38 (1 study)	low[1,5]
Emotional and behavioural problems-Externalizing at 2-year follow-up CBCL Externalizing		The mean emotional and behavioural problems-externalizing at 2-year follow-up in the intervention groups was		38 (1 study)	low[1,2]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Parent training (CBT with parent-only)	Corresponding risk Trauma-focused CBT			
change score Follow-up: mean 2 years		0.53 standard deviations lower (1.18 lower to 0.12 higher)			
Depression symptoms at endpoint CDI change score Follow-up: mean 12 weeks		The mean depression symptoms at endpoint in the intervention groups was 0.3 standard deviations higher (0.32 lower to 0.92 higher)		41 (1 study)	low[1,3]
Depression symptoms at 3-month follow-up CDI change score Follow-up: mean 3 months		The mean depression symptoms at 3-month follow-up in the intervention groups was 0.12 standard deviations higher (0.49 lower to 0.73 higher)		41 (1 study)	low[1,3]
Depression symptoms at 6-month follow-up CDI change score Follow-up: mean 6 months		The mean depression symptoms at 6-month follow-up in the intervention groups was 0.09 standard deviations higher (0.53 lower to 0.7 higher)		41 (1 study)	very low[1,4]
Depression symptoms at 12-month follow-up CDI change score Follow-up: mean 12 months		The mean depression symptoms at 12-month follow-up in the intervention groups was 0.31 standard deviations higher (0.31 lower to 0.93 higher)		41 (1 study)	low[1,3]
Depression symptoms at 2-year follow-up		The mean depression symptoms at 2-year follow-up in		41 (1 study)	low[1,5]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Parent training (CBT with parent-only)	Corresponding risk Trauma-focused CBT			
CDI change score Follow-up: mean 2 years		the intervention groups was 0.73 standard deviations higher (0.1 to 1.37 higher)			

ADIS-C= Anxiety Disorder Interview Schedule-Child version; CBCL= Child Behavioural Checklist; CBT=cognitive behavioural therapy; CDI= Children's Depression Inventory; CI=confidence interval; GAF= Global Assessment of Functioning; PTSD=post-traumatic stress disorder; RCMAS=; RR=risk ratio; SMD=standardised mean difference

[1] *Risk of bias is high or unclear across multiple outcomes*

[2] *95% CI crosses both line of no effect and threshold for clinically important benefit*

[3] *95% CI crosses both line of no effect and threshold for clinically important harm*

[4] *95% CI crosses line of no effect and thresholds for both clinically important benefit and harm*

[5] *OIS not met (N<400)*

Table 13: Summary clinical evidence profile: Trauma-focused CBT (+ psychoeducational group) versus psychoeducational group for delayed treatment (>3 months)

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Psychoeducational group	Corresponding risk Trauma-focused CBT (+ psychoeducational group)			
PTSD symptomatology self-rated at endpoint UCLA PTSD-RI; change score Follow-up: mean 20 weeks		The mean PTSD symptomatology self-rated at endpoint in the intervention groups was 0.46 standard deviations lower (0.81 to 0.11 lower)		127 (1 study)	low[1,2]
PTSD symptomatology self-rated at 4 month follow-up UCLA PTSD-RI; change score Follow-up: mean 4 months		The mean PTSD symptomatology self-rated at 4 month follow-up in the intervention groups was 0.57 standard deviations lower (1.07 to 0.07 lower)		65 (1 study)	low[1,2]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Psychoeducational group	Corresponding risk Trauma-focused CBT (+ psychoeducational group)			
Response at endpoint Number of people showing clinically significant improvement, based on reliable change indices (RCI) Follow-up: mean 20 weeks	244 per 1000	493 per 1000 (317 to 768)	RR 2.02 (1.3 to 3.15)	159 (1 study)	low[1,3]
Response at 4-month follow-up Number of people showing clinically significant improvement, based on reliable change indices (RCI) Follow-up: mean 4 months	171 per 1000	377 per 1000 (215 to 657)	RR 2.21 (1.26 to 3.85)	159 (1 study)	low[1,3]
Depression symptoms at endpoint DSRS change score Follow-up: mean 20 weeks		The mean depression symptoms at endpoint in the intervention groups was 0.44 standard deviations lower (0.8 to 0.09 lower)		125 (1 study)	low[1,2]
Depression symptoms at 4 month follow-up DSRS change score Follow-up: mean 4 months		The mean depression symptoms at 4 month follow-up in the intervention groups was 0.59 standard deviations lower (1.08 to 0.09 lower)		66 (1 study)	low[1,2]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Psychoeducational group	Corresponding risk Trauma-focused CBT (+ psychoeducational group)			
Discontinuation Number of participants lost to follow-up for any reason Follow-up: mean 20 weeks	256 per 1000	143 per 1000 (74 to 277)	RR 0.56 (0.29 to 1.08)	159 (1 study)	moderate [4]

CBT=cognitive behavioural therapy; CI=confidence interval; DSRS= Depression Self-Rating Scale; PTSD=post-traumatic stress disorder; RR=risk ratio; SMD=standard mean difference; UCLA PTSD-RI=UCLA PTSD-Reaction Index
[1] Risk of bias is high or unclear across multiple outcomes
[2] OIS not met (N<400)
[3] OIS not met (events<300)
[4] 95% CI crosses both line of no effect and threshold for clinically important harm

See appendix F for full GRADE tables.

Sensitivity and subgroup analysis

Sub-analysis of the comparison trauma-focused CBT versus waitlist, TAU or no treatment for delayed treatment (>3 months) of clinically important symptoms/PTSD, by multiplicity of trauma revealed a statistically significant subgroup difference for clinician-rated PTSD symptomatology ($Chi^2 = 15.60$, $p < 0.0001$), with a relatively larger effect observed for single incident index trauma (SMD -2.80 [-3.62, -1.99]) compared with multiple incident index trauma (SMD -0.98 [-1.37, -0.59]), although both effects are large and statistically significant. Non-significant subgroup differences were observed for self-rated PTSD symptomatology and discontinuation.

Sub-analysis of the comparison trauma-focused CBT versus waitlist, TAU or no treatment for delayed treatment (>3 months) of clinically important symptoms/PTSD, by specific intervention revealed a statistically significant subgroup difference for clinician-rated PTSD symptomatology ($Chi^2 = 28.74$, $p < 0.00001$), with relatively larger effects observed for cognitive therapy (SMD -2.80 [-3.62, -1.99]) and narrative exposure therapy (SMD -1.87 [-2.84, -0.90]), although effects were clinically important and statistically significant across all specific interventions. Non-significant subgroup differences were observed for self-rated PTSD symptomatology and discontinuation.

Sub-analysis of the comparison trauma-focused CBT versus waitlist, TAU or no treatment for delayed treatment (>3 months) of clinically important symptoms/PTSD, by format revealed a statistically significant difference for self-rated PTSD symptomatology ($Chi^2 = 8.52$, $p = 0.04$), with relatively larger effects observed for individual (child-only; SMD -1.82 [-2.43, -1.21]) and caregiver and child (SMD -1.25 [-2.09, -0.42]) compared with group (SMD -0.72 [-1.16, -0.28]), although effects were clinically important and statistically significant across all formats. Non-significant

subgroup differences were observed for clinician-rated PTSD symptomatology and discontinuation.

Sub-analysis of the comparison trauma-focused CBT versus waitlist, TAU or no treatment for delayed treatment (>3 months) of clinically important symptoms/PTSD, by age range revealed non-significant subgroup differences on PTSD symptomatology (self-rated and clinician-rated) and discontinuation, between studies where the age range includes children aged 7 years and under and studies where the age range only includes over 7s.

Sub-analysis of the comparison trauma-focused CBT versus waitlist, TAU or no treatment for delayed treatment (>3 months) of clinically important symptoms/PTSD, by diagnostic status at baseline revealed a statistically significant subgroup difference for clinician-rated PTSD symptomatology ($Chi^2 = 4.58$, $p = 0.03$), with relatively larger effects observed for those with a diagnosis at baseline (SMD -2.31 [-3.26, -1.36]) compared to those with clinically important PTSD symptoms (scoring above a threshold on a validated scale) but not necessarily a diagnosis at baseline, although effects are large and statistically significant for both subgroups. Non-significant subgroup differences were observed for self-rated PTSD symptomatology and discontinuation.

Sub-analysis of the comparison trauma-focused CBT versus waitlist, TAU or no treatment for delayed treatment (>3 months) of clinically important symptoms/PTSD, by trauma type revealed a statistically significant subgroup difference for clinician-rated PTSD symptomatology ($Chi^2 = 28.74$, $p < 0.00001$), with relatively larger effects observed for children exposed to motor vehicle collisions (SMD -2.80 [-3.62, -1.99]) or witnessing war as a civilian (SMD -1.87 [-2.84, -0.90]), although effects are clinically important and statistically significant across trauma types. Non-significant subgroup differences were observed for self-rated PTSD symptomatology and discontinuation.

Sub-analysis of the comparison trauma-focused CBT versus supportive counselling for delayed treatment (>3 months) of clinically important symptoms/PTSD, by multiplicity of trauma revealed non-significant subgroup differences for self-rated PTSD symptomatology and discontinuation, and sub-analysis was not possible for clinician-rated PTSD as there is only a single subgroup (multiple incident index trauma).

Sub-analysis of the comparison trauma-focused CBT versus supportive counselling for delayed treatment (>3 months) of clinically important symptoms/PTSD by specific intervention, by format, by age range, by diagnostic status at baseline, and by trauma type revealed non-significant subgroup differences for PTSD symptomatology (self-rated and clinician-rated) and discontinuation.

See forest plots in Appendix E.

Non-trauma-focused cognitive behavioural therapies (CBT): clinical evidence

Included studies

Five studies of non-trauma-focused CBT for the treatment of PTSD in children and young people were identified for full-text review. Of these 3 studies, 1 RCT (N=33) was included in a single comparison for non-trauma-focused CBT.

For early treatment (intervention initiated 1-3 months post-trauma) of PTSD symptoms, there were no included studies.

For delayed treatment (intervention initiated more than 3 months post-trauma) of PTSD symptoms, 1 RCT (N=33) compared non-trauma-focused CBT in addition to TAU with TAU-only (Najavits 2006)

Excluded studies

Four studies were reviewed at full text and excluded from this review because the intervention was not targeted at PTSD symptoms, group assignment was non-randomised, or the paper was a systematic review with no new useable data and any meta-analysis results not appropriate to extract.

Studies not included in this review with reasons for their exclusions are provided in Appendix K.

Summary of clinical studies included in the evidence review

Table 14 provides a brief summary of the included study and evidence from this study is summarised in the clinical GRADE evidence profile below (Table 15).

See also the study selection flow chart in Appendix C, forest plots in Appendix E and study evidence tables in Appendix D.

Table 14: Summary of included studies: Non-trauma-focused CBT for delayed treatment (>3 months)

Comparison	Non-trauma focused CBT (+ TAU) versus TAU
Total no. of studies (N randomised)	1 (33)
Study ID	Najavits 2006
Country	US
Diagnostic status	PTSD diagnosis according to ICD/DSM criteria
Mean months since onset of PTSD	61.2
Mean age (range)	16.1 (range NR)
Sex (% female)	100
Ethnicity (% BME)	21
Coexisting conditions	All met current DSM-IV criteria for both PTSD and SUD, with 94% having substance dependence. Current substance dependence diagnoses per DSM-IV criteria at intake were: cannabis (79%), alcohol (67%), hallucinogens (21%), amphetamines (15%), cocaine (9%), opioids (9%), inhalants (9%), barbiturates (6%), polysubstance (6%), and PCP 1 (3%). Participants could have more than one diagnosis
Mean months since traumatic event	88 (average age of first trauma was 8.75)
Type of traumatic event	Mixed: The most common trauma category was sexual abuse (88%), followed by general disaster/accident (82%), physical abuse (73%), and crime (39%)
Single or multiple incident index trauma	Multiple

Comparison	Non-trauma focused CBT (+ TAU) versus TAU
Lifetime experience of trauma	NR
Intervention details	Seeking Safety (based on manual by Najavits 2002) + TAU
Intervention format	Individual
Intervention intensity	25x 50-min sessions (20.8 hours) + 1 session with carer. Mean attended seeking safety sessions 9.7 (5.1) (+ 1.33 [SD = 2.09] sessions of trauma discussion; 0.78 sessions [SD = 1.00] of unspecified therapy)
Comparator	TAU: All participants were allowed to attend any treatments they naturalistically sought (e.g., Alcoholics Anonymous, psychotropic medication, and other individual and group psychotherapies)
Intervention length (weeks)	13

NR-Not reported; TAU-Treatment as usual.

See appendix D for full evidence tables.

Quality assessment of clinical studies included in the evidence review

The clinical evidence profile for this review (non-trauma-focused CBT for the treatment of PTSD in children and young people) is presented in Table 15.

Table 15: Summary clinical evidence profile: Non-trauma focused CBT (+ TAU) versus TAU for delayed treatment (>3 months)

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk TAU	Corresponding risk Non-trauma focused CBT (+TAU)			
Depression symptoms at endpoint Adolescent Psychopathology Scale: Axis I - Major Depression; change score Follow-up: mean 13 weeks		The mean depression symptoms at endpoint in the intervention groups was 0.33 standard deviations lower (1.02 lower to 0.37 higher)		33 (1 study)	low[1,2]
Depression symptoms at 3-month follow-up Adolescent Psychopathology Scale: Axis I - Major Depression; change score Follow-up: mean 3 months		The mean depression symptoms at 3-month follow-up in the intervention groups was 0.71 standard deviations higher (0 to 1.42 higher)		33 (1 study)	low[1,3]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk TAU	Corresponding risk Non-trauma focused CBT (+TAU)			
Substance use disorder symptoms at endpoint Adolescent Psychopathology Scale: Axis I - Substance Use Disorder; change score Follow-up: mean 13 weeks		The mean substance use disorder symptoms at endpoint in the intervention groups was 1.03 standard deviations lower (1.77 to 0.3 lower)		33 (1 study)	low[1,4]
Substance use disorder symptoms at 3-month follow-up Adolescent Psychopathology Scale: Axis I - Substance Use Disorder; change score Follow-up: mean 3 months		The mean substance use disorder symptoms at 3-month follow-up in the intervention groups was 0.63 standard deviations higher (0.08 lower to 1.33 higher)		33 (1 study)	low[1,3]
Discontinuation Number of participants lost to follow-up for any reason Follow-up: mean 13 weeks	200 per 1000	222 per 1000 (58 to 842)	RR 1.11 (0.29 to 4.21)	33 (1 study)	low[5]

CBT=cognitive behavioural therapy; CI=confidence interval; PTSD=post-traumatic stress disorder; RR=risk ratio; SMD=standardised mean difference; TAU=treatment as usual
[1] Risk of bias is high or unclear across multiple outcomes
[2] 95% CI crosses both line of no effect and threshold for clinically important benefit
[3] 95% CI crosses both line of no effect and threshold for clinically important harm
[4] OIS not met (N<400)
[5] 95% CI crosses line of no effect and thresholds for both clinically important benefit and harm

See appendix F for full GRADE tables.

Behavioural therapies: clinical evidence

Included studies

Three studies of behavioural therapies for the treatment of PTSD in children and young people were identified for full-text review. None of these studies could not be included.

Excluded studies

Three studies were reviewed at full text and excluded from this review because the intervention was not targeted at PTSD symptoms, the paper was a systematic review with no new useable data and any meta-analysis results not appropriate to extract, or the reference was a book section.

Studies not included in this review with reasons for their exclusions are provided in Appendix K.

Psychologically-focused debriefing: clinical evidence

Included studies

Two studies of psychologically-focused debriefing for the treatment of PTSD in children and young people were identified for full-text review. Neither of these studies could be included.

Excluded studies

Two studies were reviewed at full text and excluded from this review due to non-randomised group assignment or because the paper was a commentary.

Studies not included in this review with reasons for their exclusions are provided in Appendix K.

Eye movement desensitisation and reprocessing (EMDR): clinical evidence

Included studies

Eleven studies of eye movement desensitisation and reprocessing (EMDR) for the treatment of PTSD in children and young people were identified for full-text review. Of these 11 studies, 3 RCTs (N=165) were included in a single comparison for EMDR.

For early treatment (intervention initiated 1-3 months post-trauma) of PTSD symptoms, there were no included studies.

For delayed treatment (intervention initiated more than 3 months post-trauma) of PTSD symptoms, 3 RCTs (N=165) compared EMDR with waitlist or TAU (Ahmad 2007/ Ahmad & Sundelin-Wahlsten 2008 [one study reported across two papers]; de Roos 2017; Soberman 2002).

Comparison with trauma-focused CBT are presented in the Trauma-focused CBT section above.

Excluded studies

Eight studies were reviewed at full text and excluded from this review. The most common reasons for exclusion were that the intervention was not targeted at PTSD symptoms or the paper was a systematic review with no new useable data and any meta-analysis results not appropriate to extract.

Studies not included in this review with reasons for their exclusions are provided in Appendix K.

Summary of clinical studies included in the evidence review

See also the study selection flow chart in Appendix C, forest plots in Appendix E and study evidence tables in Appendix D.

Table 16 provides brief summaries of the included studies and evidence from these are summarised in the clinical GRADE evidence profile below (Table 17).

See also the study selection flow chart in Appendix C, forest plots in Appendix E and study evidence tables in Appendix D.

Table 16: Summary of included studies: Eye movement desensitisation and reprocessing (EMDR) for delayed treatment (>3 months)

Comparison	EMDR versus waitlist or TAU
Total no. of studies (N randomised)	3 (165)
Study ID	Ahmad 2007/2008[1] de Roos 2017[2] Soberman 2002[3]
Country	Sweden[1] Netherlands[2] US[3]
Diagnostic status	PTSD diagnosis according to ICD/DSM criteria[1] Clinically important PTSD symptoms (scoring above a threshold on validated scale) [2,3]
Mean months since onset of PTSD	Mean NR (the duration between the traumatic event and the establishment of a PTSD diagnosis was less than 1 year for 18.2% of the subjects, 1-2 years for 48.5%, and more than 3 years for 33.3%)[1] NR[2,3]
Mean age (range)	9.9 (6-16) [1] 13.1(8-18) [2] Mean NR (10-16) [3]
Sex (% female)	61[1] 57[2] 0[3]
Ethnicity (% BME)	NR
Coexisting conditions	79% fulfilled DSM-IV criteria for at least one additional diagnosis: Depression (46%); ADHD (30%); ODD (21%); separation anxiety (18%); conduct disorder (12%), overanxious disorder and autism spectrum (3%)[1] 54% had one or more co-morbid disorder (assessed with ADIS-C) [2] Other primary diagnoses included: Conduct Disorder (59%); Attention Deficit Hyperactive Disorder (17%), Learning Disability (14%), Substance Abuse (13%), and Oppositional/Defiant Disorder (3%)[3]
Mean months since traumatic event	Mean NR (the age when experiencing trauma was below 6 years in 33.3% of subjects, 7-10 years in 45.5%, and above 11 years in 21.2%)[1] 16.5[2] NR[3]

Comparison	EMDR versus waitlist or TAU
Type of traumatic event	Mixed: Maltreatment (36.4%), sexual abuse (21.2%), road accident (15.2%), witnessing unnatural death (12.1%) and other types of trauma (6.1%)[1] Mixed: Physical abuse/assault (23%); Sexual abuse (26%); Accident/injury of a loved one (19%); Traumatic loss (18%); Disaster/other (13%)[2] Unclear (no details reported)[3]
Single or multiple incident index trauma	Multiple[1] Single[2] Unclear[3]
Lifetime experience of trauma	NR
Intervention details	EMDR protocol (Shapiro 1995) adjusted for child age and developmental level[1] Eye movement desensitisation and reprocessing (EMDR) based on the standard protocol from Shapiro (2001) with age-appropriate modifications suggested by Tinker and Wilson (1999) and Greenwald (1999)[2] Eye movement desensitisation and reprocessing (EMDR, following the manual by Shapiro 1995 with selected population-specific variations suggested by Greenwald 1999), in addition to the usual treatment in either a residential or day treatment program at the same facility[3]
Intervention format	Individual
Intervention intensity	8x weekly 45-min sessions (6 hours). Mean number of session provided 5.9 (range 1-8). 59% completed at least 7/8 sessions and 82% at least 4/8 sessions[1] 6x weekly 45-min sessions (4.5 hours). Mean attended 4.1 (SD=1.3) sessions (range 2-6)[2] 3x weekly 1-hour sessions (3 hours)[3]
Comparator	Waitlist[1,2] TAU: All participants were given the same milieu treatment, including weekly individual psychotherapy (provided primarily by Master's level therapists), weekly group psychotherapy, special education services, a behaviour modification point system, and, on an individual basis as needed, medication and/or psychoeducational parent/family counselling[3]
Intervention length (weeks)	8[1] 6[2] 3[3]

ADIS-C-Anxiety Disorders Interview Schedule-Child interview; ADHD-Attention Deficit Hyperactivity Disorder; EMDR-Eye movement desensitisation and reprocessing; DSM-Diagnostic and Statistical Manual of Mental Disorders; ICD-International Classification of Disease; NR-Not reported; ODD-Oppositional defiant disorder; TAU-Treatment as usual
[1]Ahmad 2007/2008; [2]de Roos 2017; [3]Soberman 2002

See appendix D for full evidence tables.

Quality assessment of clinical studies included in the evidence review

The clinical evidence profile for this review (EMDR for the treatment of PTSD in children and young people) is presented in Table 17.

Table 17: Summary clinical evidence profile: EMDR versus waitlist or TAU for delayed treatment (>3 months)

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Waitlist or TAU	Corresponding risk Eye movement desensitisation and reprocessing (EMDR)			
PTSD symptomatology self-rated at endpoint CRTI/CRIES change score Follow-up: 3-6 weeks		The mean PTSD symptomatology self-rated at endpoint in the intervention groups was 0.9 standard deviations lower (2.64 lower to 0.85 higher)		82 (2 studies)	very low[1,2,3]
PTSD symptomatology self-rated at 2-month follow-up CRIES change score Follow-up: mean 2 months		The mean PTSD symptomatology self-rated at 2-month follow-up in the intervention groups was 0.72 standard deviations lower (1.57 lower to 0.13 higher)		23 (1 study)	low[1,4]
PTSD symptomatology clinician-rated PTSS-C change score Follow-up: mean 8 weeks		The mean PTSD symptomatology clinician-rated in the intervention groups was 0.07 standard deviations higher (0.61 lower to 0.76 higher)		33 (1 study)	very low[1,3]
Emotional and behavioural problems SDQ-A change score Follow-up: mean 6 weeks		The mean emotional and behavioural problems in the intervention groups was 1.52 standard deviations lower (2.14 to 0.91 lower)		61 (1 study)	very low[1,5]
Quality of life KIDSCREEN-27: Global HRQoL T-scores; change score Follow-up: mean 6 weeks		The mean quality of life in the intervention groups was 0.81 standard deviations higher (0.24 to 1.38 higher)		61 (1 study)	very low[1,5]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Waitlist or TAU	Corresponding risk Eye movement desensitisation and reprocessing (EMDR)			
Better indicated by higher values					
Discontinuation Number of participants lost to follow-up for any reason Follow-up: 3-8 weeks	122 per 1000	80 per 1000 (18 to 353)	RR 0.65 (0.15 to 2.88)	123 (3 studies)	low[3]

CI=confidence interval; CRIES= Children's Revised Impact of Event Scale; CRTI= Children's Response to Trauma Inventory; HRQoL=Health Related Quality of Life; KIDSCREEN-27= Health-related quality of life questionnaire for children, young people and their parents; PTSD=post-traumatic stress disorder; PTSS=Post-Traumatic Stress Symptom; RR=risk ratio; SDQ-A= Strength and Difficulties Questionnaires; SMD=standardised mean difference; TAU=treatment as usual;
[1] Risk of bias is high or unclear across multiple domains
[2] Considerable heterogeneity (I2>80%)
[3] 95% CI crosses line of no effect and thresholds for both clinically important benefit and harm
[4] 95% CI crosses both line of no effect and threshold for clinically important benefit
[5] OIS not met (N<400)

See appendix F for full GRADE tables.

Hypnotherapy: clinical evidence

Included studies

One study of hypnotherapy for the treatment of PTSD in children and young people was identified for full-text review. This study could not be included.

Excluded studies

One study was reviewed at full text and excluded from this review because the intervention was outside protocol (spiritual-hypnosis).

Studies not included in this review with reasons for their exclusions are provided in Appendix K.

Psychodynamic therapies: clinical evidence

Included studies

Three studies of psychodynamic therapies for the treatment of PTSD in children and young people were identified for full-text review. Of these 3 studies, 1 RCT (N=75) was included in a single comparison.

For early treatment (intervention initiated 1-3 months post-trauma) of PTSD symptoms, there were no included studies.

For delayed treatment (intervention initiated more than 3 months post-trauma) of PTSD symptoms, 1 RCT (N=75) compared child-parent psychotherapy using play with parent training (case management and individual treatment for parent-only) (Lieberman 2005/2006/ Ghosh Ippen 2011 [one study reported across three papers]).

Excluded studies

Two studies were reviewed at full text and excluded from this review because the study was a non-RCT (no control group) or the comparison was outside protocol (within-class individual versus group).

Studies not included in this review with reasons for their exclusions are provided in Appendix K.

Summary of clinical studies included in the evidence review

See also the study selection flow chart in Appendix C, forest plots in Appendix E and study evidence tables in Appendix D.

Table 18 provides a brief summary of the included study and evidence from this study is summarised in the clinical GRADE evidence profile below (Table 19).

See also the study selection flow chart in Appendix C, forest plots in Appendix E and study evidence tables in Appendix D.

Table 18: Summary of included studies: Psychodynamic therapies for delayed treatment (>3 months)

Comparison	Child-parent psychotherapy using play versus parent training (case management and individual treatment for parent-only)
Total no. of studies (N randomised)	1 (75)
Study ID	Lieberman 2005/2006/Ghosh Ippen 2011
Country	US
Diagnostic status	Clinically important PTSD symptoms (scoring above a threshold on validated scale)
Mean months since onset of PTSD	NR
Mean age (range)	4.1 (3-5)
Sex (% female)	52
Ethnicity (% BME)	91
Coexisting conditions	NR
Mean months since traumatic event	NR
Type of traumatic event	Domestic violence: Children exposed to marital violence
Single or multiple incident index trauma	Multiple
Lifetime experience of trauma	Multiple stressors, including exposure to community violence (47%), physical abuse (19%), sexual abuse (15%), or both (4%). During the study, 33% of the mothers reported new

Comparison	Child-parent psychotherapy using play versus parent training (case management and individual treatment for parent-only)
	traumas that affected the dyad and 17% of the mothers reported either returning to their violent partners or entering a new violent relationship
Intervention details	Child-Parent Psychotherapy (CPP, following manual by Lieberman & Van Horn 2005) with case management plus treatment as usual in the community
Intervention format	Individual/Family
Intervention intensity	50x weekly 1-hour sessions (50 hours). Mean sessions attended 32.09 (SD=15.20)
Comparator	Parent training (case management and individual treatment for parent-only). 73% of mothers and 55% of children received individual treatment, and 45% received separate individual psychotherapy for both mother and child
Intervention length (weeks)	50

NR-Not reported; CPP-Child-Parent Psychotherapy

See appendix D for full evidence tables.

Quality assessment of clinical studies included in the evidence review

The clinical evidence profile for this review (psychodynamic therapy for the treatment of PTSD in children and young people) is presented in Table 19.

Table 19: Summary clinical evidence profile: Child-parent psychotherapy using play versus parent training (case management and individual treatment for parent-only) for delayed treatment (>3 months)

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Parent training (case management and individual treatment for parent-only)	Corresponding risk Child-parent psychotherapy using play			
PTSD symptomatology clinician-rated DC 0-3; change score Follow-up: mean 50 weeks		The mean PTSD symptomatology clinician-rated in the intervention groups was 1.19 standard deviations lower (1.72 to 0.66 lower)		65 (1 study)	low[1,2]
Emotional and behavioural problems at endpoint		The mean emotional and behavioural problems at		65 (1 study)	low[1,2]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Parent training (case management and individual treatment for parent-only)	Corresponding risk Child-parent psychotherapy using play			
CBCL total; change score Follow-up: mean 50 weeks		endpoint in the intervention groups was 0.79 standard deviations lower (1.3 to 0.28 lower)			
Emotional and behavioural problems at 6-month follow-up CBCL total; change score Follow-up: mean 6 months		The mean emotional and behavioural problems at 6-month follow-up in the intervention groups was 0.98 standard deviations lower (1.58 to 0.39 lower)		50 (1 study)	low[1,2]
Discontinuation Number of participants lost to follow-up for any reason Follow-up: mean 50 weeks	121 per 1000	143 per 1000 (44 to 465)	RR 1.18 (0.36 to 3.84)	75 (1 study)	low[3]

CBCL=Children's Behavioural Checklist; CI=confidence interval; DC=Diagnostic Criteria; PTSD=post-traumatic stress disorder; RR=risk ratio; SMD=standardised mean difference
[1] Risk of bias is high or unclear across multiple domains
[2] OIS not met (N<400)
[3] 95% CI crosses line of no effect and thresholds for both clinically important benefit and harm

See appendix F for full GRADE tables.

Counselling: clinical evidence

Included studies

Five studies of counselling for the treatment of PTSD in children and young people were identified for full-text review. Of these 5 studies, 2 RCTs (N=125) were included in a single comparison for counselling.

For early treatment (intervention initiated 1-3 months post-trauma) of PTSD symptoms, there were no included studies.

For delayed treatment (intervention initiated more than 3 months post-trauma) of PTSD symptoms, 2 RCTs (N=125) compared supportive counselling with no

treatment or waitlist (Chen 2014; Ertl 2011/Neuner 2007 [published paper and protocol]).

Comparison with trauma-focused CBT are presented in the Trauma-focused CBT section above.

Excluded studies

Three studies were reviewed at full text and excluded from this review because the paper was a commentary or book section.

Studies not included in this review with reasons for their exclusions are provided in Appendix K.

Summary of clinical studies included in the evidence review

See also the study selection flow chart in Appendix C, forest plots in Appendix E and study evidence tables in Appendix D.

Table 20 provides brief summaries of the included studies and evidence from these are summarised in the clinical GRADE evidence profile below (Table 21).

See also the study selection flow chart in Appendix C, forest plots in Appendix E and study evidence tables in Appendix D.

Table 20: Summary of included studies: Counselling for delayed treatment (>3 months)

Comparison	Supportive counselling versus no treatment or waitlist
Total no. of studies (N randomised)	2 (125)
Study ID	Chen 2014[1] Ertl 2011/Neuner 2007[2]
Country	China[1] Uganda[2]
Diagnostic status	Clinically important PTSD symptoms (scoring above a threshold on validated scale) [1] PTSD diagnosis according to ICD/DSM criteria[2]
Mean months since onset of PTSD	NR
Mean age (range)	14.5 (range NR) [1] 18.4 (12-25) [2]
Sex (% female)	68[1] 55[2]
Ethnicity (% BME)	NR
Coexisting conditions	NR
Mean months since traumatic event	24[1] 80.5[2]
Type of traumatic event	Natural disaster: Adolescents who had lost at least one parent in the Sichuan, China, Earthquake[1] Child soldiers: The duration of abduction ranged from several hours to 7.42 years, with a median of 2.47 months. The likelihood of an event being indicated as the worst if present was highest for being forced to kill (55%), followed

Comparison	Supportive counselling versus no treatment or waitlist
	by witnessed killing (31%) and seeing someone being mutilated or seeing dead bodies (13%)[2]
Single or multiple incident index trauma	Single[1] Multiple[2]
Lifetime experience of trauma	NR[1] Other than abduction, the most common traumatic event types reported by 81 or more of the 85 participants were exposure to a war zone, witnessing someone being killed, witnessing abduction, witnessing physical assault, and assaults with weapons[2]
Intervention details	General support provided on an individual basis adopting counselling techniques such as listening, reflection, and empathy[1] Needs-based intervention incorporating an academic catch-up program for just over half of the intervention time and with the rest of the time equally dedicated to psychoeducation, conducting discussions on coping with symptoms, and dealing with current problems[2]
Intervention format	Individual
Intervention intensity	6x weekly sessions (length of session NR) [1] 8x thrice-weekly 90-120-min sessions (12-16 hours) [2]
Comparator	No treatment[1] Waitlist[2]
Intervention length (weeks)	6[1] 3[2]

NR-Not reported.
[1]Chen 2014; [2]Ertl 2011/Neuner 2007

See appendix F for full evidence tables.

Quality assessment of clinical studies included in the evidence review

The clinical evidence profile for this review (counselling for the treatment of PTSD in children and young people) is presented in Table 21.

Table 21: Summary clinical evidence profile: Supportive counselling versus no treatment or waitlist for delayed treatment (>3 months)

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk No treatment or waitlist	Corresponding risk Supportive counselling			
PTSD symptomatology self-rated at endpoint CRIES change score Follow-up: mean 6 weeks		The mean PTSD symptomatology self-rated at endpoint in the intervention groups was 0.48 standard deviations lower		22 (1 study)	low[1,2]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk No treatment or waitlist	Corresponding risk Supportive counselling			
		(1.33 lower to 0.37 higher)			
PTSD symptomatology self-rated at 3-month follow-up CRIES change score Follow-up: mean 3 months		The mean PTSD symptomatology self-rated at 3-month follow-up in the intervention groups was 0.42 standard deviations lower (1.27 lower to 0.43 higher)		22 (1 study)	low[1,2]
PTSD symptomatology clinician-rated at 3-month follow-up CAPS change score Follow-up: mean 3 months		The mean PTSD symptomatology clinician-rated at 3-month follow-up in the intervention groups was 0.43 standard deviations lower (0.98 lower to 0.12 higher)		52 (1 study)	moderate[2]
PTSD symptomatology clinician-rated at 6-month follow-up CAPS change score Follow-up: mean 6 months		The mean PTSD symptomatology clinician-rated at 6-month follow-up in the intervention groups was 0.11 standard deviations lower (0.66 lower to 0.44 higher)		51 (1 study)	moderate[2]
PTSD symptomatology clinician-rated at 12-month follow-up CAPS change score Follow-up: mean 12 months		The mean PTSD symptomatology clinician-rated at 12-month follow-up in the intervention groups was 0 standard deviations higher (0.55 lower to 0.55 higher)		51 (1 study)	low[3]
Remission at 12-month follow-up Number of people no longer meeting diagnostic criteria for PTSD	536 per 1000	466 per 1000 (273 to 788)	RR 0.87 (0.51 to 1.47)	56 (1 study)	low[3]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk No treatment or waitlist	Corresponding risk Supportive counselling			
Follow-up: mean 12 months					
Depression symptoms at endpoint CES-D change score Follow-up: mean 6 weeks		The mean depression symptoms at endpoint in the intervention groups was 0.11 standard deviations higher (0.73 lower to 0.95 higher)		22 (1 study)	very low[1,3]
Depression symptoms at 3-month follow-up CES-D/MINI:Depression change score Follow-up: mean 3 months		The mean depression symptoms at 3-month follow-up in the intervention groups was 0.7 standard deviations lower (1.17 to 0.22 lower)		74 (2 studies)	low[1,4]
Depression symptoms at 6-month follow-up MINI:Depression change score Follow-up: mean 6 months		The mean depression symptoms at 6-month follow-up in the intervention groups was 0.47 standard deviations lower (1.03 lower to 0.09 higher)		51 (1 study)	low[1,2]
Depression symptoms at 12-month follow-up MINI:Depression change score Follow-up: mean 12 months		The mean depression symptoms at 12-month follow-up in the intervention groups was 0.34 standard deviations lower (0.9 lower to 0.21 higher)		51 (1 study)	low[1,2]
Functional impairment at 3-month follow-up CAPS: Functional impairment; change score Follow-up: mean 3 months		The mean functional impairment at 3-month follow-up in the intervention groups was 0.91 standard		52 (1 study)	moderate[4]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk No treatment or waitlist	Corresponding risk Supportive counselling			
		deviations lower (1.49 to 0.34 lower)			
Functional impairment at 6-month follow-up CAPS: Functional impairment; change score Follow-up: mean 6 months		The mean functional impairment at 6-month follow-up in the intervention groups was 0.44 standard deviations lower (1 lower to 0.12 higher)		51 (1 study)	moderate[2]
Functional impairment at 12-month follow-up CAPS: Functional impairment; change score Follow-up: mean 12 months		The mean functional impairment at 12-month follow-up in the intervention groups was 0.27 standard deviations lower (0.82 lower to 0.28 higher)		51 (1 study)	moderate[2]
Discontinuation Number of participants lost to follow-up for any reason Follow-up: 3-6 weeks	0 per 1000	0 per 1000 (0 to 0)	RR 6.75 (0.86 to 52.7)	80 (2 studies)	moderate[5]

CAPS= Clinician Administered PTSD Symptom; CES-D= Centre for Epidemiological Studies-Depression; CI=confidence interval; CRIES= Children's Revised Impact of Event Scale; PTSD=post-traumatic stress disorder; RR=risk ratio; SMD=standardised mean difference
[1] Risk of bias is high or unclear across multiple domains
[2] 95% CI crosses both line of no effect and threshold for clinically important benefit
[3] 95% CI crosses line of no effect and thresholds for both clinically important benefit and harm
[4] OIS not met (N<400)
[5] 95% CI crosses both line of no effect and threshold for clinically important harm

See appendix F for full GRADE tables.

Combined somatic and cognitive therapies: clinical evidence

Included studies

One study of a combined somatic and cognitive therapy for the treatment of PTSD in children and young people was identified for full-text review and this RCT (N=60) was included in a single comparison.

For early treatment (intervention initiated 1-3 months post-trauma) of PTSD symptoms, there were no included studies.

For delayed treatment (intervention initiated more than 3 months post-trauma) of PTSD symptoms, 1 RCT (N=60) compared emotional freedom technique (EFT) with no treatment (Al-Hadethe 2015).

Comparison with trauma-focused CBT are presented in the Trauma-focused CBT section above.

Excluded studies

No studies were reviewed at full text and excluded from this review.

Summary of clinical studies included in the evidence review

See also the study selection flow chart in Appendix C, forest plots in Appendix E and study evidence tables in Appendix D.

Table 22 provides a brief summary of the included study and evidence from this study is summarised in the clinical GRADE evidence profile below (Table 23).

See also the study selection flow chart in Appendix C, forest plots in Appendix E and study evidence tables in Appendix D.

Table 22: Summary of included studies: Combined somatic and cognitive therapies for delayed treatment (>3 months)

Comparison	Emotional freedom technique (EFT) versus no treatment
Total no. of studies (N randomised)	1 (60)
Study ID	Al-Hadethe 2015
Country	Iraq
Diagnostic status	PTSD diagnosis according to ICD/DSM criteria
Mean months since onset of PTSD	NR
Mean age (range)	Mean NR (16-19)
Sex (% female)	0
Ethnicity (% BME)	NR
Coexisting conditions	NR
Mean months since traumatic event	NR
Type of traumatic event	Unclear (details NR)
Single or multiple incident index trauma	Unclear
Lifetime experience of trauma	NR
Intervention details	Emotional Freedom Technique (EFT). Acupressure-based treatment involving the participant tapping on specific meridian points while talking through traumatic memories
Intervention format	Individual
Intervention intensity	4x biweekly 60-90 min sessions (4-6 hours)
Comparator	No treatment
Intervention length (weeks)	2
Note. None	

EFT-Emotional Freedom Technique; PTSD-Post-traumatic stress disorder; NR-Not reported.

See appendix D for full evidence tables.

Quality assessment of clinical studies included in the evidence review

The clinical evidence profile for this review (combined somatic and cognitive therapy for the treatment of PTSD in children and young people) is presented in Table 23.

Table 23: Summary clinical evidence profile: Combined somatic and cognitive therapies versus no treatment for delayed treatment (>3 months)

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk No treatment	Corresponding risk Combined somatic and cognitive therapies			
PTSD symptomatology self-rated at endpoint SPTSS change score Follow-up: mean 2 weeks		The mean PTSD symptomatology self-rated at endpoint in the intervention groups was 1.85 standard deviations lower (2.6 to 1.1 lower)		40 (1 study)	very low[1,2]
PTSD symptomatology self-rated at 3-month follow-up SPTSS change score Follow-up: mean 3 months		The mean PTSD symptomatology self-rated at 3-month follow-up in the intervention groups was 1.96 standard deviations lower (2.72 to 1.19 lower)		40 (1 study)	very low[1,2]
PTSD symptomatology self-rated at 6-month follow-up SPTSS change score Follow-up: mean 6 months		The mean PTSD symptomatology self-rated at 6-month follow-up in the intervention groups was 1.3 standard deviations lower (1.99 to 0.61 lower)		40 (1 study)	very low[1,2]
PTSD symptomatology self-rated at 12-month follow-up SPTSS change score Follow-up: mean 12 months		The mean PTSD symptomatology self-rated at 12-month follow-up in the intervention groups was 1.85 standard deviations lower (2.6 to 1.1 lower)		40 (1 study)	very low[1,2]
Anxiety symptoms at		The mean anxiety symptoms at		40 (1 study)	very low[1,2]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk No treatment	Corresponding risk Combined somatic and cognitive therapies			
endpoint HADS-A change score Follow-up: mean 2 weeks		endpoint in the intervention groups was 0.95 standard deviations lower (1.61 to 0.3 lower)			
Anxiety symptoms at 3-month follow-up HADS-A change score Follow-up: mean 3 months		The mean anxiety symptoms at 3-month follow-up in the intervention groups was 0.89 standard deviations lower (1.54 to 0.24 lower)		40 (1 study)	very low[1,2]
Anxiety symptoms at 6-month follow-up HADS-A change score Follow-up: mean 6 months		The mean anxiety symptoms at 6-month follow-up in the intervention groups was 1.15 standard deviations lower (1.82 to 0.47 lower)		40 (1 study)	very low[1,2]
Anxiety symptoms at 12-month follow-up HADS-A change score Follow-up: mean 12 months		The mean anxiety symptoms at 12-month follow-up in the intervention groups was 1.19 standard deviations lower (1.86 to 0.51 lower)		40 (1 study)	very low[1,2]
Depression symptoms at endpoint HADS-D change score Follow-up: mean 2 weeks		The mean depression symptoms at endpoint in the intervention groups was 0.94 standard deviations lower (1.59 to 0.28 lower)		40 (1 study)	very low[1,2]
Depression symptoms at 3-month follow-up HADS-D change score Follow-up: mean 3 months		The mean depression symptoms at 3-month follow-up in the intervention groups was 0.75 standard deviations lower (1.4 to 0.11 lower)		40 (1 study)	very low[1,2]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk No treatment	Corresponding risk Combined somatic and cognitive therapies			
Depression symptoms at 6-month follow-up HADS-D change score Follow-up: mean 6 months		The mean depression symptoms at 6-month follow-up in the intervention groups was 0.85 standard deviations lower (1.5 to 0.2 lower)		40 (1 study)	very low[1,2]
Depression symptoms at 12-month follow-up HADS-D change score Follow-up: mean 12 months		The mean depression symptoms at 12-month follow-up in the intervention groups was 1.38 standard deviations lower (2.07 to 0.68 lower)		40 (1 study)	very low[1,2]
Discontinuation Number of participants lost to follow-up for any reason Follow-up: mean 2 weeks	-	-	Not estimable	40 (1 study)	low[1,3]

CI=confidence interval; HADS-A/D= Hospital Anxiety and Depression Scale-Anxiety/Depression; PTSD=post-traumatic stress disorder; RR=risk ratio; SMD=standardised mean difference; SPTSS= Screen for Post-Traumatic Stress Symptoms; TAU=treatment as usual
[1] Risk of bias is high or unclear across multiple domains
[2] OIS not met (N<400)
[3] OIS not met (events<300)

See appendix F for full GRADE tables.

Parent training/family interventions: clinical evidence

Included studies

Four studies of parent training or family interventions for the treatment of PTSD in children and young people were identified for full-text review. Of these 4 studies, 3 RCTs (N=286) were included in 3 comparisons for parent training/family interventions.

For early treatment (intervention initiated 1-3 months post-trauma) of PTSD symptoms, there were no included studies.

For delayed treatment (intervention initiated more than 3 months post-trauma) of PTSD symptoms, 1 RCT (N=100) compared parent training (CBT with parent-only)

with TAU (Deblinger 1996/1999 [one study reported across 2 papers), 1 RCT (N=36) compared parent training in addition to trauma-focused CBT for the child with trauma-focused CBT for the child-only (King 2000), and 1 RCT (N=150) compared family therapy with waitlist (Kazak 2004).

Comparison with trauma-focused CBT are presented in the Trauma-focused CBT section above.

Excluded studies

One study was reviewed at full text and excluded from this review because efficacy or safety data could not be extracted.

Studies not included in this review with reasons for their exclusions are provided in Appendix K.

Summary of clinical studies included in the evidence review

See also the study selection flow chart in Appendix C, forest plots in Appendix E and study evidence tables in Appendix D.

Table 24 provides brief summaries of the included studies and evidence from these are summarised in the clinical GRADE evidence profiles below (Table 25, Table 26 and Table 27).

See also the study selection flow chart in Appendix C, forest plots in Appendix E and study evidence tables in Appendix D.

Table 24: Summary of included studies: Parent training/family interventions for delayed treatment (>3 months)

Comparison	Parent training (CBT with parent-only) versus TAU	Parent training + TF-CBT (for child) versus TF-CBT (for child	Family therapy versus waitlist
Total no. of studies (N randomised)	1 (100)	1 (36)	1 (150)
Study ID	Deblinger 1996/1999	King 2000	Kazak 2004
Country	US	Australia	US
Diagnostic status	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Clinically important PTSD symptoms (scoring above a threshold on validated scale)
Mean months since onset of PTSD	NR	NR	NR
Mean age (range)	9.8 (7-13)	11.4 (5-17)	14.6 (10-19)
Sex (% female)	83	69	52
Ethnicity (% BME)	28	NR	12
Coexisting conditions	29% major depression; 30% oppositional	For 69% who met DSM-IV criteria for full	NR

Comparison	Parent training (CBT with parent-only) versus TAU	Parent training + TF-CBT (for child) versus TF-CBT (for child	Family therapy versus waitlist
	defiant disorder; 20% ADHD; 11% separation anxiety; 6% conduct disorder; 5% specific phobia; 1% OCD	PTSD (N=25): 16% with full PTSD had no other Axis I diagnoses, 36% had one comorbid diagnosis, 40% had two comorbid diagnoses, and 8% had three comorbid diagnoses. The comorbid diagnoses included dysthymia (28%), oppositional defiant disorder (28%), separation anxiety disorder (24%), generalized anxiety disorder (20%), conduct disorder (12%), major depression (8%), attention-deficit/hyperactivity disorder (8%), and specific phobia (8%).	
Mean months since traumatic event	Mean NR (for 66% the last sexually abusive incident occurred in the 6 months prior to initial assessment, 16% 6 months to 2 years before initial assessment, and 18% 2 more years before the evaluation)	54.5	63.6 (SD=35.0) since completion of cancer treatment. The median age at diagnosis was 7.80 years (range=2.76 months to 16.36 years)
Type of traumatic event	Childhood sexual abuse: Contact sexual abuse. 18% experienced 1 sexually abusive incident, 47% 2-10 episodes, 22% 11-50 episodes, and 13% >50 abusive incidents	Childhood sexual abuse: In the majority of cases, the offenders were male adults known to the child such as the biological father, stepfather, family friend, neighbour, or teacher. Nearly all of the children had experienced multiple episodes of sexual abuse involving penetration offenses and other forms of sexual abuse	Diagnosis of life-threatening condition: Diagnoses included leukaemia (25%), solid tumours (22%), lymphoma (21%), bone tumours (8%), and other (24%)
Single or multiple incident index trauma	Multiple	Multiple	Single

Comparison	Parent training (CBT with parent-only) versus TAU	Parent training + TF-CBT (for child) versus TF-CBT (for child	Family therapy versus waitlist
Lifetime experience of trauma	NR	Mean number of abusive episodes: 7.6 (SD=3.8; range 1-33)	NR
Intervention details	Parents taught to respond therapeutically to child behaviour and needs using graded exposure, modelling, education and coping. Caregiver seen alone for full session, child invited in for evaluation purposes only	Parent training (modelled on Cohen & Mannarino 1996 and Deblinger & Heflin 1996) in child behaviour management skills and parent–child communication skills. The child received trauma-focused CBT, based on protocol of Deblinger (1996)	Surviving Cancer Competently Intervention Program (SCCIP; following manual by Kazak 1999)
Intervention format	Individual	Individual/Family	Group
Intervention intensity	12x weekly 45-min sessions (9 hours)	20x weekly 50-min sessions (16.7 hours) for child + 20x weekly 50-min sessions (16.7 hours) for parent (33.3 hours in total)	4-sessions in 1-day (5 hours of direct therapeutic contact and an additional 2 hours of informal contact during breaks). All families completed all four sessions
Comparator	TAU: Parents and children were given information about symptom patterns and encouraged to access therapy, and child protection workers or the victim witness coordinator were asked to assist with referrals	Trauma-focused CBT for child, based on protocol of Deblinger (1996)	Waitlist
Intervention length (weeks)	12	20	0.1

ADHD-Attention Deficit Hyperactivity Disorder; CBT-Cognitive Behaviour Therapy; DSM-Diagnostic and Statistical Manual of Mental Disorders; NR-Not reported; SCCIP-Surviving Cancer Competently Interventions Program; TAU-Treatment as usual.

See appendix D for full evidence tables.

Quality assessment of clinical studies included in the evidence review

The clinical evidence profiles for this review (parent training/family interventions for the treatment of PTSD in children and young people) are presented in Table 25, Table 26 and Table 27.

Table 25: Summary clinical evidence profile: Parent training (CBT with parent-only) versus TAU for delayed treatment (>3 months)

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk TAU	Corresponding risk Parent training (CBT with parent-only)			
PTSD symptomatology clinician-rated at endpoint K-SADS-E: PTSD; change score Follow-up: mean 12 weeks		The mean PTSD symptomatology clinician-rated at endpoint in the intervention groups was 0.59 standard deviations lower (1.29 lower to 0.11 higher)		34 (1 study)	low[1,2]
PTSD symptomatology clinician-rated at 3-month follow-up K-SADS-E: PTSD; change score Follow-up: mean 3 months		The mean PTSD symptomatology clinician-rated at 3-month follow-up in the intervention groups was 0.63 standard deviations lower (1.33 lower to 0.07 higher)		34 (1 study)	low[1,2]
PTSD symptomatology clinician-rated at 6-month follow-up K-SADS-E: PTSD; change score Follow-up: mean 6 months		The mean PTSD symptomatology clinician-rated at 6-month follow-up in the intervention groups was 0.58 standard deviations lower (1.28 lower to 0.12 higher)		34 (1 study)	low[1,2]
PTSD symptomatology clinician-rated at 12-month follow-up K-SADS-E: PTSD; change score Follow-up: mean 12 months		The mean PTSD symptomatology clinician-rated at 12-month follow-up in the intervention groups was 0.42 standard deviations lower (1.11 lower to 0.27 higher)		34 (1 study)	low[1,2]
PTSD symptomatolo		The mean PTSD symptomatology		34 (1 study)	low[1,3]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk TAU	Corresponding risk Parent training (CBT with parent-only)			
gy clinician-rated at 2-year follow-up K-SADS-E: PTSD; change score Follow-up: mean 2 years		clinician-rated at 2-year follow-up in the intervention groups was 0.89 standard deviations lower (1.6 to 0.17 lower)			
Emotional and behavioural problems-Externalizing at endpoint CBCL: Externalizing; change score Follow-up: mean 12 weeks		The mean emotional and behavioural problems-externalizing at endpoint in the intervention groups was 0.63 standard deviations lower (1.38 lower to 0.12 higher)		30 (1 study)	low[1,2]
Emotional and behavioural problems-Externalizing at 3-month follow-up CBCL: Externalizing; change score Follow-up: mean 3 months		The mean emotional and behavioural problems-externalizing at 3-month follow-up in the intervention groups was 0.23 standard deviations lower (0.96 lower to 0.5 higher)		30 (1 study)	very low[1,4]
Emotional and behavioural problems-Externalizing at 6-month follow-up CBCL: Externalizing; change score Follow-up: mean 6 months		The mean emotional and behavioural problems-externalizing at 6-month follow-up in the intervention groups was 0.18 standard deviations lower (0.91 lower to 0.55 higher)		30 (1 study)	very low[1,4]
Emotional and behavioural problems-Externalizing at 12-month follow-up CBCL: Externalizing;		The mean emotional and behavioural problems-externalizing at 12-month follow-up in the intervention groups was 0.07 standard		30 (1 study)	very low[1,4]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk TAU	Corresponding risk Parent training (CBT with parent-only)			
change score Follow-up: mean 12 months		deviations lower (0.8 lower to 0.66 higher)			
Emotional and behavioural problems-Externalizing at 2-year follow-up CBCL: Externalizing; change score Follow-up: mean 2 years		The mean emotional and behavioural problems-externalizing at 2-year follow-up in the intervention groups was 0.92 standard deviations lower (1.69 to 0.15 lower)		30 (1 study)	low[1,3]
Depression symptoms at endpoint CDI change score Follow-up: mean 12 weeks		The mean depression symptoms at endpoint in the intervention groups was 0.86 standard deviations lower (1.56 to 0.15 lower)		35 (1 study)	low[1,3]
Depression symptoms at 3-month follow-up CDI change score Follow-up: mean 3 months		The mean depression symptoms at 3-month follow-up in the intervention groups was 0.45 standard deviations lower (1.13 lower to 0.23 higher)		35 (1 study)	low[1,2]
Depression symptoms at 6-month follow-up CDI change score Follow-up: mean 6 months		The mean depression symptoms at 6-month follow-up in the intervention groups was 0.32 standard deviations lower (1 lower to 0.35 higher)		35 (1 study)	low[1,2]
Depression symptoms at 12-month follow-up CDI change score Follow-up:		The mean depression symptoms at 12-month follow-up in the intervention groups was 0.5 standard		35 (1 study)	low[1,2]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk TAU	Corresponding risk Parent training (CBT with parent-only)			
mean 12 months		deviations lower (1.18 lower to 0.18 higher)			
Depression symptoms at 2-year follow-up CDI change score Follow-up: mean 2 years		The mean depression symptoms at 2-year follow-up in the intervention groups was 0.86 standard deviations lower (1.56 to 0.15 lower)		35 (1 study)	low[1,3]

CBCL=Children's Behavioural Checklist; CBT=cognitive behavioural therapy; CDI=Children's Depression Inventory; CI=confidence interval; K-SADS=Kiddele Schedulae for Affective Disorder and Schizophrenia; PTSD=post-traumatic stress disorder; RR=risk ratio; SMD=standardised mean difference; TAU=treatment as usual

[1] Risk of bias is high or unclear across multiple domains

[2] 95% CI crosses both line of no effect and threshold for clinically important benefit

[3] OIS not met (N<400)

[4] 95% CI crosses line of no effect and thresholds for both clinically important benefit and harm

Table 26: Summary clinical evidence profile: Parent training + trauma-focused CBT (for child) versus trauma-focused CBT (for child)-only for delayed treatment (>3 months)

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Trauma-focused CBT (child only)	Corresponding risk Trauma-focused CBT + parent training			
PTSD symptomatology clinician-rated at endpoint ADIS-C: PTSD; change score Follow-up: mean 20 weeks		The mean PTSD symptomatology clinician-rated at endpoint in the intervention groups was 0.36 standard deviations lower (1.16 lower to 0.45 higher)		24 (1 study)	low[1,2]
PTSD symptomatology clinician-rated at 3-month follow-up ADIS-C: PTSD;		The mean PTSD symptomatology clinician-rated at 3-month follow-up in the intervention groups was 0.48 standard deviations lower		24 (1 study)	low[1,2]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Trauma-focused CBT (child only)	Corresponding risk Trauma-focused CBT + parent training			
change score Follow-up: mean 3 months		(1.29 lower to 0.34 higher)			
Anxiety symptoms at endpoint RCMAS; change score Follow-up: mean 20 weeks		The mean anxiety symptoms at endpoint in the intervention groups was 0.14 standard deviations higher (0.66 lower to 0.94 higher)		24 (1 study)	very low[1,3]
Anxiety symptoms at 3-month follow-up RCMAS; change score Follow-up: mean 3 months		The mean anxiety symptoms at 3-month follow-up in the intervention groups was 0.03 standard deviations higher (0.77 lower to 0.83 higher)		24 (1 study)	very low[1,3]
Depression symptoms at endpoint CDI; change score Follow-up: mean 20 weeks		The mean depression symptoms at endpoint in the intervention groups was 0.29 standard deviations lower (1.09 lower to 0.52 higher)		24 (1 study)	very low[1,3]
Depression symptoms at 3-month follow-up CDI; change score Follow-up: mean 3 months		The mean depression symptoms at 3-month follow-up in the intervention groups was 0.07 standard deviations lower (0.87 lower to 0.73 higher)		24 (1 study)	very low[1,3]
Emotional and behavioural problems-Internalizing at endpoint CBCL: Internalizing;		The mean emotional and behavioural problems-internalizing at endpoint in the intervention		24 (1 study)	very low[1,3]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Trauma-focused CBT (child only)	Corresponding risk Trauma-focused CBT + parent training			
change score Follow-up: mean 20 weeks		groups was 0.29 standard deviations lower (1.1 lower to 0.51 higher)			
Emotional and behavioural problems-Internalizing at 3-month follow-up CBCL: Internalizing; change score Follow-up: mean 3 months		The mean emotional and behavioural problems-internalizing at 3-month follow-up in the intervention groups was 0.15 standard deviations lower (0.95 lower to 0.66 higher)		24 (1 study)	very low[1,3]
Emotional and behavioural problems-Externalizing at endpoint CBCL: Externalizing; change score Follow-up: mean 20 weeks		The mean emotional and behavioural problems-externalizing at endpoint in the intervention groups was 0.79 standard deviations lower (1.63 lower to 0.04 higher)		24 (1 study)	low[1,2]
Emotional and behavioural problems-Externalizing at 3-month follow-up CBCL: Externalizing; change score Follow-up: mean 3 months		The mean emotional and behavioural problems-externalizing at 3-month follow-up in the intervention groups was 0.14 standard deviations lower (0.94 lower to 0.67 higher)		24 (1 study)	very low[1,3]
Global functioning at endpoint GAF; change score Follow-up: mean 20 weeks		The mean global functioning at endpoint in the intervention groups was 0.3 standard deviations higher		24 (1 study)	very low[1,3]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Trauma-focused CBT (child only)	Corresponding risk Trauma-focused CBT + parent training			
Better indicated by higher values		(0.5 lower to 1.11 higher)			
Global functioning at 3-month follow-up GAF; change score Follow-up: mean 3 months Better indicated by higher values		The mean global functioning at 3-month follow-up in the intervention groups was 0.66 standard deviations higher (0.16 lower to 1.49 higher)		24 (1 study)	low[1,2]
Discontinuation Number of participants lost to follow-up for any reason Follow-up: mean 20 weeks	250 per 1000	250 per 1000 (62 to 1000)	RR 1 (0.25 to 4)	24 (1 study)	low[3]

ADIS-C= Anxiety Disorder Interview Schedule-Child version; CBCL= Child Behavioural Checklist; CBT=cognitive behavioural therapy; CDI= Children's Depression Inventory; CI=confidence interval; GAF= Global Assessment of Functioning; PTSD=post-traumatic stress disorder; RCMAS=; RR=risk ratio; SMD=standardised mean difference

[1] Risk of bias is high or unclear across multiple domains

[2] 95% CI crosses both line of no effect and threshold for clinically important benefit

[3] 95% CI crosses line of no effect and thresholds for both clinically important benefit and harm

Table 27: Summary clinical evidence profile: Family therapy versus waitlist for delayed treatment (>3 months)

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Waitlist	Corresponding risk Family therapy			
PTSD symptomatology UCLA PTSD-RI; change score Follow-up: mean 0.1 weeks		The mean PTSD symptomatology in the intervention groups was 0.37 standard deviations lower (0.7 to 0.05 lower)		149 (1 study)	low[1,2]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Waitlist	Corresponding risk Family therapy			
Anxiety symptoms RCMAS; T-scores change score Follow-up: mean 0.1 weeks		The mean anxiety symptoms in the intervention groups was 0.09 standard deviations higher (0.24 lower to 0.41 higher)		149 (1 study)	low[1,2]
Discontinuation Number of participants lost to follow-up for any reason Follow-up: mean 0.1 weeks	68 per 1000	382 per 1000 (156 to 932)	RR 5.65 (2.31 to 13.8)	150 (1 study)	moderate[3]

CI=confidence interval; PTSD=post-traumatic stress disorder; RCMAS=Revised Children Manifest Anxiety Scale; RR=risk ratio; SMD=standardised mean difference; UCLA PTSD-RI=UCLA PTSD-Reaction Index;
[1] Risk of bias is high or unclear across multiple domains
[2] OIS not met (N<400)
[3] OIS not met (events<300)

See appendix F for full GRADE tables.

Play therapy: clinical evidence

Included studies

Two studies of play therapy for the treatment of PTSD in children and young people were identified for full-text review, and both RCTs (N=162) were included. There were 2 comparisons for play therapy.

For early treatment (intervention initiated 1-3 months post-trauma) of PTSD symptoms, there were no included studies.

For delayed treatment (intervention initiated more than 3 months post-trauma) of PTSD symptoms, 1 RCT (N=131) compared play therapy with TAU (Deeba & Rapee 2015), and 1 RCT (N=31) compared play therapy with trauma-focused CBT (Schottelkorb 2012).

Excluded studies

No studies were reviewed at full text and excluded from this review.

Summary of clinical studies included in the evidence review

See also the study selection flow chart in Appendix C, forest plots in Appendix E and study evidence tables in Appendix D.

Table 28 provides brief summaries of the included studies and evidence from these are summarised in the clinical GRADE evidence profiles below (Table 29 and Table 30).

See also the study selection flow chart in Appendix C, forest plots in Appendix E and study evidence tables in Appendix D.

Table 28: Summary of included studies: Play therapy for delayed treatment (>3 months)

Comparison	Play therapy versus TAU	Play therapy versus trauma-focused CBT
Total no. of studies (N randomised)	1 (131)	1 (31)
Study ID	Deeba 2015	Schottelkorb 2012
Country	Bangladesh	US
Diagnostic status	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Clinically important PTSD symptoms (scoring above a threshold on validated scale)
Mean months since onset of PTSD	NR	NR
Mean age (range)	7.2 (5-9)	9.2 (6-13)
Sex (% female)	37	45
Ethnicity (% BME)	NR	67
Coexisting conditions	NR	NR
Mean months since traumatic event	NR (time in shelter home: 40.3 months)	NR
Type of traumatic event	Mixed: Children living in a shelter home. Most of the children (90%) had lost one or both parents following natural disasters or accidents or due to domestic violence and witnessed direct or indirect violence against a parent (mostly towards the mother)	Witnessing war as a civilian: Childhood refugee trauma (no further detail reported)
Single or multiple incident index trauma	Multiple	Multiple
Lifetime experience of trauma	NR	NR
Intervention details	Enhanced Huggy Puppy Intervention, following similar protocol to Sadeh (2008)	Child-centred play therapy (CCPT; following the manual by Ray 2011)
Intervention format	Individual/Family	Individual/Family
Intervention intensity	2x sessions (length of sessions NR)	24x biweekly 30-min sessions (12 hours) + 6x 15-min parent consultation sessions (1.5 hours) (13.5 hours in total). Mean 17

Comparison	Play therapy versus TAU	Play therapy versus trauma-focused CBT
		sessions completed + 3 sessions with parents
Comparator	TAU (no further detail reported)	Cohen TF-CBT/Cognitive processing therapy (based on the manual by Cohen 2006), with child only and parent only portions and conjoint parent– child sessions
Intervention length (weeks)	3	12

BME-Black and minority ethnic; CBT-Cognitive Behaviour Therapy; CCPT-Child centred play therapy; NR-Not reported; PTSD-Post-traumatic stress disorder; TAU-Treatment as usual.

See appendix D for full evidence tables.

Quality assessment of clinical studies included in the evidence review

The clinical evidence profiles for this review (play therapy for the treatment of PTSD in children and young people) are presented in Table 29 and Table 30.

Table 29: Summary clinical evidence profile: Play therapy versus TAU for delayed treatment (>3 months)

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk TAU	Corresponding risk Play therapy			
PTSD symptomatology self-rated CRIES change score Follow-up: mean 3 weeks		The mean PTSD symptomatology self-rated in the intervention groups was 1.07 standard deviations lower (1.44 to 0.7 lower)		129 (1 study)	very low[1,2]
Anxiety symptoms SCASp; change score Follow-up: mean 3 weeks		The mean anxiety symptoms in the intervention groups was 1.87 standard deviations lower (2.29 to 1.45 lower)		129 (1 study)	very low[1,2]
Depression symptoms SMFQp; change score Follow-up: mean 3 weeks		The mean depression symptoms in the intervention groups was 1.34 standard deviations lower (1.73 to 0.96 lower)		129 (1 study)	very low[1,2]
Discontinuation Number of participants lost to follow-up for any reason	32 per 1000	6 per 1000 (0 to 119)	RR 0.18 (0.01 to 3.68)	131 (1 study)	very low[1,3]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk TAU	Corresponding risk Play therapy			
Follow-up: mean 3 weeks					

CI-confidence interval; CRIES; PTSD-post-traumatic stress disorder; RR-risk ratio; SCAS-Spence Children's Anxiety Scale; SMD-standardised mean difference; SMFQ-Short Mood and Feeling Questionnaires; TAU-treatment as usual
[1] Risk of bias is high or unclear across multiple domains
[2] OIS not met (N<400)
[3] 95% CI crosses line of no effect and thresholds for both clinically important benefit and harm

Table 30: Summary clinical evidence profile: Play therapy versus trauma-focused CBT for delayed treatment (>3 months)

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Trauma-focused CBT	Corresponding risk Play therapy			
PTSD symptomatology self-rated UCLA PTSD-RI; change score Follow-up: mean 12 weeks		The mean PTSD symptomatology self-rated in the intervention groups was 0.11 standard deviations lower (0.88 lower to 0.66 higher)		26 (1 study)	very low[1,2]
Discontinuation Number of participants lost to follow-up for any reason Follow-up: mean 12 weeks	294 per 1000	32 per 1000 (3 to 535)	RR 0.11 (0.01 to 1.82)	31 (1 study)	low[2]

CI=confidence interval; PTSD=post-traumatic stress disorder; RR=risk ratio; SMD=standardised mean difference; TAU=treatment as usual; UCLA PTSD-RI=UCLA PTSD-Reaction Index.
[1] Risk of bias is high or unclear across multiple domains
[2] 95% CI crosses line of no effect and thresholds for both clinically important benefit and harm

See appendix F for full GRADE tables.

Self-help (without support): clinical evidence

Included studies

One study of self-help (without support) for the treatment of PTSD in children and young people was identified for full-text review. This study could not be included.

Excluded studies

One study was reviewed at full text and excluded from this review because the paper was a systematic review with no new useable data and any meta-analysis results not appropriate to extract.

Studies not included in this review with reasons for their exclusions are provided in Appendix K.

Economic evidence

Included studies

Four studies assessing the cost effectiveness of psychological interventions for the treatment of children and young people with PTSD were identified (Gospodarevskaya and Segal, 2012; McCrone 2005; Mihalopoulos 2015; Shearer 2018). The search strategy for economic studies is provided in Appendix B.

Excluded studies

No economic studies of psychological interventions for the treatment of children and young people with PTSD were reviewed at full text and excluded.

Summary of studies included in the economic evidence review

Gospodarevskaya and Segal (2012) developed a decision-analytic economic model to assess the cost effectiveness of trauma-focused CBT, alone or in combination with SSRIs, compared with non-directive supportive counselling and no treatment for children with PTSD in Australia. The modelled population comprised 10-year-old children who met all or most of the PTSD diagnostic criteria, including at least one symptom of avoidance or re-experiencing; some of the children had comorbid depression. Both psychological interventions comprised 12 weekly sessions lasting 45 minutes each. The analysis adopted a mental health system perspective. Costs included staff's time (psychologist, psychiatrist, GP, social worker), SSRI acquisition costs and parental group or psychoeducational sessions over 12 months; beyond 12 months, only antidepressant and GP costs were considered for children with recurrent depression. Efficacy data were taken from meta-analyses of RCTs and further adjustments via indirect comparisons. Resource use data were based on trial information; national unit costs were used. The measure of outcome was the QALY, estimated using utility scores elicited from the Australian population using the Assessment of Quality of Life (AQoL-4D) instrument. The time horizon of the analysis was 31 years. During this period, it was assumed that, following successful treatment, no relapses of PTSD due to the original traumatic event occurred; in contrast, the model allowed the recurrence of depressive episodes, which were treated with SSRIs.

The most effective intervention was the combination of trauma-focused CBT with SSRIs. Counselling was found to be less effective and more costly than trauma-focused CBT alone. The incremental cost effectiveness ratio (ICER) of combined therapy versus trauma-focused CBT alone was Aus$2,901/QALY in 2011 prices (£1,442/QALY in 2016 prices). The ICER of trauma-focused CBT versus no treatment was Aus$1,650/QALY in 2011 prices (£820/QALY in 2016 prices). Using the NICE lower cost effectiveness threshold of £20,000/QALY, combination therapy of trauma-focused CBT and SSRIs was the most cost-effective intervention. Results were sensitive to variation in clinical effectiveness, as expected. The study is partially

applicable to the NICE decision-making context as it was conducted in Australia and the method of QALY estimation is not consistent with NICE recommendations (NICE recommends use of EQ-5D and the UK utility value tariff). The study is characterised by potentially serious limitations, including its narrow perspective and some modelling assumptions (the model assumed no relapses of PTSD over 31 years).

Mihalopoulos and colleagues (2015) undertook a model-based cost-utility analysis to compare trauma-focused CBT (consisting of 8-10 individual sessions delivered by a psychologist) with non-evidence-based treatment as usual, comprising consultation with healthcare professionals for children and young people with PTSD in Australia. The eligible study population comprised prevalent cases (12-month prevalence) of children with PTSD in Australia in 2012, who were currently seeking care, had consulted any health professional for a mental health problem during the previous 12 months but had not been receiving evidence-based care. The perspective of the analysis was that of the health sector (government and service user out-of-pocket expenses). Only intervention costs were included (psychologist's, psychiatrist's or GP's time). Efficacy data were taken from meta-analysis of trial data. Resource use data were based on trial and epidemiological data and expert opinion; national unit costs were used. The measure of outcome was the QALY, estimated using utility scores elicited from the Australian population using the Assessment of Quality of Life (AQoL-4D) instrument. The Disability-Adjusted Life Year (DALY) was also used. The time horizon of the analysis was 5 years; a 3% annual discount rate was used. However, only benefits were measured for a period of 5 years (assuming that benefits are retained over this period); costs were measured over the duration of treatment (i.e. up to 8-10 weeks).

Trauma-focused CBT was found to be more costly and more effective than treatment as usual, with an ICER of Aus$8,900/QALY in 2012 prices (£3,954/QALY in 2016 prices). The probability of trauma-focused CBT being cost-effective was 1 at a willingness to pay of $50,000/QALY (£22,214/QALY). Results were most sensitive to PTSD prevalence, effectiveness of trauma-focused CBT, adherence and eligibility for CBT. The study is partially applicable to the NICE decision-making context as it was conducted in Australia and the method of QALY estimation is not consistent with NICE recommendations. The study is characterised by potentially serious limitations, including the short time used for measuring costs (until end of treatment) and the fact that only intervention costs (therapist's time) were considered.

McCrone and colleagues (2005) estimated the costs of short-term individual psychodynamic psychotherapy (up to 30 sessions) and psychoeducational group therapy (up to 18 sessions) assessed in a RCT (Trowel 2002); the trial participants were sexually abused girls 6-14 years old, with symptoms of emotional or behavioural disturbance, 73% of whom had PTSD. Both interventions included carers' support. The analysis was conducted from the perspective of providers of mental health services to children and support to parents. Only intervention costs were considered, comprising therapists' time, including introductory meeting, initial assessment, therapy, carers' support, supervision of therapists and carers' workers, and follow up assessments for up to 2 years from treatment initiation. Efficacy and resource use data were based on the RCT (N=75; at 1-year follow up: n=58; at 2-year follow up: n=54); national unit costs were used. The outcome measures of the RCT were the global impairment of functioning measured using the K-GAS and the Orvaschel's PTSD scale.

The authors conducted the study as a cost-minimisation analysis, as they reported that results between the two interventions were similar. However, psychodynamic psychotherapy showed greater improvements in manifestations of PTSD compared

with psychoeducational group therapy, with an effect size ranging from 0.60 to 0.79. Psychodynamic psychotherapy was found to be significantly more expensive than psychoeducational group therapy, with a cost difference of £2,051 per person treated in 2016 prices. The study is partially applicable to the NICE decision-making context as it used a narrow perspective and did not use QALYs as the outcome measure. The study is characterised by potentially serious limitations, including its narrow perspective and the lack of synthesis of costs and outcomes.

Shearer and colleagues (2018) conducted an economic evaluation of trauma-focused cognitive therapy (which belongs to the class of TF-CBT) versus waitlist for children and adolescents with PTSD in the UK. The analysis was based on the results of a 11-week RCT (Meiser-Stedman 2010/2017, N=29), which were extrapolated over a period of 3 years using decision-analytic economic modelling. Trauma-focused cognitive therapy comprised 10 weekly individual sessions delivered by a trained clinical psychologist. The analysis adopted a NHS and Personal Social Services (PSS) perspective. Costs included intervention costs (psychologist's time), hospital care (inpatient, outpatient, emergency department, ambulance), community health and social care staff time (GP, GP nurse, district nurse, paediatrician, clinical psychologist, CAMHS worker, counsellor, educational psychologist), advice service, social and other services, and medication. Efficacy and cost data were based on the RCT; national unit costs were used. The measure of outcome was the QALY, estimated using the Strengths and Difficulties Questionnaire (SDQ), which was then mapped onto the preference-based Child Health Utility index – 9 dimensions (CHU-9D) that has been valued by a sample of Australian population of young people. During the 3-year time horizon of the model it was assumed that no relapses of PTSD due to the original traumatic event occurred.

Trauma-focused cognitive therapy was found to be more costly and more effective than waitlist, with an ICER of £2,205/QALY in 2014 prices (£2,254/QALY in 2016 prices). The probability of trauma-focused cognitive therapy being cost-effective was 0.60-0.69 at a willingness-to-pay (WTP) of £20,000-£30,000/QALY, respectively. In a completer case analysis, the ICER increased only slightly, at £2,806/QALY in 2014 prices (£2,869 in 2016 prices), with the probability of trauma-focused cognitive therapy being cost-effective reaching 0.69-0.75 at a WTP of £20,000-£30,000/QALY, respectively. When psychologist training costs were included in the analysis, the ICER of trauma-focused cognitive therapy versus waitlist rose up to £16,187/QALY (£16,549 in 2016 prices); the probability of trauma-focused cognitive therapy being cost-effective fell at 0.51-0.62 at a WTP of £20,000-£30,000/QALY, respectively. The study is partially applicable to the NICE decision-making context, because, although it was conducted in the UK and adopted a NHS/PSS perspective, the method of QALY estimation is not consistent with NICE recommendations. The study is characterised by potentially serious limitations, mainly that costs and efficacy data were derived from a small RCT (N=29) with a short duration (11 weeks).

The references of included studies and the economic evidence tables are provided in Appendix H. The economic evidence profiles are shown in Appendix I.

Economic model

A decision-analytic model was developed to assess the relative cost effectiveness of psychological interventions for the treatment of PTSD in children and young people. The objective of economic modelling, the methodology adopted, the results and the conclusions from this economic analysis are described in detail in Appendix J. This section provides a summary of the methods employed and the results of the economic analysis.

Overview of economic modelling methods

A hybrid decision-analytic model consisting of a decision-tree followed by a two-state Markov model was constructed to evaluate the relative cost effectiveness of a range of psychological interventions for the treatment of children and young people with clinically important symptoms of PTSD in a community setting. The time horizon of the analysis was 3 years, consisting of the 6 months of the decision tree and another 2.5 years (10 x 3-month cycles) in the Markov component of the economic model. The range of interventions assessed in the economic analysis was determined by the availability of relevant clinical data included in the guideline systematic review of interventions for the treatment of children and young people with clinically important symptoms of PTSD. Network meta-analysis (NMA) was employed for synthesis of the available efficacy data. The guideline economic analysis assessed psychological interventions that were connected to the network of evidence and were thus possible to include in the NMA. The NMA and the economic analysis considered separately interventions that belonged to the trauma-focused cognitive behavioural therapy (TF-CBT) class, as individual interventions had different intervention costs and, potentially, different efficacy. Based on the advice of the committee, only effective interventions that had been tested on at least 40 people across the RCTs included in the NMAs assessing efficacy at treatment endpoint were considered in the economic analysis, as this was deemed as the minimum evidence that would be adequate to support a practice recommendation. The only exception was cognitive therapy, which had been tested on only 25 children; this was included in the economic analysis as the committee was interested in the relative clinical and cost effectiveness across all interventions belonging in the TF-CBT class, and sufficient evidence on TF-CBT class, which could be extrapolated to cognitive therapy, was available for other interventions within the class.

Based on the available evidence, the following interventions were considered in the economic analysis of psychological interventions for the treatment of children and young people with clinically important symptoms of PTSD:

- Supportive counselling
- Group CBT (TF-CBT)
- Cohen TF-CBT / Cognitive processing therapy [Cohen/CPT] (TF-CBT)
- Cognitive therapy (TF-CBT)
- Narrative exposure (TF-CBT)
- Exposure /prolonged exposure (TF-CBT)
- Eye Movement Desensitisation Reprocessing [EMDR]
- Family therapy
- Play therapy
- Parent training
- No treatment, reflected in waitlist or no treatment arms of RCTs included in the guideline systematic review and NMA.

According to the model structure, hypothetical cohorts of children and young people with clinically important symptoms of PTSD were initiated on each of the treatment options assessed, including no treatment. Following a course of treatment, children and young people in each cohort either remitted (that is, they did not meet criteria for a PTSD diagnosis) or did not remit. In the next 3 months of follow-up after end of treatment, those who remitted ('no PTSD') could remain in remission or relapse to a PTSD state. Conversely, those who did not remit, could remain in the PTSD state or could remit (and move to a 'no PTSD' state). After that point, children and young

people in each cohort were entered into the Markov component of the economic model, in either the 'PTSD' or the 'no PTSD' health states, depending on their state at the end of the decision-tree. In each cycle of the Markov model, they could remain in the same health state or move between the two states of 'PTSD' and 'no PTSD'.

Efficacy data were derived from the guideline systematic review and NMAs. The baseline risk of remission was determined based on a review of published evidence; the risk of relapse was based on the committee's expert opinion. The measure of outcome of the economic analysis was the number of QALYs gained. Utility data were selected after a systematic review of the literature. The perspective of the analysis was that of health and personal social care services. Resource use was based on published literature. National UK unit costs were used. The cost year was 2017. Model input parameters were synthesised in a probabilistic analysis. This approach allowed more comprehensive consideration of the uncertainty characterising the input parameters and captured the non-linearity characterising the economic model structure.

The main analysis utilised efficacy data at treatment endpoint from a NMA of continuous data (changes in PTSD symptom scores), transformed to log-odds ratios of remission; a secondary analysis used efficacy data at treatment endpoint from a NMA of dichotomous remission data. Four scenarios were explored in probabilistic analysis:

- Scenario A (base-case analysis) utilised base-case utility data and assumed no beneficial effect of interventions beyond treatment endpoint
- Scenario B utilised base-case utility data and efficacy data at 3 months post-treatment from a NMA of continuous data (changes in PTSD symptom scores) between baseline and 1-4 month follow-up, transformed to log-odds ratios of remission; the secondary analysis used the odds ratio of group CBT versus waitlist at 1-4 month follow-up to estimate the relative effect of all interventions versus no treatment at 3-6 months.
- Scenario C utilised alternative utility data and assumed no beneficial effect of interventions beyond treatment endpoint
- Scenario D utilised alternative utility data and efficacy data at 3 months post-treatment from a NMA of continuous data (changes in PTSD symptom scores) between baseline and 1-4 month follow-up, transformed to log-odds ratios of remission; the secondary analysis used the odds ratio of group CBT versus waitlist at 1-4 month follow-up to estimate the relative effect of all interventions versus no treatment at 3-6 months.

One-way deterministic sensitivity analysis was employed to explore the impact of a change in the annual risk of relapse.

Results have been expressed in the form of Incremental Cost Effectiveness Ratios (ICERs) following the principles of incremental analysis. Net Monetary Benefits (NMBs) have also been estimated. Incremental mean costs and effects (QALYs) of each intervention versus no treatment have been presented in the form of cost effectiveness planes. Results of probabilistic analysis have been summarised in the form of cost effectiveness acceptability curves (CEACs), which express the probability of each intervention being cost effective at various cost effectiveness thresholds. Cost effectiveness acceptability frontiers (CEAFs) have also been plotted; these show the treatment option with the highest mean NMB over different cost effectiveness thresholds, and the probability that the option with the highest NMB is the most cost-effective among those assessed.

Overview of economic modelling results and conclusions

In the base-case analysis (which utilised base-case utility data at treatment endpoint and assumed no treatment effect beyond treatment endpoint), the order of interventions from the most to the least cost-effective for the treatment of PTSD in children and young people was: cognitive therapy (TF-CBT), narrative exposure (TF-CBT), play therapy, prolonged exposure (TF-CBT), Cohen/CPT (TF-CBT), EMDR, parent training, group CBT (TF-CBT), family therapy, supportive counselling and no treatment. The probability of cognitive therapy being the most cost-effective treatment option was 0.78. In the secondary analysis that used dichotomous remission data, the order of interventions from the most to least cost-effective was: narrative exposure (TF-CBT), cognitive therapy (TF-CBT), prolonged exposure (TF-CBT), Cohen/CPT (TF-CBT), no treatment and supportive counselling. The probability of narrative exposure being the most cost-effective option was 0.62.

When a beneficial effect of up to 3 months post-treatment was assumed, the relative cost effectiveness of group CBT and Cohen/CPT (both TF-CBT) improved and the cost effectiveness of play therapy was reduced. The order of interventions became cognitive therapy (TF-CBT), Cohen/CPT (TF-CBT), group CBT (TF-CBT), narrative exposure (TF-CBT), parent training, prolonged exposure (TF-CBT), play therapy, EMDR, supportive counselling, family therapy, no treatment. The probability of cognitive therapy being the most cost-effective treatment option was 0.67. In the secondary analysis, the cost effectiveness of all interventions improved. Narrative exposure remained the most cost-effective intervention with a 0.81 probability, followed by cognitive therapy and then prolonged exposure.

When narrower utility benefits for remission and no beneficial effect beyond treatment endpoint were assumed, less costly interventions, such as EMDR and group CBT, were favoured so that their relative cost effectiveness improved. The top-3 most cost-effective interventions remained the same with those of the base-case analysis and the order of interventions by cost effectiveness was as follows: cognitive therapy (TF-CBT), narrative exposure (TF-CBT), play therapy, group CBT (TF-CBT), EMDR, prolonged exposure (TF-CBT), parent training, Cohen/CPT (TF-CBT), family therapy, no treatment, supportive counselling. The probability of cognitive therapy being the most cost-effective treatment option was 0.59. In secondary analysis, only narrative exposure and cognitive therapy were more cost-effective than no treatment; the probability of narrative exposure being the most cost-effective option was 0.71.

When narrower utility benefits for remission and a beneficial effect up to 3 months post-treatment were assumed, the order of interventions from most to least cost-effective became: cognitive therapy (TF-CBT), group CBT (TF-CBT), Cohen/CPT (TF-CBT), narrative exposure (TF-CBT), parent training, EMDR, play therapy, prolonged exposure (TF-CBT), family therapy, no treatment and supportive counselling. The probability of cognitive therapy being the most cost-effective intervention was only 0.31. In secondary analysis, the order of interventions by cost effectiveness was: narrative exposure, Cohen/CPT, prolonged exposure, cognitive therapy, supportive counselling, and no treatment. The probability of narrative exposure being the most cost-effective option was 0.79.

Results of the economic analysis were overall robust to the changes in the risk of relapse tested in deterministic sensitivity analysis.

Overall, individual forms of TF-CBT and, to a lesser degree, play therapy appear to be cost-effective in the treatment of children and young people with PTSD. Family therapy and supportive counselling do not appear to be cost-effective relative to other interventions and, under some scenarios, supportive counselling is less cost-effective

than no treatment. In-between, there is another group of interventions (EMDR, group CBT and parent training) with modest relative cost effectiveness, which is affected by the alternative scenarios tested. The secondary analysis confirmed the cost effectiveness of individual forms of TF-CBT versus supportive counselling and no treatment, although the limited evidence did not allow further comparisons to be made.

The results of the NMAs of 1-4 month follow-up PTSD change score data and of the dichotomous remission data showed considerable uncertainty due to the small size of the included studies and the small total number of studies. Thus, results based on these data should be interpreted with caution. Nevertheless, the base-case economic analysis did not utilise the outputs of any of these NMAs. The NMA that informed the base-case economic analysis was based on more robust data and was characterised by moderate heterogeneity and no evidence of inconsistency.

Resource impact

The committee made a number of recommendations based on this review. Three of them were weaker ('consider') recommendations. Unlike for stronger ('offer') recommendations that interventions should be adopted, it is not possible to make a judgement about the potential resource impact to the NHS, as uptake of interventions is difficult to predict. Overall, recommendations based on this review are not expected to have a substantial impact on resources.

The committee's considerations that contributed to the resource impact assessment are included under the 'Cost effectiveness and resource use' in 'The committee's discussion of the evidence' section.

Clinical evidence statements

Trauma-focused CBT for early treatment (1-3 months)

- Low to moderate quality single-RCT (N=30-31) evidence suggests non-significant differences between trauma-focused CBT and meditation, for PTSD symptomatology or the number of participants with a PTSD diagnosis at endpoint or 6-month follow-up or on the rate of discontinuation, for children and young people with PTSD who were exposed to trauma 1-3 months ago.

Trauma-focused CBT for delayed treatment (>3 months)

- Very low to low quality evidence from 7-13 RCTs (N=409-872) suggests a large and statistically significant benefit of trauma-focused CBT relative to waitlist, TAU or no treatment on improving PTSD symptomatology (self-rated and clinician-rated) in children and young people with PTSD who were exposed to trauma more than 3 months ago. Very low to moderate quality evidence from 1-5 RCTs (N=39-301) suggests these benefits are maintained up to 12-month follow-up, but not at 18-month or 2-year follow-ups (longest follow-up available for self-rated and clinician-rated respectively). Moderate to very low quality evidence from 2-5 RCTs (N=90-277) also suggests clinically important and statistically significant benefits of trauma-focused CBT on the rate of remission and response, and benefits on remission are maintained at 1-3 month follow-up but not 12-18 month follow-up (longest follow-up available, no follow-up data available for response). In addition, low to very low quality evidence from 1-13 RCTs (N=39-834) suggests moderate-to-large and statistically significant benefits on anxiety and depression symptoms, and emotional and behavioural problems, that are maintained up to 12-18 month follow-up (but not up to 2-year follow-up for depression). Very low quality evidence

from 2 RCTs (N=219) also suggests a small but statistically significant benefit of trauma-focused CBT on improving quality of life. Low to very low quality evidence from 1-2 RCT analyses (N=53-220) suggests a clinically important benefit that just misses statistical significance of trauma-focused CBT for improving functional impairment at endpoint, and large and statistically significant benefit at 3-month and 12-month follow-up (effect at 6-month follow-up non-significant). Very low to low quality evidence from 1-4 RCTs (N=24-321) suggests large and statistically significant benefits on global functioning that are maintained up to 3-month follow-up but not at 18-month follow-up (longest follow-up available). Finally, moderate quality evidence from 18 RCTs (N=1255) suggests a trend for higher discontinuation with trauma-focused CBT, however, this effect is not statistically significant.

- Sub-analyses of the trauma-focused CBT relative to waitlist, TAU or no treatment comparison suggests some differential relative efficacy primarily for the clinician-rated PTSD symptomatology outcome (with the exception of format where subgroup differences are observed on self-rated PTSD symptomatology). Sub-analysis by specific intervention suggested largest benefits observed for cognitive therapy and narrative exposure therapy, however benefits are clinically important and statistically significant across specific interventions. Sub-analysis by multiplicity of trauma also suggests differential efficacy with relatively larger benefits observed for children and young people who have been exposed to single incident index trauma, however, benefits for children and young people who have been exposed to multiple incident index trauma are also clinically important and statistically significant. Sub-analysis by format of intervention also suggests some differential efficacy with relatively larger effects observed for individual (child-only) and caregiver and child relative to group interventions, however, benefits are clinically important and statistically significant across formats. Sub-analysis by diagnostic status at baseline also suggests some differential efficacy with relatively larger effects observed for those with a diagnosis of PTSD at baseline relative to those with clinically important PTSD symptoms (who may not necessarily have a diagnosis). However, again effects are clinically important and statistically significant for both subgroups. Sub-analysis by trauma type also suggests some differences in effect sizes with relatively larger benefits observed for children and young people who have experienced motor vehicle accidents or witnessed war as a civilian, although clinically important and statistically significant benefits are observed across all trauma types. Finally, sub-analysis by age range (studies that include children aged under 7 years relative to studies where all children are over 7) suggests non-significant subgroup differences.
- Very low to moderate quality evidence from 2-5 RCTs (N=109-325) suggests moderate and statistically significant benefits of trauma-focused CBT relative to supportive counselling on improving PTSD symptomatology (self-rated and clinician-rated) in children and young people with PTSD who were exposed to trauma more than 3 months ago, and these benefits are maintained at longest follow-up available (12-17 months for self-rated and 12-months for clinician-rated). Low to moderate quality evidence from 1-4 RCTs (N=61-208) also suggests clinically important and statistically significant benefits on the rate of remission and response and improving global functioning, that are maintained at 12-month follow-up (longest follow-up available). Low to very low quality single-RCT (N=48-82) analyses suggests moderate-to-large and statistically significant delayed benefits of trauma-focused CBT on improving dissociative symptoms and functional impairment (significant at 6- and 12-month follow-up, and just 12-month follow-up respectively). Conversely, moderate to very low quality evidence from 2-7 RCTs (N=70-552) suggests small but statistically significant benefits of trauma-focused CBT on anxiety and depression symptoms, but these benefits are short-

term (non-significant at 6- and 12-month follow-up, and 3-, 6- and 12-17 month follow-up for anxiety and depression symptoms respectively). Low to very low quality evidence from 2-3 RCTs (N=224-385) suggests non-significant differences between trauma-focused CBT and supportive counselling for internalising and externalising and behaviour problems at endpoint, 6- or 12-month follow-up. Moderate quality evidence from 8 RCTs (N=678) suggests a trend for a higher discontinuation rate associated with counselling relative to trauma-focused CBT, however this effect is not statistically significant. Sub-analyses by multiplicity of trauma, specific intervention, intervention format, age range, diagnostic status at baseline and trauma type suggest non-significant subgroup differences.

- Low quality single-RCT (N=24) evidence suggests large and statistically significant benefits of a combined trauma-focused CBT and parent training intervention relative to waitlist on improving clinician-rated PTSD symptomatology and global functioning at endpoint and 3-month follow-up for children and young people with PTSD who were exposed to trauma more than 3 months ago. Evidence from this RCT suggests a large and statistically significant delayed benefit of a combined trauma-focused CBT and parent training intervention on emotional and behavioural problems (non-significant at endpoint and significant at 3-month follow-up). Whereas, evidence from this same RCT suggests non-significant effects on anxiety or depression symptoms. Low quality evidence from this RCT suggests a trend for a higher rate of discontinuation associated with a combined trauma-focused CBT and parent training intervention relative to waitlist, however this effect is not statistically significant.
- Low quality single-RCT (N=65-159) evidence suggests moderate and statistically significant benefits of a combined trauma-focused CBT and psychoeducational group intervention relative to psychoeducational group-only on self-rated PTSD symptomatology, the rate of response and depression symptoms at endpoint and 4-month follow-up for children and young people with PTSD who were exposed to trauma more than 3 months ago. Moderate quality evidence from this same RCT (N=159) suggests a trend for a higher rate of discontinuation associated with psychoeducational group-only, however this effect is not statistically significant.

Non-trauma-focused CBT for delayed treatment (>3 months)

- Low quality single-RCT (N=33) evidence suggests a large and statistically significant benefit of non-trauma-focused CBT in addition to TAU relative to TAU-only for improving substance use disorder symptoms in adolescents and young people with PTSD who were exposed to trauma more than 3 months ago. However, evidence from this same RCT suggests this benefit is not maintained at 3-month follow-up, effects on depression symptoms and discontinuation are non-significant, and no PTSD outcomes are available.

Eye movement desensitisation and reprocessing (EMDR) for delayed treatment (>3 months)

- Very low to low quality evidence from 1-2 RCTs (N=23-82) suggests clinically important but not statistically significant benefits of EMDR relative to waitlist or TAU on self-rated PTSD symptomatology at endpoint and 2-month follow-up, and large and statistically significant benefits of EMDR on improving emotional and behavioural problems and quality of life, for children and young people with PTSD who were exposed to trauma more than 3 months ago. However, very low quality evidence from another RCT (N=33) suggests non-significant effects of EMDR on clinician-rated PTSD symptomatology. Low quality evidence from 3 RCTs (N=123) suggests a trend for a lower rate of discontinuation associated with EMDR relative to waitlist or TAU, however, this effect is not statistically significant.

- Very low to low quality evidence from 1-2 RCTs (N=48-133) suggests a non-significant difference between trauma-focused CBT and EMDR on self-rated PTSD symptomology and quality of life (at endpoint, 3- and 12-month follow-up), clinician-rated PTSD symptomatology (at endpoint, no follow-up available) and discontinuation, for children and young people with PTSD who were exposed to trauma more than 3 months ago. Very low quality single-RCT (N=85) evidence suggests a small-to-moderate and statistically significant benefit of EMDR relative to trauma-focused CBT on emotional and behavioural problems at endpoint and 3- and 12-month follow-up.

Psychodynamic therapies for delayed treatment (>3 months)

- Low quality single-RCT (N=50-65) evidence suggests a large and statistically significant benefit of child-parent psychotherapy using play relative to parent training (case management and individual treatment for parent-only) on improving clinician-rated PTSD symptomatology at endpoint (no follow-up available) and emotional and behavioural problems at endpoint and 6-month follow-up, for children and young people with PTSD who were exposed to trauma more than 3 months ago. Evidence from this same RCT (N=75) suggests non-significant effects on discontinuation.

Counselling for delayed treatment (>3 months)

- Moderate to low quality evidence from single-RCT (N=22-56) analyses suggests non-significant effects of supportive counselling relative to no treatment or waitlist on self-rated PTSD symptomatology (at endpoint or 3-month follow-up), clinician-rated PTSD symptomatology (at 3-, 6- or 12-month follow-up) or remission (at 12-month follow-up), for children and young people with PTSD who were exposed to trauma more than 3 months ago. Low quality evidence from 2 RCTs (N=74) suggests a moderate and statistically significant benefit of supportive counselling on depression symptoms at 3-month follow-up, however, effects at endpoint (K=1; N=22), 6-month and 12-month follow-up (K=1; N=51) are non-significant. Moderate quality evidence from 1 of these RCTs (N=52) also suggests a large and statistically significant benefit of supportive counselling on improving functional impairment at 3-month follow-up, however, again effects are not maintained at longer-term follow-up (6-month and 12-month). Moderate quality evidence from 2 RCTs (N=80) suggests a trend for a higher rate of discontinuation at endpoint associated with supportive counselling, however this effect is not statistically significant.

Combined somatic and cognitive therapies for delayed treatment (>3 months)

- Very low quality single-RCT (N=40) evidence suggests large and statistically significant benefits of emotional freedom technique (EFT) relative to no treatment on improving self-rated PTSD symptomatology, anxiety and depression symptoms and benefits are maintained up to 12-month follow-up, for children and young people with PTSD who were exposed to trauma more than 3 months ago. No participants discontinued from this study.
- Very low quality single-RCT (N=39) evidence suggests large and statistically significant benefits of emotional freedom technique (EFT) relative to trauma-focused CBT on self-rated PTSD symptomatology that is maintained up to 12-month follow-up, for children and young people with PTSD who were exposed to trauma more than 3 months ago. Evidence from the same RCT suggests large and statistically significant short-term benefits of EFT on improving anxiety symptoms (significant at endpoint and 3-month follow-up and non-significant at 6- and 12-month follow-up). Large or moderate and statistically significant benefits of EFT relative to trauma-focused CBT are also shown on depression symptoms at

endpoint and 12-month follow-up (but non-significant at 3- and 6-month follow-up). Evidence from this RCT suggests a trend for a higher discontinuation rate associated with trauma-focused CBT relative to EFT, however this effect is not statistically significant.

Parent training/family interventions for delayed treatment (>3 months)

- Low quality single-RCT (N=149) evidence suggests a small but statistically significant benefit of family therapy relative to waitlist on improving PTSD symptomatology for children and young people with PTSD who were exposed to trauma more than 3 months ago. However, evidence from this same RCT suggests benefits do not extend to anxiety symptoms. Moreover, moderate quality evidence from this RCT (N=150) suggests a significantly higher rate of discontinuation associated with family therapy.
- Low to very low quality single-RCT (N=30-34) evidence suggests a delayed but large and statistically significant benefit of parent training (CBT with parent-only) relative to TAU on improving clinician-rated PTSD symptomatology and emotional and behavioural problems at 2-year follow-up (effects non-significant at endpoint and 3-, 6- and 12-month follow-up) for children and young people with PTSD who were exposed to trauma more than 3 months ago. Low quality evidence from the same RCT (N=35) suggests large and statistically significant benefits of CBT with the parent-only on improving children's depression symptoms at endpoint and 2-year follow-up, although effects are non-significant at 3-, 6- and 12-month follow-up. No evidence for discontinuation is available.
- Low quality single-RCT (N=41) evidence suggests delayed moderate and statistically significant benefits of parent training (CBT with parent-only) relative to trauma-focused CBT on improving PTSD symptomatology and depression symptoms at 2-year follow-up, for children and young people with PTSD who were exposed to trauma more than 3 months ago. Conversely evidence from the same study (N=38) suggests benefits in favour of trauma-focused CBT relative to parent training on emotional and behavioural problems at 6- and 12-month follow-up (non-significant at endpoint, 3-month or 2-year follow-up). No evidence for discontinuation is available.
- Low to very low quality single-RCT (N=24) evidence suggests non-significant differences between combined trauma-focused CBT for the child and parent training relative to trauma-focused CBT (for the child)-only on clinician-rated PTSD symptomatology, anxiety or depression symptoms, emotional and behavioural problems or global functioning (at endpoint and 3-month follow-up) for children and young people with PTSD who were exposed to trauma more than 3 months ago. Low quality evidence from this same RCT also suggests non-significant effects on discontinuation.

Play therapy for delayed treatment (>3 months)

- Very low quality single-RCT (N=129) evidence suggests large and statistically significant benefits of play therapy relative to TAU on improving self-rated PTSD symptomatology and anxiety and depression symptoms for children and young people with PTSD who were exposed to trauma more than 3 months ago. Evidence from this same RCT (N=131) also suggests a lower rate of discontinuation may be associated with play therapy relative to TAU, however absolute numbers are small and this effect is not statistically significant.
- Very low quality single-RCT (N=26) evidence suggests a non-significant difference between play therapy and trauma-focused CBT on self-rated PTSD symptomatology for children and young people with PTSD who were exposed to trauma more than 3 months ago. Low quality evidence from this same RCT

(N=31) suggests a lower rate of discontinuation may be associated with play therapy relative to trauma-focused CBT, however this effect is not statistically significant.

Economic evidence statements

- Evidence from 1 Australian model-based study suggests that trauma-focused CBT alone or combined with SSRIs is more cost-effective than counselling. The study is partially applicable to the NICE decision-making context and is characterised by potentially serious limitations.
- Evidence from 1 Australian model-based study suggests that trauma-focused CBT combined with SSRIs is more cost-effective than trauma-focused CBT alone. The study is partially applicable to the NICE decision-making context and is characterised by potentially serious limitations.
- Evidence from 1 Australian model-based study suggests that trauma-focused CBT is more cost-effective than treatment as usual. The study is partially applicable to the NICE decision-making context and is characterised by potentially serious limitations.
- Evidence from 1 UK cost-minimisation analysis conducted alongside a RCT (N=75) suggests that individual psychodynamic psychotherapy was significantly costlier than psychoeducational group therapy. The study is partially applicable to the NICE decision-making context and is characterised by potentially serious limitations.
- Evidence from 1 UK cost-utility study that extrapolated efficacy and cost data from a RCT (N=29) suggests that trauma-focused cognitive therapy is more cost-effective than waitlist. The study is partially applicable to the NICE decision-making context and is characterised by potentially serious limitations.
- Evidence from the guideline economic analysis suggests that individual forms of TF-CBT and, to a lesser degree, play therapy are cost-effective in the treatment of children and young people with PTSD. Family therapy and supportive counselling do not appear to be cost-effective relative to other interventions and, under some scenarios, supportive counselling is less cost-effective than no treatment. In-between, there is another group of interventions (EMDR, group CBT and parent training) with modest relative cost effectiveness, which is affected by the alternative scenarios tested. The economic analysis is directly applicable to the NICE decision-making context and is characterised by minor limitations.

The committee's discussion of the evidence

Interpreting the evidence

Outcomes that matter the most

Critical outcomes were measures of PTSD symptom improvement on validated scales, remission (as defined as a loss of diagnosis or scoring below threshold on a validated scale), and response (as measured by an agreed percentage improvement in symptoms and/or by a dichotomous rating of much or very much improved). Attrition from treatment (for any reason) was also considered an important outcome, as a proxy for the acceptability and/or tolerability of treatment. The committee considered dissociative symptoms, personal/social/educational functioning (including global functioning/functional impairment, sleeping difficulties, and quality of life), and symptoms of a coexisting condition (including anxiety, depression and emotional and behavioural problems) as important but not critical outcomes. This distinction was

based on the primacy of targeting the core PTSD symptoms, whilst acknowledging that broader symptom measures may be indicators of a general pattern of effect. Generally change scores were favoured over final scores as although in theory randomisation should balance out any differences at baseline, this assumption can be violated by small sample sizes. The committee also expressed a general preference for self-rated PTSD symptomatology (over clinician-rated or parent-rated measures), however, in considering psychological interventions (relative to pharmacological interventions) a greater emphasis was placed on triangulating effects on self-rated PTSD symptomatology with clinician-rated outcome measures, given that the latter but not the former could be blinded.

The quality of the evidence

With the exception of a few outcomes of moderate quality, all the evidence reviewed was of low or very low quality, reflecting the high risk of bias associated with the studies (including for instance, high risk of bias associated with randomisation method as reflected by significant group differences at baseline, and lack of/unclear blinding of outcome assessment), the small numbers in many trials and the imprecision of many of the results (in terms of both the width of the confidence intervals and the failure to meet the optimal information size). There were also only 2 UK-based trials which raises some questions about applicability. However, the committee agreed to make a strong recommendation despite uncertainty in the evidence, as the breadth of outcomes considered allowed triangulation of effects, and greater confidence was conferred where long-term follow-up was available.

Consideration of clinical benefits and harms

There is no evidence for psychologically-focused debriefing for the treatment of PTSD in children and young people exposed to a traumatic event more than 1 month ago. However, the committee were mindful of the non-significant effects found within 1 month of trauma, and considered it appropriate to make clear that this intervention should also not be offered for the treatment of PTSD for children and young people exposed to a traumatic event more than 1 month ago.

The committee discussed the strength and breadth of the evidence for an individual trauma-focused CBT intervention, with benefits observed on both clinician-rated and self-rated measures of PTSD symptomatology, the rate of remission and response, and on other outcomes including depression, anxiety, emotional and behavioural problems, quality of life and global functioning. Although there was evidence for some differential relative efficacy on clinician-rated PTSD symptomatology, clinically important and statistically significant benefits were observed across: a range of trauma types (including motor vehicle collisions, witnessing war as a civilian, sexual abuse and mixed trauma types); both single and multiple incident index traumas; both those with a diagnosis of PTSD and those with clinically important symptoms (who may not necessarily have a diagnosis); across all specific trauma-focused intervention types within the class (both those that place emphasis on exposure and those that place emphasis on cognitive techniques); and across formats (individual, caregiver and child, and group). Considered alongside evidence suggesting that benefits are potentially long-lasting, the committee agreed that trauma-focused CBT should be offered as a first-line treatment to children and young people with PTSD. The committee discussed the evidence that showed a trend for a higher rate of discontinuation with trauma-focused CBT relative to waitlist, TAU or no treatment, and agreed that, given that this effect was not statistically significant and the comparison against supportive counselling showed a trend in favour of trauma-focused CBT for lower discontinuation, the benefits of trauma-focused CBT outweighed any potential harm.

The sub-analysis of trauma-focused CBT by age suggested clinically important and statistically significant benefits for both studies where the age range includes children aged 7 years and under, and where the age range only includes over 7s. However, the committee were mindful that the youngest children included in the evidence review were 5 years old. Given the lack of clear evidence or clear consensus the committee did not feel it was appropriate to make recommendations for adaptations that may be required for very young children. On this basis a weaker recommendation was made for an individual trauma-focused CBT intervention for children aged 5 to 6 years based on the more limited evidence for this younger age group, and a stronger recommendation was made for children and young people aged 7 to 17 years with PTSD more than 3 months after a traumatic event.

The committee noted the lack of evidence for a trauma-focused CBT intervention compared to a non-active control for treatment within 1-3 months of a traumatic event. However, the committee extrapolated from the broad evidence base for benefits more than 3 months after trauma and agreed that trauma-focused CBT should be an option within this earlier time period, although it could not be recommended with the same certainty as for delayed treatment.

The committee noted that although interventions within the trauma-focused CBT class are using the same broad approach and there is considerable overlap in the techniques and proposed mechanisms of the various versions of trauma-focused CBT, this class is a somewhat broad umbrella and it was therefore important to specify the content and structure of the recommended intervention. The committee also expressed concern that psychological interventions are not always implemented consistently. For example, audits have suggested less-than-recommended number of sessions are used in practice. The recommended structure and content of trauma-focused CBT (number of sessions, manualised, involvement of parents or carers, included content) is informed by the interventions in the RCT's included in the evidence review, and modified by the expert advice of the committee. This recommendation seeks to ensure clarity and consistency, and that use in routine practice reflects the interventions in the clinical trials on which the efficacy estimates are based. However, this recommendation was also drafted with enough flexibility to allow clinicians to modify treatment for the individual with PTSD whilst ensuring a minimum standard was set. So, for example, the recommendation includes that an individual trauma-focused CBT intervention should typically be provided over 6 to 12 sessions but the committee were aware that for some children and young people more sessions might be needed so the recommendation included the proviso that more sessions could be offered if clinically indicated, for example for children or young people who have experienced multiple traumas.

The committee considered the evidence for EMDR in the treatment of children with PTSD and noted the limited evidence base, in terms of the number of studies/participants, the number of different comparisons, the breadth of outcomes reported, and the availability of long-term follow-up. The committee observed that the benefits of EMDR were not statistically significant relative to waitlist or treatment as usual, and the head-to-head comparisons against trauma-focused CBT (although suggestive of no significant difference) were not sufficiently powered to detect non-inferiority (single-study analyses). The committee also took into account the results of the NMA which suggested that EMDR was less clinically effective than all individual trauma-focused CBT interventions. On this basis, the committee agreed that EMDR should only be considered for children and young people if they do not respond to or engage with trauma-focused CBT.

Given the considerable evidence base for trauma-focused CBT, the committee considered it appropriate to set a relatively high bar for other interventions. For some interventions (such as emotional freedom technique [EFT], combined trauma-focused CBT and parent training, child-parent psychotherapy using play, parent training, and family therapy), there is limited evidence for efficacy but the evidence base was considered too small to be confident that the benefits observed are true effects and thus a recommendation could not be supported. For other interventions, such as supportive counselling, the suggestion of inferiority to trauma-focused CBT, together with the non-significant effects relative to no treatment or waitlist, were sufficient for the committee to decide that a recommendation was not appropriate. Play therapy looked potentially more promising and required greater scrutiny and deliberation. However, given that less is known about the breadth of effects (no evidence for clinician-rated PTSD symptomatology, remission, other important associated symptoms and no follow-up) and there was some difficulty in pinpointing the core active ingredient of a play therapy (given differences between the two interventions in this category in terms of the inclusion of cognitive elements), the committee came to the decision that the evidence was not sufficient to warrant a recommendation at this time.

Cost effectiveness and resource use

Existing evidence suggests that trauma-focused CBT, alone or combined with SSRIs is a cost-effective option for the treatment of PTSD in children and young people, compared with counselling, TAU or no treatment. Individual psychodynamic psychotherapy appears to be less cost-effective than psychoeducational group therapy. The committee took existing economic evidence into account but noted that some of this evidence is only partially applicable to the UK as the studies were conducted in other countries, it assesses the relative cost effectiveness of a limited number of interventions, and is characterised by potentially serious limitations.

The committee considered the results of the base-case guideline economic analysis when making recommendations, which was informed by an NMA of overall good quality, although some of the secondary analyses were characterised by a limited evidence base at endpoint. Results of the guideline economic analysis were directly applicable to the NICE decision-making context and were thus given more weight than existing evidence. The guideline base-case economic analysis was overall characterised by minor limitations, so the committee were confident to use its findings to support recommendations.

Results suggested that individual forms of trauma-focused CBT and, to a lesser degree, play therapy are cost-effective in the treatment of children and young people with PTSD. Family therapy and supportive counselling do not appear to be cost-effective relative to other interventions and, under some scenarios, supportive counselling is less cost-effective than no treatment. In-between, there is another group of interventions (EMDR, group CBT and parent training) with modest relative cost effectiveness, which is somewhat affected by the alternative scenarios tested. Results were robust to scenarios tested through deterministic sensitivity analysis.

The committee noted that all forms of individual trauma-focused CBT were cost-effective, although their relative cost effectiveness was slightly affected by the different scenarios and assumptions tested. This evidence, combined with the fact that trauma-focused CBT has the largest empirical base among all interventions tested on children and young people with PTSD led the committee to make a recommendation for individual trauma-focused CBT.

Play therapy was also shown to be cost-effective in economic analysis, however results were based on a limited evidence base (2 trials). As already reported, the committee had some difficulty in pinpointing the core active ingredient of a play therapy (given differences between the two interventions in this category in terms of the inclusion of cognitive elements). Moreover, the committee noted that the resource use associated with the interventions differed considerably between the 2 trials, suggesting a less well-defined intervention, thus introducing uncertainty in the results of the economic analysis. For this reason and because of the limited evidence base the committee were reluctant to make a recommendation for play therapy.

Of the remaining interventions, EMDR, group CBT and parent training showed a modest relative cost effectiveness. The committee considered the cost effectiveness of EMDR alongside the clinical evidence base and decided to make a 'consider' recommendation for children and young people aged 7-18 years who do not respond to or engage with trauma-focused CBT.

The committee did not make any recommendation for group CBT, as it is less cost-effective than individual trauma-focused CBT, individual trauma-focused CBT was already recommended as a first-line option, so no further benefits were expected to be gained by a potential recommendation on group CBT.

The committee did not make a recommendation on parent training, despite its modest relative cost effectiveness, because this result was based on a very limited evidence base (N=49).

The committee anticipated that the recommendations will result in a moderate change in practice. The only strong ('offer') recommendation for trauma-focused CBT more than 3 months after a traumatic event was also a strong recommendation in the previous guideline and the committee were not aware of wide variation in practice. The recommendations for trauma-focused CBT within 1-3 months after a traumatic event and the recommendation for EMDR are new. However, changes in practice will be limited by the fact that these are weaker recommendations and, in the case of EMDR, the recommendation should be considered if children do not respond to or engage with trauma-focused CBT. Moreover, it is anticipated that children with a diagnosis of PTSD or clinically important symptoms of PTSD within 1-3 months after a traumatic event, as well as children who do not respond to or engage with trauma-focused CBT, may be currently accessing services and receiving alternative interventions of lesser known effectiveness, which are anticipated to be replaced, at least partly, by the recommended interventions, and therefore implementation costs of newly recommended interventions are expected to be offset, to some extent, by cost-savings of interventions forgone.

When assessing the impact of treatment recommendations on available resources, the committee was aware that previous recommendations were made for children with PTSD, whereas current recommendations are also relevant to children with clinically important symptoms of PTSD. Clinically important symptoms of PTSD are identified when people score above a pre-determined threshold on a validated PTSD symptom scale, which is indicative but not confirmatory of a diagnosis of PTSD. The committee noted that the assessment of a person with suspected PTSD includes a general assessment of mental state, specific questions about the traumatic event(s), enquiries into specific traumatic hyper vigilance and intrusive thoughts and assessment of the impact of the symptoms on personal and social functioning. In current practice, the structure, content and time of the assessment is the same for people for whom a diagnosis of PTSD has been made and for people who have been assessed as having PTSD on a validated scale. The committee noted that the decision to start treatment in both populations is influenced by the severity of

symptoms, the trajectory of symptoms, any coexisting conditions and the individual's preference for treatment. The committee expressed the opinion that the impact of experiencing clinically important PTSD symptoms on the person's social and personal functioning may be broadly similar to the impact of a formal diagnosis of PTSD, depending on the presence and/or intensity of the factors described above (i.e. severity and trajectory of symptoms and any coexisting conditions) and decided that treatment recommendations should focus on both populations. The committee expressed the view that the population of children and young people covered in the current treatment recommendations does not represent a significant broadening of the population that was covered by the previous guideline recommendations.

Other factors the committee took into account

The committee discussed the inclusion of family members in the treatment of children and young people and concluded that the carers of the child or young person should be included and involved in the treatment as and when appropriate and deemed to be useful.

References for included studies

Trauma-focused CBT

Ahrens 2002

Ahrens J and Rexford L (2002) Cognitive processing therapy for incarcerated adolescents with PTSD. Journal of Aggression. Maltreatment & Trauma 6(1), 201-16

Al-Hadethe 2015

Al-Hadethe A, Hunt N, Al-Qaysi G and Thomas S (2015) Randomised Controlled Study Comparing Two Psychological Therapies for Posttraumatic Stress Disorder (PTSD): Emotional Freedom Techniques (EFT) Vs. Narrative Exposure Therapy (NET). J Trauma Stress Disor Treat 4, 2

Auslander 2017

Auslander W, McGinnis H, Tlapek S, et al. (2017) Adaptation and implementation of a trauma-focused cognitive behavioral intervention for girls in child welfare. American Journal of Orthopsychiatry 87(3), 206

Berger 2009

Berger R and 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), 364-71

Catani 2009/Rockstroh 2004

Catani C, Kohiladevy M, Ruf M, et al. (2009) Treating children traumatized by war and Tsunami: a comparison between exposure therapy and meditation-relaxation in North-East Sri Lanka. BMC Psychiatry 9, 22 [DOI: 10.1186/1471-244X-9-22.]

Rockstroh B and Schauer E (2004) KIDNET vs Meditation/Relaxation - a Dissemination Randomized Controlled Trial for the Treatment of Traumatized Children After War in Sri Lanka [NCT00564317]. Availabel from: https://clinicaltrials.gov/ct2/show/NCT00564317 [accessed 15.05.18]

Chen 2014

Chen Y, Shen WW, Gao K, et al. (2014) Effectiveness RCT of a CBT intervention for youths who lost parents in the Sichuan, China, earthquake. Psychiatric Services 65(2), 259-62

Cohen 1998/2005a

Cohen JA and Mannarino AP (1998) Interventions for sexually abused children: Initial treatment outcome findings. Child Maltreatment 3(1), 17-26

Cohen JA, Mannarino AP and Knudsen K (2005) Treating sexually abused children: 1 year follow-up of a randomized controlled trial. Child Abuse & Neglect 29(2), 135-45

Cohen 2004a/Deblinger 2006

Cohen JA, Deblinger E, Mannarino AP and Steer RA (2004) A multisite, randomized controlled trial for children with sexual abuse–related PTSD symptoms. Journal of the American Academy of Child & Adolescent Psychiatry 43(4), 393-402

Deblinger E, Mannarino AP, Cohen JA and Steer RA (2006) A follow-up study of a multisite, randomized, controlled trial for children with sexual abuse-related PTSD symptoms. Journal of the American Academy of Child & Adolescent Psychiatry 5(12), 1474-84

Cohen 2011/2005b

Cohen JA, Mannarino AP and Iyengar S (2011) Community treatment of posttraumatic stress disorder for children exposed to intimate partner violence: a randomized controlled trial. Arch Pediatr Adolesc Med 165(1), 16-21 [DOI: 10.1001/archpediatrics.2010.247]

Cohen JA (2005) Treating PTSD in Children Exposed to Domestic Violence [NCT00183326] Available from: https://www.clinicaltrials.gov/ct2/show/NCT00183326 [accessed 15.05.2018]

de Roos 2017

de Roos C, van der Oord S, Zijlstra B, et al. (2017) EMDR and Cognitive Behavioral Writing Therapy versus Waitlist in Pediatric PTSD Following Single-Incident Trauma: A Multi-Center Randomized Clinical Trial. Journal of Child Psychology and Psychiatry [in press]

Deblinger 1996/1999

Deblinger E, Lippman J and Steer R (1996) Sexually abused children suffering posttraumatic stress symptoms: initial treatment outcome findings. Child Maltreatment 1, 310-321

Deblinger E, Steer RA and Lippmann J (1999) Two-year follow-up study of cognitive behavioral therapy for sexually abused children suffering post-traumatic stress symptoms. Child Abuse & Neglect 23, 1371-1378

Diehle 2015/Lindauer 2009

Diehle J, Opmeer BC, Boer F, et al. (2015) Trauma-focused cognitive behavioral therapy or eye movement desensitization and reprocessing: What works in children

with posttraumatic stress symptoms? A randomized controlled trial. European child & adolescent psychiatry 24(2), 227-36

Lindauer RJL (2009) Effects of Trauma Focused Cognitive Behavioural Therapy (TF-CBT) and Eye Movement Desensitization and Reprocessing (EMDR) for children with Posttraumatic Stress Symptoms after Emergency Care [NTR1814]. Available from: http://www.trialregister.nl/trialreg/admin/rctview.asp?TC=1814 [accessed 15.05.18]

Ertl 2011/Neuner 2007

Ertl V, Pfeiffer A, Schauer E, et al. (2011) Community-implemented trauma therapy for former child soldiers in Northern Uganda: a randomized controlled trial. JAMA 306(5), 503-12 [DOI: 10.1001/jama.2011.1060]

Neuner F, Elbert T and Ertl V (2007) A Randomized Controlled Clinical Trial (RCCT) to Test the Effectiveness of Narrative Exposure Therapy (NET) Versus an Attention Control Condition (AC) in Reducing Trauma Related Symptoms in Formerly Abducted Children and Former Child Soldiers Suffering From Posttraumatic Stress Disorder (PTSD) [NCT00552006]. Available from: https://clinicaltrials.gov/show/NCT00552006 [accessed 15.05.18]

Foa 2013a/McLean 2015a/Capaldi 2016/Kaczkurkin 2016/Zandberg 2016

Foa EB, McLean CP, Capaldi S and Rosenfield D (2013) Prolonged exposure vs supportive counseling for sexual abuse–related PTSD in adolescent girls: A randomized clinical trial. JAMA 310(24), 2650-7

McLean CP, Yeh R, Rosenfield D and Foa EB (2015) Changes in negative cognitions mediate PTSD symptom reductions during client-centered therapy and prolonged exposure for adolescents. Behaviour research and therapy 68, 64-9

Capaldi S, Asnaani A, Zandberg LJ, et al. (2016) Therapeutic Alliance during Prolonged Exposure Versus Client□Centered Therapy for Adolescent Posttraumatic Stress Disorder. Journal of clinical psychology 72(10), 1026-36

Kaczkurkin AN, Asnaani A, Zhong J andFoa EB (2016) The moderating effect of state anger on treatment outcome in female adolescents with PTSD. Journal of Traumatic Stress 29(4), 325-31

Zandberg L, Kaczkurkin AN, McLean CP, et al. (2016) Treatment of Adolescent PTSD: The Impact of Prolonged Exposure versus Client□Centered Therapy on Co□ Occurring Emotional and Behavioral Problems. Journal of Traumatic Stress 29(6), 507-14

Ford 2012

Ford JD, Steinberg KL, Hawke J, et al. Randomized trial comparison of emotion regulation and relational psychotherapies for PTSD with girls involved in delinquency. Journal of Clinical Child & Adolescent Psychology 41(1), 27-37

Gilboa-Schechtman 2004/2010

Gilboa-Schechtman E and Foa EB (2004) Treating Terror-Related PTSD in Adolescents [NCT00183690]. Available from: https://www.clinicaltrials.gov/ct2/show/NCT00183690 [accessed 15.05.18]

Gilboa-Schechtman E, Foa EB, Shafran N, et al. (2010) Prolonged exposure versus dynamic therapy for adolescent PTSD: a pilot randomized controlled trial. J Am Acad Child Adolesc Psychiatry 49(10), 1034-42. [DOI: 10.1016/j.jaac.2010.07.014]

Goldbeck 2016/Sachser 2016

Goldbeck L, Muche R, Sachser C, et al. (2016) Effectiveness of Trauma-Focused Cognitive Behavioral Therapy for Children and Adolescents: A Randomized Controlled Trial in Eight German Mental Health Clinics. Psychotherapy and Psychosomatics 85, 159-170

Sachser C, Keller F, Goldbeck L (2016) Complex PTSD as proposed for ICD□11: validation of a new disorder in children and adolescents and their response to Trauma□Focused Cognitive Behavioral Therapy. Journal of Child Psychology and Psychiatry

Jaycox 2009

Jaycox LH, Langley AK, Stein BD, et al. (2009) Support for students exposed to trauma: A pilot study. School mental health 1(2), 49-60

Jensen 2014

Jensen TK, Holt T, Ormhaug SM, et al. (2014) A randomized effectiveness study comparing trauma-focused cognitive behavioral therapy with therapy as usual for youth. J Clin Child Adolesc Psychol 43(3), 356-69 [DOI:10.1080/15374416.2013.822307]

King 2000

King NJ, Tonge BJ, Mullen P, et al. (2000) Treating sexually abused children with posttraumatic stress symptoms: A randomized clinical trial. Journal of the American Academy of Child and Adolescent Psychiatry 39(11), 1347-1355

Langley 2015

Langley AK, Gonzalez A, Sugar CA, et al. (2015) Bounce back: Effectiveness of an elementary school-based intervention for multicultural children exposed to traumatic events. Journal of consulting and clinical psychology 83(5), 853

Layne 2008

Layne CM, Saltzman WR, Poppleton L, et al. (2008) Effectiveness of a school-based group psychotherapy program for war-exposed adolescents: a randomized controlled trial. Journal of the American Academy of Child and Adolescent Psychiatry 47(9), 1048-62

Meiser-Stedman 2010/2017

Meiser-Stedman R (2010) Cognitive behavioural therapy (CBT) as an early intervention for post-traumatic stress disorder (PTSD) in youth: preliminary efficacy and mechanisms of action [ISRCTN38352118]. Available from: http://www.isrctn.com/ISRCTN38352118 [accessed 30.04.17]

Meiser□Stedman R, Smith P, McKinnon A, et al. (2017) Cognitive therapy as an early treatment for post□traumatic stress disorder in children and adolescents: a randomized controlled trial addressing preliminary efficacy and mechanisms of action. Journal of Child Psychology and Psychiatry 58(5), 623-633

Pityaratstian 2015

Pityaratstian N, Piyasil V, Ketumarn P, et al. (2015) Randomized controlled trial of group cognitive behavioural therapy for post-traumatic stress disorder in children and adolescents exposed to tsunami in Thailand. Behavioural and cognitive psychotherapy 43(05), 549-61

Ruf 2010

Ruf M, Schauer M, Neuner F, Catani C, Schauer E, Elbert T. Narrative exposure therapy for 7□to 16□year□olds: A randomized controlled trial with traumatized refugee children. Journal of traumatic stress. 2010 Aug 1; 23(4):437-45

Shein-Szydlo 2016

Shein□Szydlo J, Sukhodolsky DG, Kon DS, et al. (2016) A Randomized Controlled Study of Cognitive–Behavioral Therapy for Posttraumatic Stress in Street Children in Mexico City. Journal of Traumatic Stress 29(5), 406-14

Smith 2007

Smith P, Yule W, Perrin S, et al. (2007) Cognitive-behavioral therapy for PTSD in children and adolescents: a preliminary randomized controlled trial. Journal of the American Academy of Child & Adolescent Psychiatry 46(8), 1051-61

Stein 2003a/Kataoka 2011

Stein BD, Jaycox LH, Kataoka SH, et al. (2003) A mental health intervention for schoolchildren exposed to violence - A randomized controlled trial. JAMA 290(5), 603-611

Kataoka S, Jaycox LH, Wong M, et al. (2011) Effects on school outcomes in low-income minority youth: Preliminary findings from a community-partnered study of a school trauma intervention. Ethnicity & disease 21(301):S1

Non-trauma-focused CBT

Najavits 2006

Najavits LM, Gallop RJ and Weiss RD (2006) Seeking safety therapy for adolescent girls with PTSD and substance use disorder: A randomized controlled trial. The Journal of Behavioral Health Services & Research 33(4), 453-63

Eye movement desensitisation and reprocessing (EMDR)

Ahmad 2007/2008

Ahmad A, Larsson B and Sundelin-Wahlsten V (2007) EMDR treatment for children with PTSD: Results of a randomized controlled trial. Nordic journal of psychiatry 61(5), 349-54

Ahmad A and Sundelin-Wahlsten V (2002) Applying EMDR on children with PTSD. European Child & Adolescent Psychiatry 17(3), 127-32

de Roos 2017

de Roos C, van der Oord S, Zijlstra B, et al. (2017) EMDR and Cognitive Behavioral Writing Therapy versus Waitlist in Pediatric PTSD Following Single-Incident Trauma:

A Multi-Center Randomized Clinical Trial. Journal of Child Psychology and Psychiatry [in press]

Soberman 2002

Soberman GB, Greenwald R and Rule DL (2002) A controlled study of eye movement desensitization and reprocessing (EMDR) for boys with conduct problem. Journal of aggression, maltreatment & trauma 6(1), 217-36

Psychodynamic therapies

Lieberman 2005/2006/Ghosh Ippen 2011

Lieberman AF, Van Horn P and Ippen CG (2005) Toward evidence-based treatment: child-parent psychotherapy with preschoolers exposed to marital violence. J Am Acad Child Adolesc Psychiatry 44(12), 1241-8

Lieberman AF, Ippen CG and Van Horn P (2006) Child-parent psychotherapy: 6-month follow-up of a randomized controlled trial. Journal of the American Academy of Child & Adolescent Psychiatry 45(8), 913-8

Ghosh I, Harris WW, Van Horn and Lieberman AF (2011) Traumatic and stressful events in early childhood: can treatment help those at highest risk? Child abuse & neglect 35(7), 504-513

Counselling

Chen 2014

Chen Y, Shen WW, Gao K, et al. (2014) Effectiveness RCT of a CBT intervention for youths who lost parents in the Sichuan, China, earthquake. Psychiatric Services 65(2), 259-62

Ertl 2011/Neuner 2007

Ertl V, Pfeiffer A, Schauer E, et al. (2011) Community-implemented trauma therapy for former child soldiers in Northern Uganda: a randomized controlled trial. JAMA 306(5), 503-12 [DOI: 10.1001/jama.2011.1060]

Neuner F, Elbert T and Ertl V (2007) A Randomized Controlled Clinical Trial (RCCT) to Test the Effectiveness of Narrative Exposure Therapy (NET) Versus an Attention Control Condition (AC) in Reducing Trauma Related Symptoms in Formerly Abducted Children and Former Child Soldiers Suffering From Posttraumatic Stress Disorder (PTSD) [NCT00552006]. Available from: https://clinicaltrials.gov/show/NCT00552006 [accessed 30.04.17]

Combined somatic and cognitive therapies

Al-Hadethe 2015

Al-Hadethe A, Hunt N, Al-Qaysi G and Thomas S (2015) Randomised Controlled Study Comparing Two Psychological Therapies for Posttraumatic Stress Disorder (PTSD): Emotional Freedom Techniques (EFT) Vs. Narrative Exposure Therapy (NET). J Trauma Stress Disor Treat 4, 2

Parent training/Family interventions

Deblinger 1996/1999

Deblinger E, Lippman L and Steer R (1996) Sexually abused children suffering posttraumatic stress symptoms: initial treatment outcome findings. Child Maltreatment 1, 310-3 21

Deblinger E, Steer RA and Ippmann J (1999) Two-year follow-up study of cognitive behavioral therapy for sexually abused children suffering post-traumatic stress symptoms. Child Abuse & Neglect 23, 1371-1378

Kazak 2004

Kazak AE, Alderfer MA, Streisand R, et al. (2004) Treatment of posttraumatic stress symptoms in adolescent survivors of childhood cancer and their families: A randomized clinical trial. Journal of Family Psychology 18(3), 493-504

King 2000

King NJ, Tonge BJ, Mullen P, et al. (2000) Treating sexually abused children with posttraumatic stress symptoms: A randomized clinical trial. Journal of the American Academy of Child and Adolescent Psychiatry 39(11), 1347-1355

Play therapy

Deeba 2015

Deeba F and Rapee RM (2015) Evaluation of an innovative intervention for traumatized children from a low resourced country. Mental Health & Prevention 3(4), 157-69

Schottelkorb 2012

Schottelkorb AA, Doumas DM and Garcia R (2012) Treatment for childhood refugee trauma: A randomized, controlled trial. International Journal of Play Therapy 21(2), 57

Psychosocial interventions for the treatment of PTSD in children and young people

Introduction

Psychosocial interventions will be considered as classes of intervention (art therapy; music therapy; meditation; psychoeducational interventions; peer support) and form the subsections below.

Evidence for interventions in the following classes was also searched for but none was found: mindfulness-based stress reduction (MBSR); nature-assisted therapies; supported employment; practical support.

Art therapy: clinical evidence

Included studies

Four studies of art therapy for the treatment of PTSD in children and young people were identified for full-text review. Of these 4 studies, 1 RCT (N=77) was included in a single comparison.

For early treatment (intervention initiated 1-3 months post-trauma) of PTSD symptoms, there were no included studies.

For delayed treatment (intervention initiated more than 3 months post-trauma) of PTSD symptoms, 1 RCT (N=77) compared art therapy (in addition to TAU) with attention-placebo (in addition to TAU) (Lyshak-Stelzer 2007).

Excluded studies

Three studies were reviewed at full text and excluded from this review due to non-randomised group assignment, small sample size (N<10 per arm), or because efficacy or safety data could not be extracted.

Studies not included in this review with reasons for their exclusions are provided in Appendix K.

Summary of clinical studies included in the evidence review

See also the study selection flow chart in Appendix C, forest plots in Appendix E and study evidence tables in Appendix D.

Table 31 provides a brief summary of the included study and evidence from this study is summarised in the clinical GRADE evidence profile below (Table 32).

See also the study selection flow chart in Appendix C, forest plots in Appendix E and study evidence tables in Appendix D.

Table 31: Summary of included studies: Art therapy for delayed treatment (>3 months)

Comparison	Art therapy (+ TAU) versus attention-placebo (+ TAU)
Total no. of studies (N randomised)	1 (77)
Study ID	Lyshak-Stelzer 2007
Country	US
Diagnostic status	Clinically important PTSD symptoms (scoring above a threshold on validated scale)
Mean months since onset of PTSD	NR
Mean age (range)	15.1 (13-17)
Sex (% female)	45
Ethnicity (% BME)	82
Coexisting conditions	NR
Mean months since traumatic event	NR
Type of traumatic event	Mixed: Frequently reported trauma types included: Physically abused or threatened with physical abuse at home (62%); Witnessing physical abuse at home (50%); Being in a bad accident (50%); Witnessing shooting, beating, or threats in neighbourhood (47%); Sexual abuse (46%); Beaten, shot at, or threatened in neighbourhood (45%); Serious medical problem (40%); Being in a disaster (weather, fire, etc.) (19%)
Single or multiple incident index trauma	Multiple

Comparison	Art therapy (+ TAU) versus attention-placebo (+ TAU)
Lifetime experience of trauma	NR
Intervention details	Trauma-focused expressive art therapy (+ TAU). Each participant completed collages or drawings to express a narrative of his/her "life story"
Intervention format	Group
Intervention intensity	16x weekly sessions (length of session NR)
Comparator	Attention-placebo (+ TAU): standard arts and craft activity group already in use at the two facilities
Intervention length (weeks)	16

BME –Black and minority ethnic; NR-Not reported; PTSD-Post-traumatic stress disorder; TAU-Treatment as usual.

See appendix D for full evidence tables.

Quality assessment of clinical studies included in the evidence review

The clinical evidence profile for this review (art therapy for the treatment of PTSD in children and young people) are presented in Table 32.

Table 32: Summary clinical evidence profile: Art therapy (+ TAU) versus attention-placebo (+ TAU) for delayed treatment (>3 months)

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Attention-placebo (+ TAU)	Corresponding risk Art therapy (+ TAU)			
PTSD symptomatology clinician-rated UCLA PTSD-RI administered via structured interview format; change score Follow-up: mean 16 weeks		The mean PTSD symptomatology clinician-rated in the intervention groups was 1.79 standard deviations lower (2.67 to 0.91 lower)		29 (1 study)	low[1,2]

CI=confidence interval; PTSD=post-traumatic stress disorder; SMD=standardised mean difference; TAU=treatment as usual; UCLA PTSD-RI= UCLA PTSD-Reaction Index
[1] OIS not met (N<400)
[2] This is an interim report but unable to locate full report

See appendix F for full GRADE tables.

Music therapy: clinical evidence

Included studies

One study of music therapy for the treatment of PTSD in children and young people was identified for full-text review. This study could not be included.

Excluded studies

One study was reviewed at full text and excluded from this review due to non-randomised group assignment.

Studies not included in this review with reasons for their exclusions are provided in Appendix K.

Meditation: clinical evidence

Included studies

Five studies of meditation for the treatment of PTSD in children and young people were identified for full-text review. Of these 5 studies, 1 RCT (N=82) was included in a single comparison for meditation.

For early treatment (intervention initiated 1-3 months post-trauma) of PTSD symptoms, there were no included studies.

For delayed treatment (intervention initiated more than 3 months post-trauma) of PTSD symptoms, 1 RCT (N=82) compared meditation with waitlist (Gordon 2006/Gordon

2008 [protocol and published paper]).

Excluded studies

Four studies were reviewed at full text and excluded from this review because the population was outside scope (<80% of participants are eligible for the review and disaggregated data cannot be obtained), the study was unpublished (registered on clinical trials.gov and author contacted for full trial report but not provided), or the paper was a systematic review with no new useable data and any meta-analysis results not appropriate to extract.

Studies not included in this review with reasons for their exclusions are provided in Appendix K.

Summary of clinical studies included in the evidence review

See also the study selection flow chart in Appendix C, forest plots in Appendix E and study evidence tables in Appendix D.

Table 33 provides a brief summary of the included study and evidence from this study is summarised in the clinical GRADE evidence profile below (Table 34).

See also the study selection flow chart in Appendix C, forest plots in Appendix E and study evidence tables in Appendix D.

Table 33: Summary of included studies: Meditation for delayed treatment (>3 months)

Comparison	Meditation versus waitlist
Total no. of studies (N randomised)	1 (82)
Study ID	Gordon 2006/2008
Country	Kosovo

Comparison	Meditation versus waitlist
Diagnostic status	PTSD diagnosis according to ICD/DSM criteria
Mean months since onset of PTSD	NR
Mean age (range)	16.3 (14-18)
Sex (% female)	76
Ethnicity (% BME)	NR
Coexisting conditions	NR
Mean months since traumatic event	NR
Type of traumatic event	Witnessing war as a civilian: Kosovar adolescents
Single or multiple incident index trauma	Multiple
Lifetime experience of trauma	NR
Intervention details	Mind-body skills group, combines meditation with spoken and written word exercises, drawing and movement in a small-group school setting
Intervention format	Group
Intervention intensity	12x twice-weekly 2-hour sessions (24 hours)
Comparator	Waitlist
Intervention length (weeks)	6

BME –Black and minority ethnic; NR-Not reported; PTSD-Post-traumatic stress disorder.

See appendix D for full evidence tables.

Quality assessment of clinical studies included in the evidence review

The clinical evidence profile for this review (meditation for the treatment of PTSD in children and young people) is presented in Table 34.

Table 34: Summary clinical evidence profile: Meditation versus waitlist for delayed treatment (>3 months)

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Waitlist	Corresponding risk Meditation			
PTSD symptomatology self-rated HTQ change score Follow-up: mean 6 weeks		The mean PTSD symptomatology self-rated in the intervention groups was 1.65 standard deviations lower (2.17 to 1.13 lower)		77 (1 study)	low[1,2]
Discontinuation Number of participants lost to follow-up for any reason	49 per 1000	73 per 1000 (13 to 415)	RR 1.5 (0.26 to 8.51)	82 (1 study)	low[3]

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Waitlist	Corresponding risk Meditation			
Follow-up: mean 6 weeks					

CI=confidence interval; HTQ= Harvard Trauma Questionnaire; PTSD=post-traumatic stress disorder; RR=risk ratio; SMD=standardised mean difference
[1] Risk of bias is high or unclear across multiple domains
[2] OIS not met (N<400)
[3] 95% CI crosses line of no effect and thresholds for both clinically important benefit and harm

See appendix F for full GRADE tables.

Psychoeducational interventions: clinical evidence

Included studies

Seven studies of psychoeducational interventions for the treatment of PTSD in children and young people were identified for full-text review. None of these studies could be included

Excluded studies

Seven studies were reviewed at full text and excluded from this review. Reasons for exclusion included non-randomised group assignment, non-validated outcome measures and small sample size (N<10 per arm).

Studies not included in this review with reasons for their exclusions are provided in Appendix K.

Peer support: clinical evidence

Included studies

Four studies of peer support for the treatment of PTSD in children and young people were identified for full-text review. None of these studies could be included.

Excluded studies

Four studies were reviewed at full text and excluded from this review because the intervention was not targeted at PTSD symptoms, or efficacy or safety data could not be extracted.

Studies not included in this review with reasons for their exclusions are provided in Appendix K.

Economic evidence

Included studies

The systematic search of the literature did not identify any economic studies assessing the cost effectiveness of psychosocial interventions for the treatment of

PTSD in children and young people. The search strategy for economic studies is provided in Appendix B.

Excluded studies

No economic studies of psychosocial interventions for the treatment of PTSD in children and young people were reviewed at full text and excluded.

Economic model

No economic modelling was undertaken in this area because other topics were agreed as higher priorities for economic evaluation.

Resource impact

As no recommendations were made in this area and psychosocial interventions for the treatment of PTSD in children and young people are not in widespread use in routine clinical practice, there is no impact on resources.

Clinical evidence statements

Art therapy for delayed treatment (>3 months)

- Low quality single-RCT (N=29) evidence suggests a large and statistically significant benefit of art therapy (in addition to TAU) relative to attention-placebo (in addition to TAU) on improving clinician-rated PTSD symptomatology for children with PTSD who were exposed to trauma more than 3 months ago. No other outcomes are available for art therapy.

Meditation for delayed treatment (>3 months)

- Low quality single-RCT (N=77) evidence suggests a large and statistically significant benefit of meditation relative to waitlist on improving self-rated PTSD symptomatology for children with PTSD who were exposed to trauma more than 3 months ago. Evidence from this same RCT (N=82) suggests a trend for a higher rate of discontinuation associated with meditation relative to waitlist, however absolute differences are small and this effect is not statistically significant.

Economic evidence statements

No economic evidence on psychosocial interventions for the treatment of PTSD in children and young people was identified and no primary economic modelling was undertaken.

The committee's discussion of the evidence

Interpreting the evidence

Outcomes that matter the most

Critical outcomes were measures of PTSD symptom improvement on validated scales, remission (as defined as a loss of diagnosis or scoring below threshold on a validated scale), and response (as measured by an agreed percentage improvement in symptoms and/or by a dichotomous rating of much or very much improved). Attrition from treatment (for any reason) was also considered an important outcome, as a proxy for the acceptability and/or tolerability of treatment. The committee

considered dissociative symptoms, personal/social/educational functioning (including global functioning/functional impairment, sleeping difficulties, and quality of life), and symptoms of a coexisting condition (including anxiety, depression and emotional and behavioural problems) as important but not critical outcomes. This distinction was based on the primacy of targeting the core PTSD symptoms, whilst acknowledging that broader symptom measures may be indicators of a general pattern of effect. Generally change scores were favoured over final scores as although in theory randomisation should balance out any differences at baseline, this assumption can be violated by small sample sizes. The committee also expressed a general preference for self-rated PTSD symptomatology, however, in considering psychosocial interventions (relative to pharmacological interventions) a greater emphasis was placed on triangulating effects on self-rated PTSD symptomatology with clinician-rated outcome measures, given that the latter but not the former could be blinded.

The quality of the evidence

All the evidence reviewed was of low quality, reflecting the high risk of bias associated with the studies (including for instance, non-blind outcome assessment), the small numbers in trials and the imprecision of many of the results (in terms of the failure to meet the optimal information size). This uncertainty of the evidence is reflected in the Committee decision to not make any recommendations for psychosocial interventions for the treatment of PTSD in children and young people.

Consideration of clinical benefits and harms

The Committee considered the evidence suggesting potential benefits of meditation or art therapy on improving self-rated or clinician-rated PTSD symptomatology respectively. However, evidence for both interventions was limited to small single studies, there was no evidence for effects on important associated symptoms or a triangulation of effects on other PTSD outcomes, there was no evidence for discontinuation for art therapy, and a non-statistically significant trend for a higher rate of discontinuation associated with meditation. Based on this uncertainty in the evidence, the Committee were not confident in the robustness of the benefits themselves or whether any benefits would outweigh any potential harms, and thus a recommendation was not warranted.

Cost effectiveness and resource use

No evidence on the cost effectiveness of psychosocial interventions for the treatment of PTSD in children and young people was identified and no economic modelling was undertaken in this area. As there was very limited evidence of clinical benefit associated with psychosocial interventions, no recommendation was made. None of these interventions are in widespread use in routine clinical practice, therefore no impact on resources is expected.

References for included studies

Art therapy

Lyshak-Stelzer 2007

Lyshak-Stelzer F, Singer P, Patricia SJ and Chemtob CM (2007) Art therapy for adolescents with posttraumatic stress disorder symptoms: A pilot study. Art Therapy 24(4), 163-9

Meditation

Gordon 2006/2008

Gordon JS (2006) Treatment of Posttraumatic Stress Disorder in Kosovar High School Students Using Mind-Body Skills Groups: A Randomized Controlled Trial [NCT00136357]. Available from: https://clinicaltrials.gov/ct2/show/study/NCT00136357 [accessed 29.04.17]

Gordon JS, Staples JK, Blyta A, et al. (2008) Treatment of posttraumatic stress disorder in postwar Kosovar adolescents using mind-body skills groups: a randomized controlled trial. The Journal of clinical psychiatry 69(9), 1469-76

Other non-pharmacological interventions for the treatment of PTSD in children and young people

Introduction

Potentially relevant evidence was only identified for one class of non-pharmacological intervention, massage (see subsection below).

Evidence for interventions in the following classes was also searched for but none was found: acupuncture; exercise; repetitive transcranial magnetic stimulation [rTMS]; yoga).

Massage: clinical evidence

Included studies

One study of massage for the treatment of PTSD in children and young people was identified for full-text review. This study could not be included.

Excluded studies

One study was reviewed at full text and excluded from this review because efficacy or safety data could not be extracted.

Studies not included in this review with reasons for their exclusions are provided in Appendix K.

Economic evidence

Included studies

The systematic search of the literature did not identify any economic studies assessing the cost effectiveness of other non-pharmacological interventions for the treatment of PTSD in children and young people. The search strategy for economic studies is provided in Appendix B.

Excluded studies

No economic studies of other non-pharmacological interventions for the treatment of PTSD in children and young people were reviewed at full text and excluded.

Economic model

No economic modelling was undertaken in this area because other topics were agreed as higher priorities for economic evaluation.

Resource impact

As no recommendations were made in this area and other non-pharmacological interventions for the treatment of PTSD in children and young people are not in widespread use in routine clinical practice, there is no impact on resources.

Clinical evidence statements

No clinical evidence on other non-pharmacological interventions for the treatment of PTSD in children and young people met inclusion criteria for this review.

Economic evidence statements

No economic evidence on other non-pharmacological interventions for the treatment of PTSD in children and young people was identified and no primary economic modelling was undertaken.

The committee's discussion of the evidence

Interpreting the evidence

Outcomes that matter the most

No evidence was included in this review.

The quality of the evidence

No evidence was included in this review.

Consideration of clinical benefits and harms

No evidence was included in this review.

Cost effectiveness and resource use

No evidence on the cost effectiveness of other non-pharmacological interventions for the treatment of PTSD in children and young people was identified and no economic modelling was undertaken in this area. As there was no clinical evidence available, no recommendation was made. None of these interventions are in widespread use in routine clinical practice, therefore no impact on resources is expected.

Other references

Alisic 2014

Alisic E, Zalta AK, Van Wesel F, et al. (2014) Rates of post-traumatic stress disorder in trauma-exposed children and adolescents: meta-analysis. The British Journal of Psychiatry 204(5), 335-340

Hiller 2016

Hiller RM, MeiserStedman R, Fearon P, et al. (2016) Research Review: Changes in the prevalence and symptom severity of child post□traumatic stress disorder in the year following trauma–a meta□analytic study. Journal of Child Psychology and Psychiatry 57(8), 884-898

Appendices

Appendix A – Review protocols

Review protocol for "For children and young people with clinically important post-traumatic stress symptoms, what are the relative benefits and harms of psychological, psychosocial or other non-pharmacological interventions targeted at PTSD symptoms?"

Topic	Psychological, psychosocial and other non-pharmacological interventions for the treatment of PTSD in children and young people
Review question(s)	RQ. 1.2 For children and young people with clinically important post-traumatic stress symptoms, what are the relative benefits and harms of psychological, psychosocial or other non-pharmacological interventions targeted at PTSD symptoms?
Sub-question(s)	Where evidence exists, consideration will be given to the specific needs of: women who have been exposed to sexual abuse or assault, or domestic violence lesbian, gay, bisexual, transsexual or transgender people people from black and minority ethnic groups people who are homeless or in insecure accommodation asylum seekers or refugees or other immigrants who are entitled to NHS treatment people who have been trafficked people who are socially isolated (and who are not captured by any other subgroup listed) people with complex PTSD people with neurodevelopmental disorders (including autism) people with coexisting conditions (drug and alcohol misuse, common mental health disorders, eating disorders, personality disorders, acquired brain injury, physical disabilities and sensory impairments) people who are critically ill or injured (for instance after a vehicle crash)
Objectives	To identify the most effective psychological, psychosocial or other non-pharmacological interventions for the treatment of PTSD in children and young people

Topic	Psychological, psychosocial and other non-pharmacological interventions for the treatment of PTSD in children and young people
Population	Children and young people (aged under 18 years) with clinically important post-traumatic stress symptoms (more than one month after a traumatic event), defined by a diagnosis of PTSD according to DSM, ICD or similar criteria (including PTSD for children 6 years and younger) or clinically-significant PTSD symptoms as indicated by baseline scores above threshold on a validated scale (see PTSD scales listed under outcomes). For mixed adult and children populations, where possible disaggregated data will be obtained. If this is not possible then the study will be categorised according to the mean age of the population (<18 years as children and young people and ≥18 years as adult). If some, but not all, of a study's participants are eligible for the review, where possible disaggregated data will be obtained. If this is not possible then the study will be included if at least 80% of its participants are eligible for this review.
Exclude	Trials of people with adjustment disorders Trials of people with traumatic grief Trials of people with psychosis as a coexisting condition Trials of people with learning disabilities Trials of women with PTSD during pregnancy or in the first year following childbirth Trials of adults in contact with the criminal justice system (not solely as a result of being a witness or victim)
Intervention	Psychological interventions (psychological interventions listed below are examples of interventions which may be included either alone or in combination and delivered to the child or young person and/or a parent or carer in an individual or group format): Trauma-focused cognitive behavioural therapies (CBT), including cognitive therapy, cognitive processing therapy, compassion focused therapy, exposure therapy/prolonged exposure (PE), virtual reality exposure therapy (VRET), imagery rehearsal therapy, mindfulness-based cognitive therapy (MBCT) and narrative exposure therapy for traumatized children and adolescents (KidNET) Non-trauma-focused CBT, including stress inoculation training (SIT) Psychologically-focused debriefing (including single session debriefing) Eye movement desensitisation and reprocessing (EMDR)

Topic	Psychological, psychosocial and other non-pharmacological interventions for the treatment of PTSD in children and young people
	Hypnotherapy Psychodynamic therapies, including traumatic incident reduction (TIR) Counselling, including non-directive/supportive/person-centred counselling Human givens therapy Combined somatic and cognitive therapies, including thought field therapy (TFT) and emotional freedom technique (EFT) Parent training/family interventions, including behavioural family therapy (such as Child and Family Traumatic Stress Intervention [CFTSI]) Play therapy Psychosocial interventions (psychosocial interventions listed below are examples of interventions which may be included either alone or in combination): Meditation Mindfulness-based stress reduction (MBSR) Nature-assisted therapies (including ecotherapy, horticultural therapy, therapeutic horticulture and nature-based therapy) Supported employment (including individual placement and support [IPS] supported employment and Veterans Health Administration Vocational Rehabilitation Programme [VRP]) Practical support (including financial and housing) Psychoeducational interventions Peer support (including self-help groups and support groups) Other non-pharmacological interventions (other non-pharmacological interventions listed below are examples of interventions which may be included either alone or in combination): Acupuncture (including classical acupuncture, electroacupuncture, auricular acupuncture, laser acupuncture and acupoint stimulation [such as acupressure, moxibustion and tapping])

Topic	Psychological, psychosocial and other non-pharmacological interventions for the treatment of PTSD in children and young people
	Exercise (including anaerobic [such as heavy weight training, sprinting, high-intensity interval training] and aerobic [such as running/jogging, swimming, cycling and walking] exercise, both supervised and unsupervised) Repetitive transcranial magnetic stimulation (rTMS) Yoga (including all types of yoga) Combination interventions, such as combined psychological plus pharmacological versus pharmacological alone, will also be considered here. A distinction will be made between early interventions (delivered within 3 months of the traumatic event) and delayed interventions (delivered more than 3 months after the traumatic event) Exclude: Inoculation interventions for people who may be at risk of experiencing but have not experienced, a traumatic event Interventions that are not targeted at PTSD symptoms
Comparison	Any other intervention Treatment as usual Waitlist Placebo
Critical outcomes	Efficacy PTSD symptomology (mean endpoint score or change in PTSD score from baseline) Diagnosis of PTSD (number of people meeting diagnostic criteria for PTSD according to DSM, ICD or similar criteria) Recovery from PTSD/Remission (number of people no longer meeting diagnostic criteria for PTSD according to DSM, ICD or similar criteria at endpoint, or endpoint scores below threshold on a validated scale) Response (as measured by an agreed percentage improvement in symptoms and/or by a dichotomous rating of much or very much improved on Clinical Global Impressions [CGI] scale)Relapse (number of people who remitted

Topic	Psychological, psychosocial and other non-pharmacological interventions for the treatment of PTSD in children and young people
	at endpoint but at follow-up either met diagnostic criteria for PTSD according to DSM, ICD or similar criteria, or whose follow-up scores were above threshold on a validated scale) The following PTSD scales will be included: Assessor-rated PTSD symptom scales Clinician-Administered PTSD Scale for Children and Adolescents for DSM–IV (CAPS–CA) or DSM-V (CAPS-CA-5) Anxiety Disorders Interview Schedule for Children for DSM–IV (ADIS–C) Schedule for Affective Disorders and Schizophrenia for School Age Children (K–SADS) Children's PTSD Inventory (CPTSDI) Self-report (parent-report) instruments of PTSD symptoms: Children's Impact of Event Scale/Children's Revised Impact of Event Scale (CRIES) Child Post Traumatic Stress Reaction Index (CPTS–RI)/UCLA PTSD Index for DSM-IV (UPID)/ CPTS-RI Revision 2 (also referred to as the PTSD Index for DSM-IV) Child PTSD Symptom Scale (CPSS) Trauma Screening Checklist for Children (TSCC) Children's Reaction to Traumatic Events Scale (CRTES) Angie/ Andy Cartoon Trauma Scales (ACTS)/ Angie/Andy Parent Rating Scales Pediatric Emotional Distress Scale (PEDS) Acceptability/tolerability Acceptability of the intervention Discontinuation due to adverse effects Discontinuation due to any reason (including adverse effects)
Important, but not critical outcomes	Dissociative symptoms as assessed with a validated scale including: Assessor-rated scales: Dissociation symptom cluster score on CAPS-CA

Topic	Psychological, psychosocial and other non-pharmacological interventions for the treatment of PTSD in children and young people
	Self-report (parent-report) scales: Adolescent Dissociative Experiences Scale (A-DES) Child Dissociative Checklist (CDC) Personal, social, educational and occupational functioning Emotional and behavioural problems (as assessed with a validated scale including Strengths and Difficulties Questionnaire [SDQ]) Sleeping difficulties (as assessed with a validated scale including Children's Sleep Habits Questionnaire [CSHQ], Sleep Disturbance Scale for Children [SDSC]) School attendance Employment (for instance, number in paid employment) Housing (for instance, number homeless or in insecure accommodation) Quality of life (as assessed with a validated scale including Pediatric Quality of Life Inventory [PedsQL] and Warwick-Edinburgh Mental Well-being Scale [WEMWBS]) Coexisting conditions (note that target of intervention should be PTSD symptoms): Symptoms of and recovery from a coexisting condition Self-harm Suicide
Study design	Systematic reviews of RCTs RCTs
Include unpublished data?	Clinical trial registries (ISRCTN and ClinicalTrials.gov) will be searched to identify any relevant unpublished trials and authors will be contacted to request study reports (where these are not available online). Unpublished data will only be included where a full study report is available with sufficient detail to properly assess the risk of bias. Authors of unpublished evidence will be asked for permission to use such data, and will be informed that summary data from the study and the study's characteristics will be published in the full guideline

Topic	Psychological, psychosocial and other non-pharmacological interventions for the treatment of PTSD in children and young people
	Conference abstracts and dissertations will not be included.
Restriction by date?	All relevant studies from existing reviews from the 2005 guideline will be carried forward. No restriction on date for the updated search.
Minimum sample size	N = 10 in each arm
Study setting	Primary, secondary, tertiary, social care and community settings. Treatment provided to troops on operational deployment or exercise will not be covered.
The review strategy	Reviews If existing systematic reviews are found, the committee will assess their quality, completeness, and applicability to the NHS and to the scope of the guideline. If the committee agrees that a systematic review appropriately addresses a review question, a search for studies published since the review will be conducted. Data Extraction (selection and coding) Citations from each search will be downloaded into EndNote and duplicates removed. Titles and abstracts of identified studies will be screened by two reviewers for inclusion against criteria, until a good inter-rater reliability has been observed (percentage agreement =>90% or Kappa statistics, K>0.60). Initially 10% of references will be double-screened. If inter-rater agreement is good then the remaining references will be screened by one reviewer. All primary-level studies included after the first scan of citations will be acquired in full and re-evaluated for eligibility at the time they are being entered into a study database (standardised template created in Microsoft Excel). At least 10% of data extraction will be double-coded. Discrepancies or difficulties with coding will be resolved through discussion between reviewers or the opinion of a third reviewer will be sought. Non-English-language papers will be excluded (unless data can be obtained from an existing review). Data Analysis Where data is available, meta-analysis using a fixed-effects model will be used to combine results from similar studies. Heterogeneity will be considered and if a random-effects model is considered more appropriate it will be conducted.

Topic	Psychological, psychosocial and other non-pharmacological interventions for the treatment of PTSD in children and young people
	For risk of bias, outcomes will be downgraded if the randomisation and/or allocation concealment methods are unclear or inadequate. Outcomes will also be downgraded if no attempts are made to blind the assessors or participants in some way, i.e. by either not knowing the aim of the study or the result from other tests. Outcomes will also be downgraded if there is considerable missing data (see below). Handling missing data: Where possible an intention to treat approach will be used outcomes will be downgraded if there is a dropout of more than 20%, or if there was a difference of >20% between the groups. For heterogeneity: outcomes will be downgraded once if I2>50%, twice if I2 >80% For imprecision: outcomes will be downgraded if: Step 1: If the 95% CI is imprecise i.e. crosses 0.8 or 1.25 (dichotomous) or -0.5 or 0.5 (for continuous). Outcomes will be downgraded one or two levels depending on how many lines it crosses. Step 2: If the clinical decision threshold is not crossed, we will consider whether the criterion for Optimal Information Size is met, if not we will downgrade one level for the following. for dichotomous outcomes: <300 events for continuous outcomes: <400 participants For clinical effectiveness, if studies report outcomes using the same scale mean differences will be considered, if not standardized mean differences (SMDs) will be considered and the following criteria will be used: SMD <0.2 too small to likely show an effect SMD 0.2 small effect SMD 0.5 moderate effect SMD 0.8 large effect RR <0.8 or >1.25 clinical benefit Anything less (RR >0.8 and <1.25), the absolute numbers will be looked at to make a decision on whether there may be a clinical effect.
Heterogeneity (sensitivity analysis and subgroups)	Where substantial heterogeneity exists, sensitivity analyses will be considered, for instance: Studies with <50% completion data (drop out of >50%) will be excluded

Topic	Psychological, psychosocial and other non-pharmacological interventions for the treatment of PTSD in children and young people
	Where possible, the influence of subgroups will be considered, including subgroup analyses giving specific consideration to the groups outlined in the sub-question section and to the following groups: Trauma type (including single incident relative to chronic exposure) Duration of intervention (for instance, short-term [≤12 weeks] relative to long-term [>12 weeks]) Intensity of intervention (for instance, low intensity [≤15 sessions] relative to high intensity [>15 sessions]) Format of intervention (individual relative to group) Mode of intervention delivery (including digital relative to face-to-face) First-line treatment relative to second-line treatment and treatment-resistant PTSD (≥2 inadequate treatments) Acute PTSD symptoms (clinically important PTSD symptoms for less than 3 months) relative to chronic PTSD symptoms (clinically important PTSD symptoms for 3 months or more)
Notes	Practical and social support (area of scope) is covered quantitatively by interventions listed under psychosocial interventions: • Supported employment (including individual placement and support [IPS] supported employment and Veterans Health Administration Vocational Rehabilitation Programme [VRP]) • Practical support (including financial and housing) • Peer support (including self-help groups and support groups)

Appendix B – Literature search strategies

Literature search strategy for "For children and young people with clinically important post-traumatic stress symptoms, what are the relative benefits and harms of psychological, psychosocial or other non-pharmacological interventions targeted at PTSD symptoms?"

Clinical evidence

Database: **Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R), Embase, PsycINFO**

Date of last search: 29 January 2018

#	Searches
1	*acute stress/ or *behavioural stress/ or *emotional stress/ or *critical incident stress/ or *mental stress/ or *posttraumatic stress disorder/ or *psychotrauma/
2	1 use emez
3	stress disorders, traumatic/ or combat disorders/ or psychological trauma/ or stress disorders, post-traumatic/ or stress disorders, traumatic, acute/ or stress, psychological/
4	3 use mesz, prem
5	exp posttraumatic stress disorder/ or acute stress disorder/ or combat experience/ or emotional trauma/ or post-traumatic stress/ or traumatic neurosis/ or trauma/ or psychological stress/ or chronic stress/
6	5 use psyh
7	(railway spine or (rape adj2 trauma*) or reexperienc* or re experienc* or torture syndrome or traumatic neuros* or traumatic stress).ti,ab.
8	(trauma* and (avoidance or grief or horror or death* or nightmare* or night mare* or emotion*)).ti,ab.
9	(posttraumatic* or post traumatic* or stress disorder* or acute stress or ptsd or asd or desnos or (combat neuros* or combat syndrome or concentration camp syndrome or extreme stress or flashback* or flash back* or hypervigilan* or hypervigilen* or psych* stress or psych* trauma* or psycho?trauma* or psychotrauma*) or (posttrauma* or traumagenic* or traumatic stress*)).ti,ab.
10	or/2,4,6-9
11	*psychotherapy/ use emez or psychotherapy/ use mesz, prem,psyh
12	(((psycholog* or psycho social* or psychosocial*) adj3 (intervention* or program* or therap* or treat*)) or psychotherap* or psycho therap* or talk* therap* or therapeutic technique* or therapist* or third wave or time limited).ti,ab,sh.
13	exp *behavior therapy/ or exp *cognitive therapy/
14	13 use emez
15	exp behavior therapy/ use mesz, prem
16	exp behavior therapy/ or exp cognitive behavior therapy/
17	16 use psyh
18	(((behaviour* or behavior*) adj2 cognitiv*) or cbt or ccbt or ((behav* or cognitive*) adj3 (intervention* or manag* or program* or restructure* or therap* or treat*)) or (stress inoculation adj2 (intervention* or program* or therap* or train* or treat*)) or (behav* adj2

#	Searches
	activat*) or ((trauma adj (based or focused or led)) or exposure based or prolonged exposure)).ti,ab.
19	*emotion/ use emez or emotions/ use mesz, prem
20	emotion focused therapy/ or sympathy/
21	20 use psyh
22	(((compassion or emotion* or emotive*) adj (based or focused or led)) or emotional processing or ((compassion or emotion* or emotive*) adj3 (coach* or intervention* or program* or therap* or treat*))).ti,ab.
23	exposure therapy/ or narrative therapy/ or virtual reality exposure therapy/
24	23 use emez
25	implosive therapy/ or narrative therapy/ or virtual reality exposure therapy/
26	25 use mesz, prem
27	exposure therapy/ or narrative therapy/ or virtual reality/
28	27 use psyh
29	(((augmented or virtual) adj2 reality) or (virtual adj (environment or restorative)) or ((exposure or implosive or virtual reality) adj2 (intervention* or program* or therap* or train*))).ti,ab.
30	((imagery adj2 (rehears* or re hears*)) or (((lower* or reduc*) adj3 (bad dream* or nightmare*)) and (intervention* or program* or therap* or treat*)) or ((intervention* or program* or therap* or treat*) adj3 nightmare*)).mp. or ((presleep or presleep) adj2 imagery).ti,ab.
31	(mindfulness or ((exposure or narrative) adj therapy)).sh.
32	(kidnet or mindful* or narrative therap*).ti,ab.
33	exp "debriefing (psychological)"/ use psyh
34	debrief*.ti,ab.
35	eye movement desensitization reprocessing/ use mesz, prem or eye movement desensitization therapy/ use psyh or (emdr or (eye movement adj2 desensiti*)).ti,ab.
36	hypnosis/ use emez or exp hypnosis/ use mesz, prem or exp hypnotherapy/ use psyh or (hypnosis or hypnotherap*).ti,ab.
37	psychodynamic psychotherapy/ use emez or psychotherapy, psychodynamic/ use mesz, prem or psychodynamic psychotherapy/ use psyh or repetitive transcranial magnetic stimulation/ use emez or Transcranial Magnetic Stimulation/ use mesz, prem, psyh
38	((psychodynamic or (dynamic adj (psychotherapy* or therap*)) or incident reduction) or ((brain or transcranial) adj2 stimulat*) or rtms).ti,ab.
39	(psychoanal* or psychosomatic*).ti,ab.
40	exp counseling/ use emez,mesz,psyh or counsel*.ti,ab.
41	(hg therap* or human givens).ti,ab.
42	psychosomatic disorder/th use emez or exp somatoform disorders/th use mesz, prem
43	(exp somatoform disorders/ or somatization/) and (intervention* or program* or therap* or treat*).ti,ab,hw. use psyh
44	(psychosomatic* or somatherap* or somatic*).ti,ab.
45	(emotional freedom or holistic or thought field).ti,ab.
46	dance therap*.ti,ab,sh.
47	couple therapy/ or family therapy/ or marital therapy/ or exp parent/ed
48	47 use emez

#	Searches
49	couples therapy/ or family therapy/ or marital therapy/ or exp parents/ed
50	49 use mesz, prem
51	couples therapy/ or family intervention/ or exp family therapy/ or exp marriage counseling/ or parent training/
52	51 use psyh
53	(((con?joint or couple* or family or families or husband* or marriage* or marital* or partner* or relations* or spous* or wife or wives* or (child* adj5 parent*)) adj6 (counsel* or intervention* or program* or support* or therap* or treat*)) or ((couples* or family* or relations*) adj (based or focused or led)) or ecological therap* or expressed emotion or family dynamics or family relationships).tw.
54	((child* adj2 family traumatic stress intervention) or cftsi).ti,ab.
55	play therapy.sh.
56	(doll therap* or ((play or playful) adj3 (intervention* or program* or therap* or treat*)) or sandplay or sand play).ti,ab.
57	meditation.sh. or meditat*.ti,ab.
58	mindfulness.sh. or (mbsr or mindful*).ti,ab.
59	exp horticulture/ or occupational therapy/ or recreational therapy/
60	59 use emez
61	horticultural therapy/ or occupational therapy/ or recreation therapy/
62	61 use mesz, prem
63	exp "nature (environment)"/ or horticulture therapy/ or recreation therapy/ or occupational therapy/
64	63 use psyh
65	((nature adj (assisted or based)) or (nature adj3 (intervention* or program* or therap* or treat*)) or ecotherap* or e cotherap* or gardening or horticult* or leisure activit* or naturopath* or occupational therap*).ti,ab. or exp animal assisted therapy/ use emez, mesz or animal assisted therapy/ use psyh or (((animal* or dog* or equine* or horse* or pet or pets) adj2 (assist* or based or facilitat*)) or ((animal* or dog* or equine* or horse* or pet or pets) adj3 (intervention* or therap* or treat* or program*))).ti,ab.
66	psychoeducation.sh. or (psychoed* or psycho ed*).ti,ab.
67	exp acupuncture/ use emez or exp alternative medicine/ use emez or biofeedback/ or massage/ use emez or meditation/ use emez or acupressure/ use mesz, prem or massage/ use mesz, prem or acupuncture/ use mesz, prem or exp complementary therapies/ use mesz, prem or exp alternative medicine/ use psyh or biofeedback/ use psyh or massage/ use psyh or mind body therapy/ use psyh
68	(chinese medicine or medicine, chinese traditional or (moxibustion or electroacupuncture)).sh,id. or ((alternative or complementary) adj2 (medicine* or therap*)).ti,ab,sh. or (acu point* or acupoint* or acupressur* or acupunctur* or (ching adj2 lo) or cizhen or dianzhen or electroacupunctur* or (jing adj2 luo) or jingluo or massag* or needle therap* or tapping or zhenjiu or zhenci).tw.
69	exp *exercise/ use emez or exp *kinesiotherapy/ use emez or exp exercise/ use mesz, prem or exercise therapy/ use mesz, prem or exp exercise/ use psyh (physiotherap* or physio therap* or rehab*).ti,ab,hw.
70	(((balance or flexibility or resistance or sitting* or strenth*) adj2 (exercise* or train*)) or aerobic* or anaerobic* or bowls or dancing or dance or cycling or cycle* or elliptical train* or jogging or low impact activit* or running or swimming or sprinting or swim*1 or walking or

#	Searches
	yoga or tai chi or weight train* or (weight and brain* and (change* or increas* or volum*))).ti,ab.
71	friendship/ or peer counseling/ or peer group/ or self help/ or self care/ or social network/ or social support/ or support group/
72	71 use emez
73	community networks/ or friends/ or exp peer group/ or self care/ or self-help groups/ or social networking/ or social support/
74	73 use mesz, prem
75	friendship/ or network therapy/ or exp social networks/ or peer relations/ or peers/ or peer counseling/ or self care skills/ or exp self help techniques/ or social support/ or exp support groups/
76	75 use psyh
77	((self adj (administer* or assess* or attribut* or care or change or directed or efficacy or help* or guide* or instruct* or manag* or medicat* or monitor* or regulat* or reinforc* or re inforc* or support* or technique* or therap* or train* or treat*)) or selfadminister* or selfassess* or selfattribut* or selfcare or selfchange or selfdirected or selfefficacy or selfhelp* or selfguide* or selfinstruct* or selfmanag* or selfmedicat* or selfmonitor* or selfregulat* or selfreinforc* or self re inforc* or selfsupport* or selftechnique* or selftherap* or selftrain* or selftreat* or (wellness adj (therap* or train* or treat*))).ti,ab,sh.
78	(befriend* or be*1 friend* or buddy or buddies or ((community or lay or paid or support) adj (person or worker*))).ti,ab.
79	(((consumer* or famil* or friend* or lay or mutual* or peer* or social* or spous* or voluntary or volunteer*) adj3 (assist* or advice* or advis* or counsel* or educat* or forum* or help* or mentor* or network* or support* or visit*)) or ((consumer* or famil* or peer* or self help or social* or support* or voluntary or volunteer*) adj2 group*) or ((consumer* or famil* or friend* or lay or mutual* or peer* or self help or social* or spous* or support* or voluntary or volunteer*) adj3 (intervention* or program* or rehab* or therap* or service* or skill* or treat*)) or (((consumer* or famil* or friend* or lay* or peer* or spous* or user* or support* or voluntary or volunteer*) adj (based or counsel* or deliver* or interact* or led or mediat* or operated or provides or provider* or run*)) or ((consumer* or famil* or friend* or lay* or peer* or relation* or spous* or support*) adj3 trust*) or voluntary work*)).ti,ab.
80	(((lay or peer*) adj3 (advis* or consultant or educator* or expert* or facilitator* or instructor* or leader* or mentor* or person* or tutor* or worker*)) or expert patient* or mutual aid).ti,ab.
81	(peer* adj3 (assist* or counsel* or educat* or program* or rehab* or service* or supervis*)).ti,ab.
82	((psychoeducat* or psycho educat*) adj3 (group or network* or service*)).ti,ab.
83	((psychosocial or social) adj work*).ti,ab.
84	((ptsd or posttrauma* or post trauma* or trauma*) adj2 support*).ti,ab.
85	recovery support.ti,ab.
86	financial management/ use emez or financial support/ use mesz, prem or finance/ use psyh
87	((financ* or money) adj2 (assist* or educat* or guidance or intervention* or program* or support* or train*)).ti,ab.
88	assisted living facility/ or emergency shelter/ or halfway house/ or housing/ or independent living/ or residential home/ or residential home/
89	88 use emez
90	assisted living facilities/ or emergency shelter/ or group homes/ or halfway houses/ or housing/ or independent living/ or residential facilities/

#	Searches
91	90 use mesz, prem
92	assisted living / use psyh or shelters/ use psyh or group homes/ use psyh or halfway houses/ use psyh or housing/ use psyh or residential care institutions/ use psyh or ((resident* or hous* or accommod* or commun* or comu* or home*) adj5 (support* or support* or shelter* or outreach* or visit* or appointment*)).ti,ab.
93	(residential treatm* or residential facility* or supported hous* or public hous*).ti,ab.
94	(accomod* or assertive community treatment* or home* or housing* or outreach* or residential*).ti,ab.
95	absenteeism/ or daily life activity/ or employment/ or medical leave/ or mentoring/ or occupational health/ or occupational therapy/ or return to work/ or supported employment/ or unemployment/ or vocational guidance/ or vocational rehabilitation/ or work capacity/ or work/
96	95 use emez
97	absenteeism/ or "activities of daily living"/ or employment, supported/ or employment/ or mentoring/ or occupational health/ or occupational therapy/ or rehabilitation, vocational/ or return to work/ or sick leave/ or unemployment/ or vocational guidance/ or work/
98	97 use mesz, prem
99	"activities of daily living"/ or exp coaching/ or employee absenteeism/ or employment status/ or occupational guidance/ or occupational health/ or occupational therapy/ or reemployment/ or unemployment/ or vocational counselors/ or exp vocational rehabilitation/
100	99 use psyh
101	(((supp* or transitional*) adj5 (employ* or work*)) or individual placement or (placement* adj3 (employ* or work*))).ti,ab.
102	((employ* or placement* or psychosocial* or psycho-social* or occupation* or soc* or vocation* or work* or job* or counsel*) adj5 rehab*).ti,ab.
103	(sheltered work* or vocatio* or fountain house* or fountainhouse* or clubhouse* or club house* or work therap*).ti,ab.
104	(transitional employment or rehabilitation counsel* or (occupational adj (health or medicine)) or work* adjustment).ti,ab.
105	((performance adj (activit* or coach* or management or occupation*)) or coaching).ti,ab.
106	(((sheltered or permitted or voluntary or vocational or return* or rehabilitat*) adj3 work*) or work capacity or reemploy* or re employ* or job retention or work capacity).ti,ab.
107	((employ* or job or occupation* or vocation* or work*) adj5 (counsel* or educat* or guidance* or intervention* or program* or rehab* or reintegrat* or re integrat* or support* or therap* or train*)).ti,ab.
108	placement.ti,ab.
109	or/11-12,14-15,17-19,21-22,24,26,28-46,48,50,52-58,60,62,64-70,72,74,76-87,89,91-94,96,98,100-108
110	meta analysis/ or "meta analysis (topic)"/ or systematic review/
111	110 use emez
112	meta analysis.sh,pt. or "meta-analysis as topic"/ or "review literature as topic"/
113	112 use mesz, prem
114	(literature review or meta analysis).sh,id,md. or systematic review.id,md.
115	114 use psyh
116	(exp bibliographic database/ or (((electronic or computer* or online) adj database*) or bids or cochrane or embase or index medicus or isi citation or medline or psyclit or psychlit or

#	Searches
	scisearch or science citation or (web adj2 science)).ti,ab.) and (review*.ti,ab,sh,pt. or systematic*.ti,ab.)
117	116 use emez
118	(exp databases, bibliographic/ or (((electronic or computer* or online) adj database*) or bids or cochrane or embase or index medicus or isi citation or medline or psyclit or psychlit or scisearch or science citation or (web adj2 science)).ti,ab.) and (review*.ti,ab,sh,pt. or systematic*.ti,ab.)
119	118 use mesz, prem
120	(computer searching.sh,id. or (((electronic or computer* or online) adj database*) or bids or cochrane or embase or index medicus or isi citation or medline or psyclit or psychlit or scisearch or science citation or (web adj2 science)).ti,ab.) and (review*.ti,ab,pt. or systematic*.ti,ab.)
121	120 use psyh
122	((analy* or assessment* or evidence* or methodol* or quantativ* or systematic*) adj2 (overview* or review*)).tw. or ((analy* or assessment* or evidence* or methodol* or quantativ* or systematic*).ti. and review*.ti,pt.) or (systematic* adj2 search*).ti,ab.
123	(metaanal* or meta anal*).ti,ab.
124	(research adj (review* or integration)).ti,ab.
125	reference list*.ab.
126	bibliograph*.ab.
127	published studies.ab.
128	relevant journals.ab.
129	selection criteria.ab.
130	(data adj (extraction or synthesis)).ab.
131	(handsearch* or ((hand or manual) adj search*)).ti,ab.
132	(mantel haenszel or peto or dersimonian or der simonian).ti,ab.
133	(fixed effect* or random effect*).ti,ab.
134	((pool* or combined or combining) adj2 (data or trials or studies or results)).ti,ab.
135	or/111,113,115,117,119,121-134
136	exp "clinical trial (topic)"/ or exp clinical trial/ or crossover procedure/ or double blind procedure/ or placebo/ or randomization/ or random sample/ or single blind procedure/
137	136 use emez
138	exp clinical trial/ or exp "clinical trials as topic"/ or cross-over studies/ or double-blind method/ or placebos/ or random allocation/ or single-blind method/
139	138 use mesz, prem
140	(clinical trials or placebo or random sampling).sh,id.
141	140 use psyh
142	(clinical adj2 trial*).ti,ab.
143	(crossover or cross over).ti,ab.
144	(((single* or doubl* or trebl* or tripl*) adj2 blind*) or mask* or dummy or doubleblind* or singleblind* or trebleblind* or tripleblind*).ti,ab.
145	(placebo* or random*).ti,ab.
146	treatment outcome*.md. use psyh
147	animals/ not human*.mp. use emez

#	Searches
148	animal*/ not human*/ use mesz, prem
149	(animal not human).po. use psyh
150	or/137,139,141-146
151	150 not (or/147-149)
152	or/135,151
153	10 and 109 and 152

Database: **CDSR, DARE, HTA, CENTRAL**

Date of last search: 29 January 2018

#	Searches
#1	MeSH descriptor: Stress Disorders, Traumatic this term only
#2	MeSH descriptor: Combat Disorders this term only
#3	MeSH descriptor: Psychological Trauma this term only
#4	MeSH descriptor: Stress Disorders, Post-Traumatic this term only
#5	MeSH descriptor: Stress Disorders, Traumatic, Acute this term only
#6	MeSH descriptor: Stress, Psychological this term only
#7	("railway spine" or (rape near/2 trauma*) or reexperienc* or "re experienc*" or "torture syndrome" or "traumatic neuros*" or "traumatic stress"):ti (Word variations have been searched)
#8	("railway spine" or (rape near/2 trauma*) or reexperienc* or "re experienc*" or "torture syndrome" or "traumatic neuros*" or "traumatic stress"):ab (Word variations have been searched)
#9	(trauma* and (avoidance or grief or horror or death* or nightmare* or "night mare*" or emotion*)):ti (Word variations have been searched)
#10	(trauma* and (avoidance or grief or horror or death* or nightmare* or "night mare*" or emotion*)):ab (Word variations have been searched)
#11	(posttraumatic* or "post traumatic*" or "stress disorder*" or "acute stress" or ptsd or asd or desnos or ("combat neuros*" or "combat syndrome" or "concentration camp syndrome" or "extreme stress" or flashback* or "flash back*" or hypervigilan* or hypervigilen* or "psych* stress" or "psych* trauma*" or psychotrauma* or psychotrauma*) or (posttrauma* or traumagenic* or "traumatic stress*")):ti (Word variations have been searched)
#12	(posttraumatic* or "post traumatic*" or "stress disorder*" or "acute stress" or ptsd or asd or desnos or ("combat neuros*" or "combat syndrome" or "concentration camp syndrome" or "extreme stress" or flashback* or "flash back*" or hypervigilan* or hypervigilen* or "psych* stress" or "psych* trauma*" or psychotrauma* or psychotrauma*) or (posttrauma* or traumagenic* or "traumatic stress*")):ab (Word variations have been searched)
#13	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 or #11 or #12

Database: **CINAHL PLUS**

Date of last search: 29 January 2018

#	Searches
s52	s6 and s51
s51	s40 or s50
s50	s48 not s49

#	Searches
s49	(mh "animals") not (mh "human")
s48	s41 or s42 or s43 or s44 or s45 or s46 or s47
s47	ti (placebo* or random*) or ab (placebo* or random*)
s46	ti (single blind* or double blind* or treble blind* or mask* or dummy* or singleblind* or doubleblind* or trebleblind* or tripleblind*) or ab (single blind* or double blind* or treble blind* or mask* or dummy* or singleblind* or doubleblind* or trebleblind* or tripleblind*)
s45	ti (crossover or cross over) or ab (crossover or cross over)
s44	ti clinical n2 trial* or ab clinical n2 trial*
s43	(mh "crossover design") or (mh "placebos") or (mh "random assignment") or (mh "random sample")
s42	mw double blind* or single blind* or triple blind*
s41	(mh "clinical trials+")
s40	s7 or s8 or s9 or s10 or s11 or s12 or s13 or s14 or s15 or s16 or s17 or s18 or s19 or s20 or s21 or s22 or s23 or s29 or s30 or s31 or s34 or s35 or s36 or s37 or s38 or s39
s39	ti (analy* n5 review* or evidence* n5 review* or methodol* n5 review* or quantativ* n5 review* or systematic* n5 review*) or ab (analy* n5 review* or assessment* n5 review* or evidence* n5 review* or methodol* n5 review* or qualitativ* n5 review* or quantativ* n5 review* or systematic* n5 review*)
s38	ti (pool* n2 results or combined n2 results or combining n2 results) or ab (pool* n2 results or combined n2 results or combining n2 results)
s37	ti (pool* n2 studies or combined n2 studies or combining n2 studies) or ab (pool* n2 studies or combined n2 studies or combining n2 studies)
s36	ti (pool* n2 trials or combined n2 trials or combining n2 trials) or ab (pool* n2 trials or combined n2 trials or combining n2 trials)
s35	ti (pool* n2 data or combined n2 data or combining n2 data) or ab (pool* n2 data or combined n2 data or combining n2 data)
s34	s32 and s33
s33	ti review* or pt review*
s32	ti analy* or assessment* or evidence* or methodol* or quantativ* or qualitativ* or systematic*
s31	ti “systematic* n5 search*” or ab “systematic* n5 search*”
s30	ti “systematic* n5 review*” or ab “systematic* n5 review*”
s29	(s24 or s25 or s26) and (s27 or s28)
s28	ti systematic* or ab systematic*
s27	tx review* or mw review* or pt review*
s26	(mh "cochrane library")
s25	ti (bids or cochrane or embase or “index medicus” or “isi citation” or medline or psyclit or psychlit or scisearch or “science citation” or web n2 science) or ab (bids or cochrane or “index medicus” or “isi citation” or psyclit or psychlit or scisearch or “science citation” or web n2 science)
s24	ti (“electronic database*” or “bibliographic database*” or “computeri?ed database*” or “online database*”) or ab (“electronic database*” or “bibliographic database*” or “computeri?ed database*” or “online database*”)
s23	(mh "literature review")
s22	pt systematic* or pt meta*
s21	ti (“fixed effect*” or “random effect*”) or ab (“fixed effect*” or “random effect*”)

#	Searches
s20	ti (“mantel haenszel” or peto or dersimonian or “der simonian”) or ab (“mantel haenszel” or peto or dersimonian or “der simonian”)
s19	ti (handsearch* or "hand search*" or "manual search*") or ab (handsearch* or "hand search*" or "manual search*")
s18	ab "data extraction" or "data synthesis"
s17	ab "selection criteria"
s16	ab "relevant journals"
s15	ab "published studies"
s14	ab bibliograph*
s13	ti "reference list*"
s12	ab "reference list*"
s11	ti (“research review*” or “research integration”) or ab (“research review*” or “research integration”)
s10	ti (metaanal* or “meta anal*” or metasynthes* or “meta synethes*”) or ab (metaanal* or “meta anal*” or metasynthes* or “meta synethes*”)
s9	(mh "meta analysis")
s8	(mh "systematic review")
s7	(mh "literature searching+")
s6	s1 or s2 or s3 or s4 or s5
s5	ti ((posttraumatic* or "post traumatic*" or "stress disorder*" or "acute stress" or ptsd or asd or desnos or ("combat neuros*" or "combat syndrome" or "concentration camp syndrome" or "extreme stress" or flashback* or "flash back*" or hypervigilan* or hypervigilen* or "psych* stress" or "psych* trauma*" or psychotrauma* or psychotrauma*) or (posttrauma* or traumagenic* or "traumatic stress*"))) or ab ((posttraumatic* or "post traumatic*" or "stress disorder*" or "acute stress" or ptsd or asd or desnos or ("combat neuros*" or "combat syndrome" or "concentration camp syndrome" or "extreme stress" or flashback* or "flash back*" or hypervigilan* or hypervigilen* or "psych* stress" or "psych* trauma*" or psychotrauma* or psychotrauma*) or (posttrauma* or traumagenic* or "traumatic stress*")))
s4	ti ((trauma* and (avoidance or grief or horror or death* or nightmare* or "night mare*" or emotion*))) or ab ((trauma* and (avoidance or grief or horror or death* or nightmare* or "night mare*" or emotion*)))
s3	ti (("railway spine" or (rape near/2 trauma*) or reexperienc* or "re experienc*" or "torture syndrome" or "traumatic neuros*" or "traumatic stress")) or ab (("railway spine" or (rape near/2 trauma*) or reexperienc* or "re experienc*" or "torture syndrome" or "traumatic neuros*" or "traumatic stress"))
s2	(mh "stress, psychological")
s1	(mh "stress disorders, post-traumatic")

Health economic evidence

Note: evidence resulting from the health economic search update was screened to reflect the final dates of the searches that were undertaken for the clinical reviews (see review protocols).

Database: **Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R), Embase, PsycINFO**

Date of last search: 1 March 2018

#	Searches
1	*acute stress/ or *behavioural stress/ or *emotional stress/ or *critical incident stress/ or *mental stress/ or *posttraumatic stress disorder/ or *psychotrauma/
1	*acute stress/ or *behavioural stress/ or *emotional stress/ or *critical incident stress/ or *mental stress/ or *posttraumatic stress disorder/ or *psychotrauma/
2	1 use emez
3	stress disorders, traumatic/ or combat disorders/ or psychological trauma/ or stress disorders, post-traumatic/ or stress disorders, traumatic, acute/ or stress, psychological/
4	3 use mesz, prem
5	exp posttraumatic stress disorder/ or acute stress disorder/ or combat experience/ or "debriefing (psychological)"/ or emotional trauma/ or post-traumatic stress/ or traumatic neurosis/ or "trauma"/ or stress reactions/ or psychological stress/ or chronic stress/
6	5 use psyh
7	(railway spine or (rape adj2 trauma*) or reexperienc* or re experienc* or torture syndrome or traumatic neuros* or traumatic stress).ti,ab.
8	(trauma* and (avoidance or grief or horror or death* or nightmare* or night mare* or emotion*)).ti,ab.
9	(posttraumatic* or post traumatic* or stress disorder* or acute stress or ptsd or asd or desnos or (combat neuros* or combat syndrome or concentration camp syndrome or extreme stress or flashback* or flash back* or hypervigilan* or hypervigilen* or psych* stress or psych* trauma* or psycho?trauma* or psychotrauma*)).ti,ab.
10	or/2,4,6-9
11	budget/ or exp economic evaluation/ or exp fee/ or funding/ or exp health care cost/ or health economics/ or exp pharmacoeconomics/ or resource allocation/
12	151 use emez
13	exp budgets/ or exp "costs and cost analysis"/ or economics/ or exp economics, hospital/ or exp economics, medical/ or economics, nursing/ or economics, pharmaceutical/ or exp "fees and charges"/ or value of life/
14	153 use mesz, prem
15	exp "costs and cost analysis"/ or cost containment/ or economics/ or finance/ or funding/ or "health care economics"/ or pharmacoeconomics/ or exp professional fees/ or resource allocation/
16	155 use psyh
17	(cost* or economic* or pharmacoeconomic* or pharmaco economic*).ti. or (cost* adj2 (effective* or utilit* or benefit* or minimi*)).ab. or (budget* or fee or fees or financ* or price or prices or pricing or resource* allocat* or (value adj2 (monetary or money))).ti,ab.
18	or/12,14,16-17
19	decision theory/ or decision tree/ or monte carlo method/ or nonbiological model/ or (statistical model/ and exp economic aspect/) or stochastic model/ or theoretical model/
20	159 use emez
21	exp decision theory/ or markov chains/ or exp models, economic/ or models, organizational/ or models, theoretical/ or monte carlo method/
22	161 use mesz, prem
23	exp decision theory/ or exp stochastic modeling/
24	163 use psyh
25	((decision adj (analy* or model* or tree*)) or economic model* or markov).ti,ab.

#	Searches
26	or/20,22,24-25
27	quality adjusted life year/ or "quality of life index"/ or short form 12/ or short form 20/ or short form 36/ or short form 8/ or sickness impact profile/
28	167 use emez
29	quality-adjusted life years/ or sickness impact profile/
30	169 use mesz, prem
31	(((disability or quality) adj adjusted) or (adjusted adj2 life)).ti,ab.
32	(disutili* or dis utili* or (utilit* adj1 (health or score* or value* or weigh*))).ti,ab.
33	(health year equivalent* or hye or hyes).ti,ab.
34	(daly or qal or qald or qale or qaly or qtime* or qwb*).ti,ab.
35	discrete choice.ti,ab.
36	(euroqol* or euro qol* or eq5d* or eq 5d*).ti,ab.
37	(hui or hui1 or hui2 or hui3).ti,ab.
38	(((general or quality) adj2 (wellbeing or well being)) or quality adjusted life or qwb or (value adj2 (money or monetary))).ti,ab.
39	(qol or hql* or hqol* or hrqol or hr ql or hrql).ti,ab.
40	rosser.ti,ab.
41	sickness impact profile.ti,ab.
42	(standard gamble or time trade* or tto or willingness to pay or wtp).ti,ab.
43	(sf36 or sf 36 or short form 36 or shortform 36 or shortform36).ti,ab.
44	(sf6 or sf 6 or short form 6 or shortform 6 or shortform6).ti,ab.
45	(sf12 or sf 12 or short form 12 or shortform 12 or shortform12).ti,ab.
46	(sf16 or sf 16 or short form 16 or shortform 16 or shortform16).ti,ab.
47	(sf20 or sf 20 or short form 20 or shortform 20 or shortform20).ti,ab.
48	(sf8 or sf 8 or short form 8 or shortform 8 or shortform8).ti,ab.
49	or/28,30-48
50	or/18,26,49

Database: **HTA, NHS EED**

Date of last search: 1 March 2018

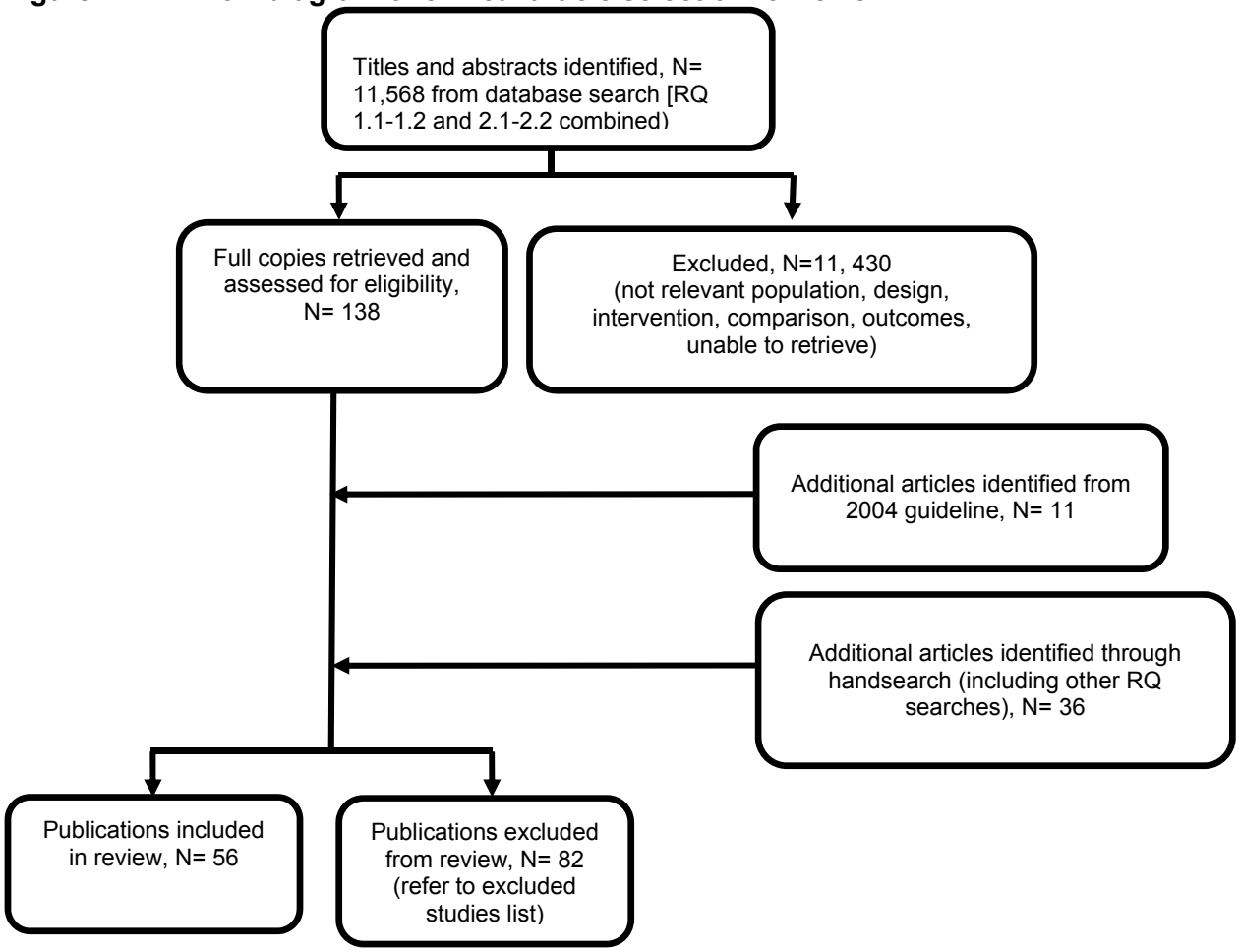
#	Searches
#1	MeSH descriptor: Stress Disorders, Traumatic this term only
#2	MeSH descriptor: Combat Disorders this term only
#3	MeSH descriptor: Psychological Trauma this term only
#4	MeSH descriptor: Stress Disorders, Post-Traumatic this term only
#5	MeSH descriptor: Stress Disorders, Traumatic, Acute this term only
#6	MeSH descriptor: Stress, Psychological this term only
#7	("railway spine" or (rape near/2 trauma*) or reexperienc* or "re experienc*" or "torture syndrome" or "traumatic neuros*" or "traumatic stress"):ti (Word variations have been searched)

#	Searches
#8	("railway spine" or (rape near/2 trauma*) or reexperienc* or "re experienc*" or "torture syndrome" or "traumatic neuros*" or "traumatic stress"):ab (Word variations have been searched)
#9	(trauma* and (avoidance or grief or horror or death* or nightmare* or "night mare*" or emotion*)):ti (Word variations have been searched)
#10	(trauma* and (avoidance or grief or horror or death* or nightmare* or "night mare*" or emotion*)):ab (Word variations have been searched)
#11	(posttraumatic* or "post traumatic*" or "stress disorder*" or "acute stress" or ptsd or asd or desnos or ("combat neuros*" or "combat syndrome" or "concentration camp syndrome" or "extreme stress" or flashback* or "flash back*" or hypervigilan* or hypervigilen* or "psych* stress" or "psych* trauma*" or psychotrauma* or psychotrauma*) or (posttrauma* or traumagenic* or "traumatic stress*")):ti (Word variations have been searched)
#12	(posttraumatic* or "post traumatic*" or "stress disorder*" or "acute stress" or ptsd or asd or desnos or ("combat neuros*" or "combat syndrome" or "concentration camp syndrome" or "extreme stress" or flashback* or "flash back*" or hypervigilan* or hypervigilen* or "psych* stress" or "psych* trauma*" or psychotrauma* or psychotrauma*) or (posttrauma* or traumagenic* or "traumatic stress*")):ab (Word variations have been searched)
#13	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 or #11 or #12

Appendix C – Clinical evidence study selection

Clinical evidence study selection for "For children and young people with clinically important post-traumatic stress symptoms, what are the relative benefits and harms of psychological, psychosocial or other non-pharmacological interventions targeted at PTSD symptoms?"

Figure 1: Flow diagram of clinical article selection for review



Appendix D – Clinical evidence tables

Clinical evidence tables for "For children and young people with clinically important post-traumatic stress symptoms, what are the relative benefits and harms of psychological, psychosocial or other non-pharmacological interventions targeted at PTSD symptoms?"

Psychological: Trauma-focused CBT

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
Ahrens 2002	Trauma-focused CBT: Cohen TF-CBT/Cognitive processing therapy	PTSD diagnosis according to ICD/DSM criteria (including self-report of diagnosis)	Mixed - Adolescent offenders incarcerated in a youth facility. Interview data indicated that about one-third of the youths had experienced multiple traumas (n = 11, 29%), and over half had documented trauma histories (n = 26 or 68%, as documented in their charts from collateral sources ranging from Social Rehabilitation Service investigations, child protective services reports, hospital reports, etc.)	38	Age range (mean): 15-18 (16.4) Gender (% female): 0 BME (% non-white): 40 Country: US Coexisting conditions: 52% stated they had experienced a head injury that led to loss of consciousness; 40% stated that they had been diagnosed with ADD or ADHD in the past Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): 29% had experienced multiple traumas; 68% had documented trauma histories (in their charts	Inclusion criteria: Adolescent males incarcerated in a youth facility for adolescent offenders who met DSM-IV criteria for PTSD

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
					from collateral sources ranging from Social Rehabilitation Service investigations, child protective services reports, hospital reports, etc.). Single or multiple incident index trauma: Multiple	
Al-Hadethe 2015	Trauma-focused CBT: Narrative exposure therapy for traumatized children and adolescents (KidNET)	PTSD diagnosis according to ICD/DSM criteria (including self-report of diagnosis)	Unclear (Not reported in details)	60	Age range (mean): 16-19 (NR) Gender (% female): 0 BME (% non-white): Unclear Country: Iraq Coexisting conditions: NR Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR Single or multiple incident index trauma: Unclear	Inclusion criteria: male secondary school students aged 16-19 years old, who met DSM-IV criteria for PTSD as measured by the Scale of Posttraumatic Stress Symptoms (SPTSS)
Auslander 2017	Trauma-focused CBT: CBT group	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Mixed (Girls involved in child welfare who had histories of abuse and neglect. Girls with histories of sexual abuse were included)	34	Age range (mean): 12-18 (14.6) Gender (% female): 100 BME (% non-white): 78 Country: US Coexisting conditions: NR Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR	Inclusion criteria: girls who had histories of child maltreatment investigated by child protective services; aged 12-18 years; reported histories of trauma with corresponding symptoms that were causing emotional, psychological, and/or relationship difficulties (based on the observations and assessments of their referring caseworker or therapist). Exclusion

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
					Single or multiple incident index trauma: Multiple	criteria: severe learning problems (i.e., could not read or write), active suicidal or psychotic thoughts, or had severe behavioural disorders that would prohibit their participation in a group or interview. Participants who were recently hospitalized for mental health problems were delayed entry into the study (after a 6-month waiting period)
Berger 2009	Trauma-focused CBT: CBT group	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Natural disasters (such as severe floods, earthquakes or tsunamis) - Tsunami (Sri Lanka, December 26 2004) - 84% present and physically hurt during the tsunami; 12% present during the tsunami, but were not hurt; 4% not personally exposed to the tsunami. 89.2% had been exposed to a major traumatic incident not related to the tsunami.	166	Age range (mean): 9-14 (NR) Gender (% female): 48 BME (% non-white): NR Country: Sri Lanka Coexisting conditions: NR Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR Single or multiple incident index trauma: Single	Inclusion: children aged 9-14 years exposed to the 2004 tsunami and DSMIVTR (One positive response regarded as meeting criterion A1 of PTSD, and one score of at least 4 was necessary to fulfil criterion A2 of PTSD)
Catani 2009/Rockstroh 2004	Trauma-focused CBT: Narrative exposure therapy for traumatized children and	Clinically important PTSD symptoms (scoring above	Natural disasters (such as severe floods, earthquakes or tsunamis) - Tsunami disaster in Sri Lanka	31	Age range (mean): 8-14(11.9) Gender (% female): 45 BME (% non-white): NR	Inclusion criteria: children within refugee camps following tsunami who met criteria for a preliminary PTSD diagnosis (all DSM-IV criteria except time criterion).

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
	adolescents (KidNET)	a threshold on validated scale)			Country: Sri Lanka Coexisting conditions: NR Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): Mean number of traumas 4.6. 81% identified the tsunami as the worst traumatic event experienced but 68% had also been affected by traumatic war experiences Single or multiple incident index trauma: Multiple	Exclusion criteria: mental retardation, psychosis or any neurological disorder
Chen 2014	Trauma-focused CBT: CBT group	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Natural disasters (such as severe floods, earthquakes or tsunamis): Adolescents who had lost at least 1 parent in the Sichuan, China, Earthquake	40	Age range (mean): NR (14.5) Gender (% female): 68 BME (% non-white): NR Country: Israel Coexisting conditions: NR Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR Single or multiple incident index trauma: Single	Inclusion criteria: adolescents from two secondary schools, who had lost at least one parent in the earthquake, and scored≥18 on the CRIES-13
Cohen 1998/2005a	Trauma-focused CBT: Cohen TF-CBT/Cognitive processing therapy	Clinically important PTSD symptoms (scoring above	Childhood sexual abuse - Contact sexual abuse perpetrated by someone at least 5 years older than the	82	Age range (mean): 7-15(11.1) Gender (% female): 69 BME (% non-white): 41	Inclusion criteria: contact sexual abuse within the past 6 months which had been validated by CPS or an independent forensic evaluation prior to entry into the

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
		a threshold on validated scale)	participants (36% single episode, 21% 2-5 abuse occasions, 8% 6-10 times, 33% were abused more than 10 times; 2% unknown)		Country: US Coexisting conditions: NR Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR Single or multiple incident index trauma: Multiple	study, significant symptomatology related to the sexual abuse experience (as documented by a score in the clinical range on any of the self-report instruments or the presence of sexually inappropriate behaviour as reported by the parent), and availability of a non-offending parent or primary caregiver who was able to participate in treatment. Exclusion criteria: Active psychotic symptoms or substance abuse, or mental retardation or pervasive developmental delay in the child, or active psychosis in the parent or primary caretaker participating in the treatment.
Cohen 2004a/Deblinger 2006	Trauma-focused CBT: Narrative exposure therapy (NET)	PTSD diagnosis according to ICD/DSM criteria (including self-report of diagnosis)	Childhood sexual abuse (Contact sexual abuse)	229	Age range (mean): 8-14(10.8) Gender (% female): 79 BME (% non-white): 40 Country: US Coexisting conditions: NR Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): Mean 2.66 (SD 1.61) traumatic events in addition to sexual abuse. Previous trauma: 58% had witnessed domestic	Inclusion criteria: children who had experienced contact sexual abuse that was confirmed by Child Protective Services (CPS), law enforcement, or a professional independent forensic evaluator; who met at least five criteria for sexual abuse–related DSM-IV-defined PTSD, including at least one symptom in each of the three PTSD clusters (re-experiencing, avoidance or numbing, and hyperarousal); who had a parent or other caretaker (including long-term foster parents) who was willing and able to participate in the

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
					violence, 26% were victims of physical abuse, 37% had witnessed or been involved in a serious accident, 17% were victims or witnesses of community violence, 14% had experienced a fire or natural disaster, and 25% had experienced other PTSD-level traumatic events, such as medical traumas, traumatic custody situations (e.g., being kidnapped by noncustodial parent), school violence not included in the K-SADS definition of community violence, and terrorist attacks Single or multiple incident index trauma: Multiple	parental treatment component of the study. Exclusion criteria: an active psychotic disorder or an active substance use disorder that resulted in significant impairment in adaptive functioning, or if the parent or primary caretaker who would be participating in the treatment had such a disorder; non-fluency in English; a documented developmental disorder (e.g., autism); children who were currently taking psychotropic medication who had not been on a stable medication regimen for at least 2 months prior to admission to the study.
Cohen 2011/2005b	Trauma-focused CBT: Cohen TF-CBT/Cognitive processing therapy	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Domestic violence (Children exposed to intimate partner violence)	124	Age range (mean): 7-14 (9.6) Gender (% female): 51 BME (% non-white): 44 Country: US Coexisting conditions: Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): Mean	Inclusion criteria: children aged 7-14 years; had at least 5 IPV-related PTSD symptoms, including at least 1 in each of 3 PTSD symptom clusters on the Kiddie Schedule for Affective Disorders and Schizophrenia, Present and Lifetime Version (K-SADS-PL); were fluent in English and had an English-speaking mother who was

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
					number of trauma types: 3.7. Past trauma experiences: Car accident (15%); Other accident (38%); Fire (12%); Disaster (9%); Witness to violent crime (23%); Victim of violent crime (18%); Physical abuse (36%); Sexual abuse (8%); Other (44%) Single or multiple incident index trauma: Multiple	a direct IPV victim; assented (and their mother consented) to participate in 8 therapy sessions. Exclusion criteria: a significant developmental disorder or an IQ less than 80; serious psychotic symptoms in parent or child; living in an IPV shelter.
Deblinger 1996/1999	Trauma-focused CBT: Exposure therapy/prolonged exposure (PE)	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Childhood sexual abuse (Contact sexual abuse. 18% experienced 1 sexually abusive incident, 47% 2-10 episodes, 22% 11-50 episodes, and 13% >50 abusive incidents)	100	Age range (mean): 7-13(9.8) Gender (% female): 83 BME (% non-white): 28 Country: US Coexisting conditions: 29% major depression; 30% oppositional defiant disorder; 20% ADHD; 11% separation anxiety; 6% conduct disorder; 5% specific phobia; 1% OCD Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR Single or multiple incident index trauma: Single	Inclusion criteria: contact childhood sexual abuse substantiated by an investigation conducted by the Division of Youth and Family Services (DYFS) or the prosecutor's office; children aged 7-13 years; consent to participate in the study completed by child and legal guardian; presence of a total of three posttraumatic stress symptoms including at least one symptom of avoidance or re-experiencing. Exclusion criteria: severe developmental delay; psychosis; ongoing, unsupervised contact with the alleged perpetrator; female caretaker not willing to participate; danger to themselves or others

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
de Roos 2017	Trauma-focused CBT: Narrative exposure therapy (NET)	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Mixed - Physical abuse/assault (23%); Sexual abuse (26%); Accident/injury of a loved one (19%); Traumatic loss (18%); Disaster/other (13%)	103	Age range (mean): 8-18 (13.1) Gender (% female): 57 BME (% non-white): NR Country: Netherlands Coexisting conditions: 54% had one or more co-morbid disorder (assessed with ADIS-C) Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR Single or multiple incident index trauma: Single	Inclusion criteria: children aged 8-18 years; able to read/write and communicate in the Dutch language; have a primary DSM-IV diagnosis of PTSD or subthreshold PTSD, with the PTSD symptoms being tied to a single traumatic event that occurred at least one month prior to trial assessment. Exclusion criteria: the presence of symptoms other than PTSD in more urgent need of treatment (e.g., suicidal intent/acts, acute psychosis); ongoing exposure to a severe threat to the child's safety; starting psychotropic medication within three months of trial assessment; currently receiving another form of psychological treatment; an IQ estimated to be < 80 based on information contained in the medical history or referral letter.
Diehle 2015/Lindauer 2009	Trauma-focused CBT: Cohen TF-CBT/Cognitive processing therapy	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Mixed - 63% Single-event index trauma. Single event traumas: accidents (23 %), sexual assault (17 %); threat (with weapon) (13 %); kidnapping (10 %); serious illness (7 %); or other (30 %). Multiple-event traumas:	48	Age range (mean): 8-18(12.9) Gender (% female): 62 BME (% non-white): NR Country: Israel Coexisting conditions: NR Lifetime experience of trauma (mean number of prior traumas/% with	Inclusion criteria: aged 8-18 years; command of the Dutch language; exposure to at least one single traumatic event; the last traumatic event occurred at least 4 weeks prior to the first measurement; and partial (fulfilling two of the three symptom clusters or one symptom present in each of the three symptom clusters) or full PTSD as

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
			exposure to domestic violence (44 %) and sexual assault (39 %) and other (17 %)		previous trauma): Mean types of prior trauma 6.5 Single or multiple incident index trauma: Single	reported by the child (interviewed with the CAPS-CA) or the caretaker (interviewed with the ADIS-P PTSD module). Exclusion criteria: clinical signs of psychotic disorder, substance use disorder, pervasive developmental disorder (e.g., autism) or acute suicidality. After 12 months of slow recruitment, the inclusion criteria was adjusted in order to also include children who had experienced multiple-event trauma.
Ertl 2011/Neuner 2007	Trauma-focused CBT: Narrative exposure therapy for traumatized children and adolescents (KidNET)	PTSD diagnosis according to ICD/DSM criteria (including self-report of diagnosis)	Child soldiers - The duration of abduction ranged from several hours to 7.42 years, with a median of 2.47 months. Other than abduction, the most common traumatic event types reported by 81 or more of the 85 participants were exposure to a war zone, witnessing someone being killed, witnessing abduction, witnessing physical assault, and assaults with weapons. The likelihood of an event being indicated as the	85	Age range (mean): 12-25(18.4) Gender (% female): 55 BME (% non-white): NR Country: Uganda Coexisting conditions: NR Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR Single or multiple incident index trauma: Multiple	Inclusion criteria: Former child soldiers aged 12-25 years, whose PTSD diagnoses were confirmed by clinical experts according to the Clinician- Administered PTSD Scale (CAPS). Exclusion criteria: psychotic symptoms.

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
			worst if present was highest for being forced to kill (55%), followed by witnessed killing (31%) and seeing someone being mutilated or seeing dead bodies (13%)			
Foa 2013a/McLean 2015a/Capaldi 2016/Kaczkurkin 2016/Zandberg 2016	Trauma-focused CBT: Exposure therapy/prolonged exposure (PE)	PTSD diagnosis according to ICD/DSM criteria (including self-report of diagnosis)	Childhood sexual abuse	61	Age range (mean): 13-18 (15.3) Gender (% female): 100 BME (% non-white): 82 Country: US Coexisting conditions: 57% had ≥1 comorbid psychiatric diagnoses Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR Single or multiple incident index trauma: Multiple	Inclusion criteria: adolescent girls who met criteria for a primary DSM-IV-TR diagnosis of chronic or subthreshold (required only two of three avoidance symptoms and a total score 14 on the Child Posttraumatic Stress Scale-Interview) PTSD related to sexual assault. Exclusion criteria: suicidal ideation with intent, current uncontrolled bipolar disorder, current psychosis, current conduct disorder, pervasive developmental disorder, and initiation of psychotropic medication within the previous 12 weeks
Ford 2012	Trauma-focused CBT: Cohen TF-CBT/Cognitive processing therapy	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Mixed - Trauma exposure was extensive, including 97% to a traumatic accident, disaster, or illness; 88% to physical assault or abuse; 81% to traumatic community violence; 78% to	59	Age range (mean): 13-17(14.7) Gender (% female): 100 BME (% non-white): 75 Country: US Coexisting conditions: 34% major depressive disorder, 26% oppositional defiant disorder, 23%	Inclusion criteria: self-reported delinquency; full or partial PTSD (Clinician Administered PTSD Scale for Children-Adolescents [CAPS-CA] structured diagnostic interview). Exclusion criteria: substantial cognitive impairment (i.e., score <16 on Orientation, Attention, and Recall sections of

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
			traumatic family violence; 44% to sexual assault or abuse; 41% to traumatic emotional abuse; and 29% to traumatic bullying		conduct disorder, and 13% attention deficit hyperactivity disorder Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR Single or multiple incident index trauma: Multiple	the Mini Mental State Exam; on one-to-one suicide watch (although suicidal ideation was not an exclusion, and most participants reported current or previous suicidal ideation); age younger than 13 or older than 18.
Gilboa-Schechtman 2004/2010	Trauma-focused CBT: Exposure therapy/prolonged exposure (PE)	PTSD diagnosis according to ICD/DSM criteria (including self-report of diagnosis)	Mixed - Terrrorist attack (13%); motor vehicle accident (42%); non-sexual assault (0.5%); sexual assault (21%); Other (18%)	38	Age range (mean): 12-18 (14.1) Gender (% female): 63 BME (% non-white): NR Country: Israel Coexisting conditions: 81% ≥ 1 comorbid disorder: 50% had one additional internalizing disorder, 13% had an additional externalizing disorder, and 16% had internalizing and externalizing disorders. Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR Single or multiple incident index trauma: Single	Inclusion criteria: aged 12-18 years, a primary diagnosis of PTSD related to a single traumatic event, and fluency in Hebrew. Exclusion criteria: organic brain damage, mental retardation, an ongoing trauma-related threat, suicidal ideation posing imminent danger, current substance dependence, pending legal issues, initiation of treatment with psychotropic medication within the previous 6 weeks, and ongoing psychological treatment
Goldbeck 2016/Sachser 2016	Trauma-focused CBT: Cohen TF-	Clinically important PTSD symptoms	Mixed - Interpersonal trauma (77%); accidental (23%). The	159	Age range (mean): 7-17 (13)	Inclusion criteria: aged 7–17 years; exposure to one or more traumatic event(s) after age 2 and dating

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
	CBT/Cognitive processing therapy	(scoring above a threshold on validated scale)	most frequently reported traumatic index events were experiences of sexual abuse, sexual assaults, physical violence, or witnessing domestic violence		Gender (% female): 72 BME (% non-white): NR Country: Germany Coexisting conditions: 34% >1 comorbid DSM-IV disorder: Depressive disorders (20%); Anxiety disorders (10%); ADHD (6%); Disruptive behaviour disorders (4%) Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): Number of traumatic events: 6.35 (3.70) Single or multiple incident index trauma: Multiple	back at least 3 months; at least medium severity of PTSS as indicated by a total symptom score of ≥ 35 and at least one symptom per DSM-IV clusters B, C, and D assessed with the Clinician-Administered PTSD Scale for Children and Adolescents (CAPS-CA); PTSD was the main disorder based on clinical estimation, if comorbid disorders were present; availability of a non-offending adult caregiver for the treatment; willingness and ability of the patient and the caregiver to attend weekly treatment sessions; safe living circumstances to minimize the risk of re-traumatization during the study; sufficient cognitive ability to respond to cognitive interventions, as indicated by a raw score of ≥ 14 on the block design and vocabulary subtests of the Wechsler Intelligence Scale for Children (WISC IV); patients' and caregivers' sufficient command of the German language to participate in the treatment. Exclusion Criteria: acute suicidal behaviour or suicidal ideations requiring immediate hospitalization; severe head trauma indicated by a score <9 on the Glasgow Coma Scale as

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
						known from the patient's medical history, to avoid brain dysfunction or retrograde amnesia of the traumatic event due to head injury; a current or lifetime diagnosis of a pervasive developmental disorder or psychosis; psychopharmacological treatment started <6 weeks before recruitment or change of psychotropic medication during the course of the study; concurrent psychotherapy during the study; current severe mental disorder of the patient's main caregiver as evaluated by the responsible clinician, such as psychosis, severe episode of depression, or severe substance abuse; a sibling of the patient already participating in the study
Jaycox 2009	Trauma-focused CBT: CBT group	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Exposure to non-sexual violence (Experience of severe violence in the prior year)	78	Age range (mean): NR (11.5) Gender (% female): 51 BME (% non-white): 96 Country: US Coexisting conditions: NR Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR Single or multiple incident index trauma: Single	Inclusion criteria: experience of severe violence in the prior year (responses on the Modified Life Experiences Survey [LES] indicating being the victim or witness of violence involving a knife of gun or having a summed score greater than 3, consistent with exposure to one or more violent events; current symptoms of PTSD as assessed on the Child PTSD Symptom Scale of 11 or

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
						greater, indicating moderate levels of symptom severity.
Jensen 2014/2017	Trauma-focused CBT: Cohen TF-CBT/Cognitive processing therapy	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Mixed - 59% violence or threats of violence outside the family context, 45.5% physical abuse within the family, 42.9% witnessing violence within the family, 27.6% witnessing violence outside the family, 27.6% sexual abuse outside the family, 20.5% severe accident, 16% extremely painful or frightening medical procedures, 10.9% robbery or assault, 7.7% sexual abuse within the family, 5.8% natural disaster, 5.1% kidnapping, and 30.8% other frightening or overwhelming experiences	156	Age range (mean): 10-18 (15.1) Gender (% female): 80 BME (% non-white): NR Country: Israel Coexisting conditions: NR Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): Mean 3.6 different types of traumas (SD=1.8, range=1–10) Single or multiple incident index trauma: Multiple	Inclusion criteria: children aged 10-18 years who had been referred to one of eight community mental health outpatient clinics in Norway; the youth had to have experienced at least one traumatizing event and suffered from significant posttraumatic stress reactions (score ≥ 15 on the CPSS and at least one symptom in each of the three PTSD symptom criteria [re-experiencing, avoidance, and hyperarousal]). Exclusion criteria: acute psychosis; suicidal behaviour; need for an interpreter.
King 2000	Trauma-focused CBT: Exposure therapy/prolonged exposure (PE)	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Childhood sexual abuse (In the majority of cases, the offenders were male adults known to the child such as the biological father, stepfather, family	36	Age range (mean): 5-17 (11.4) Gender (% female): 69 BME (% non-white): NR Country: Australia Coexisting conditions: For 69% who met DSM-IV	Inclusion criteria: sexually abused children who had a history of contact sexual abuse such as sexual touching, oral-genital contact, or penile penetration of the vagina or anus, with or without physical force; if the perpetrator

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
			friend, neighbour, or teacher. Nearly all of the children had experienced multiple episodes of sexual abuse involving penetration offenses and other forms of sexual abuse)		criteria for full PTSD (N=25): 16% with full PTSD had no other Axis I diagnoses, 36% had one comorbid diagnosis, 40% had two comorbid diagnoses, and 8% had three comorbid diagnoses. The comorbid diagnoses included dysthymia (28%), oppositional defiant disorder (28%), separation anxiety disorder (24%), generalized anxiety disorder (20%), conduct disorder (12%), major depression (8%), attention-deficit/hyperactivity disorder (8%), and specific phobia (8%). Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): Mean number of abusive episodes: 7.6 (SD=3.8; range 1-33) Single or multiple incident index trauma: Multiple	was a child, he/she had to be 5 years older than the victimized child; both child and his/her non-offending primary caregiver were English-speaking; independent validation of sexual abuse was required; the child's symptoms met diagnostic criteria for PTSD or fell short of the diagnostic criteria for PTSD by several symptoms, but the child still experienced severe stress reactions (had to exhibit a total of 3 posttraumatic stress symptoms including at least one of avoidance or re-experiencing phenomena). Exclusion criteria: ongoing, unsupervised contact with the alleged perpetrator; severe intellectual disability, psychosis, or suicidal behaviour; taking antidepressant or antianxiety medication; child or parents not willing to participate.
Langley 2015	Trauma-focused CBT: CBT group	Clinically important PTSD symptoms	Mixed (Types of trauma commonly reported included: Witnessed/	74	Age range (mean): 6-11 (7.7)	Inclusion criteria: experience of one or more traumatic events; current symptoms of PTSD

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
		(scoring above a threshold on validated scale)	know of family member arrested (31%); Witnessed physical violence (26%); Victim of physical violence (25%); Witnessed or heard about neighbourhood or school violence (25%); Separated from parent(s) (e.g., deportation, deployment, hospitalization) (22%); Witnessed a serious accident (18%); Threatened by someone (violence) (18%); Someone close to child very sick or hurt badly (16%); Serious Illness/hospitalization of loved one (15%))		Gender (% female): 50 BME (% non-white): 73 Country: US Coexisting conditions: NR Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR Single or multiple incident index trauma: Multiple	indicating moderate or higher levels of symptom severity (score ≥20 on the PTSD Reaction Index). Exclusion criteria: presence of a severe psychiatric disturbance (i.e., acute suicidal behaviour, current psychotic symptoms); sexual abuse as only and primary trauma.
Layne 2008	Trauma-focused CBT: CBT group	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Witnessing war as a civilian (Approximately 73% of the students participating reported experiencing direct life threat arising from close proximity to exploding shells or rifle fire, 36% reported witnessing during the war violent death or	159	Age range (mean): 13-19(16) Gender (% female): 64 BME (% non-white): NR Country: Bosnia Coexisting conditions: NR Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR	Three inclusion criteria: significant trauma exposure before, during, and/or after the war (e.g., serious physical injury, life threat, witnessing death or serious injury, traumatic bereavement); significant current distress, especially severe persisting symptoms of PTSD, depression, or traumatic grief; and significant functional impairment, including family or peer

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
			serious injury, 12% reported witnessing torture, and 46% reported the serious injury of a person to whom they were close, 14% reported the violent death during the war of a nuclear family member, and 73% reported the violent death of at least one person to whom they were close)		Single or multiple incident index trauma: Multiple	relationships and school performance. With respect to exclusion criteria, students who did not meet the three inclusion criteria or who did but showed signs of psychosis, represented an imminent threat to themselves or others, were unable to attend group meetings, were judged not to be appropriate for group-based intervention due to highly disruptive behavioural or substance abuse problems, or reluctance to participate in a group setting were excluded from participation in the study
Meiser-Stedman 2010/2017	Trauma-focused CBT: Cognitive therapy	PTSD diagnosis according to ICD/DSM criteria (including self-report of diagnosis)	Motor Vehicle Collisions: Motor vehicle collision (52%); Assault (24%); Medical emergency (3%); House fire (3%); Other (17%)	29	Age range (mean): 8-17 (13.3) Gender (% female): 72 BME (% non-white): 14 Country: UK Coexisting conditions: 86% comorbid anxiety disorder; 55% comorbid affective disorder; 52% comorbid behavioural disorder Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): 38% had experienced previous trauma	Inclusion criteria: aged 8–17 years old; main presenting problem of PTSD (using an age-appropriate diagnostic algorithm [PTSD-AA]: presence of one re-experiencing symptom, one avoidance symptom, two hyperarousal symptoms and impaired functioning) relating to a single trauma in previous 2–6 months; fluency in English. Exclusion criteria: organic brain damage; unconscious >15 min during the trauma; intellectual disability or autistic spectrum disorder; ongoing threat; recently initiated (within 3 months) psychotropic medication; receiving another psychological

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
					Single or multiple incident index trauma: Single	treatment; acute treatment required for suicide risk or other major mental health problem.
Pityaratstian 2015	Trauma-focused CBT: Brief group CBT	PTSD diagnosis according to ICD/DSM criteria (including self-report of diagnosis)	Natural disasters (such as severe floods, earthquakes or tsunamis): Tsunami in Thailand - 50% saw tsunami with own eyes; 36% lost family member; 64% lost friend; 25% lost home; 28% sustained injury	36	Age range (mean): 10-15 (12.3) Gender (% female):72 BME (% non-white):NR Country: Thailand Coexisting conditions: NR Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR Single or multiple incident index trauma: Single	Inclusion criterion: primary diagnosis of DSM-IV-TR PTSD. Exclusion criteria: mental retardation, pervasive developmental disorders, psychotic symptoms, or current involvement in psychopharmacological treatment
Ruf 2010	Trauma-focused CBT: Narrative exposure therapy for traumatized children and adolescents (KidNET)	PTSD diagnosis according to ICD/DSM criteria (including self-report of diagnosis)	Witnessing war as a civilian - Violent attacks against their parents or other family members at home (73%) were the most common trauma type reported. These assaults were mainly conducted by soldiers or other organized militant groups (58%). Other traumatic experiences included witnessing physical attacks against non-family members outside of the house (50%), accidents	26	Age range (mean): 7-16(11.4) Gender (% female): 46 BME (% non-white): NR Country: Germanyh Coexisting conditions: NR Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): Mean number of traumatic event types: 4.4 Single or multiple incident index trauma: Multiple	Children/young people aged 7-16, diagnosed with PTSD according to DSMIV, willing to participate and all parents giving consent. Exclusion: acute psychotic symptoms.

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
			(46%), violence against the child at home (35%, most of these were by militant forces, 27%), assaults against the child outside of the home (35%), living in a place of war (35%), seeing dead bodies (35%), painful or scary medical treatments (27%), hearing about the violent death of a beloved person (27%), earthquakes (19%), other natural disasters (12%), and sexual abuse (8%)			
Smith 2007	Trauma-focused CBT: Cognitive therapy	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Motor Vehicle Collisions: Motor vehicle accident (50%); Assault (38%); Witnessed violence (13%)	24	Age range (mean): NR (13.9) Gender (% female):50 BME (% non-white): 54 Country: UK Coexisting conditions: 79% had any comorbidity Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): 29% prior exposure to trauma Single or multiple incident index trauma: Single	Inclusion criteria: Children aged 8-18 years; presenting with PTSD symptoms relating to a single traumatic event; fluent in English; retained their PTSD diagnosis after 4 weeks of symptom monitoring. Exclusion criteria: organic brain damage; unconscious for >15 mins during trauma; significant learning difficulty; ongoing trauma-related threat in the environment; psychotropic medication (within 3 months); current other psychological treatment

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
Shein-Szydlo 2016	Trauma-focused CBT: Cohen TF-CBT/Cognitive processing therapy	PTSD diagnosis according to ICD/DSM criteria (including self-report of diagnosis)	Mixed (Street Children in Mexico City - 56% were victims of sexual abuse,47% of physical abuse, 18% of witnessing a violent event, and 17% of death of a family member)	100	Age range (mean): 12-18 (14.9) Gender (% female): 64 BME (% non-white): NR Country: Mexico Coexisting conditions: 14% anxiety disorder; 28% depression Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): 35% reported more than one type of traumatic event Single or multiple incident index trauma: Multiple	Inclusion criteria: children aged 12-18 years in one of eight facilities that provide shelter, food, basic education, and medical care for street children in Mexico City; with a PTS score of ≥24 at screening; had a diagnosis of PTSD (assessed with the Diagnostic Interview Schedule for Children). Exclusion criteria: severe psychopathology (psychosis, severe suicidal depression requiring different and immediate treatment); intellectual disability
Stein 2003a/Kataoka 2011	Trauma-focused CBT: CBT group	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Exposure to non-sexual violence (76% any violence involving a gun or knife. Number of violent events experienced: 2.8; Number of violent events witnessed: 5.95)	126	Age range (mean): NR (11) Gender (% female): 56 BME (% non-white): NR Country: US Coexisting conditions: NR Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR Single or multiple incident index trauma: Multiple	Inclusion criteria: Children aged 11-12 years with substantial exposure to violence (victom or witness) involving knife or gun or having a Life Events Scale score >6, consistent with exposure to≥3 violent events; clinically important PTSD symptoms on CPSS scale; PTSD symptoms related to exposure to violence that they were willing to discuss in a group; not disruptive/able to participate in intervention according to school-based mental health clinician

ADHD-Attention deficit hyperactivity disorder; BME-Black and minority ethnic; CBT-Cognitive Behaviour Therapy; DSM-Diagnostic and Statistical Manual of Mental Disorders; ICD-International Classification of Disease; LED-Modified life experiences surveys; NET-Narrative exposure therapy; NR-Not recorded; PTSD-Post-traumatic stress disorder; PTSS-Post-traumatic stress syndrome.

Psychological: Non-trauma-focused CBT

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
Najavits 2006	Non-trauma-focused CBT: Seeking Safety	PTSD diagnosis according to ICD/DSM criteria (including self-report of diagnosis)	Mixed - The most common trauma category was sexual abuse (88%), followed by general disaster/accident (82%), physical abuse (73%), and crime (39%)	33	Age range (mean): NR (16.1) Gender (% female): 100 BME (% non-white): 21 Country: US Coexisting conditions: All met current DSM-IV criteria for both PTSD and SUD, with 94% having substance dependence. Current substance dependence diagnoses per DSM-IV criteria at intake were: cannabis (79%), alcohol (67%), hallucinogens	Inclusion criteria: outpatient adolescent girls; met current DSM-IV criteria for both PTSD and SUD; active substance use within the past 60 days. Exclusion criteria: a history of bipolar I disorder, psychotic disorder, were mandated to treatment, or had characteristics that would interfere with treatment completion (mental retardation, homelessness, impending incarceration, or a life-threatening illness)

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
					(21%), amphetamines (15%), cocaine (9%), opioids (9%), inhalants (9%), barbiturates (6%), polysubstance (6%), and PCP 1 (3%). Participants could have more than one diagnosis Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR Single or multiple incident index trauma: Multiple	

DSM-Diagnostic and Statistical Manual of Mental Disorders; ICD-International Classification of Disease; NR-Not recorded; PTSD-Post-traumatic stress disorder; SUD-Substance use disorder

Psychological: Supportive counselling

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
Chen 2014	Trauma-focused CBT: CBT group	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Natural disasters (such as severe floods, earthquakes or tsunamis): Adolescents who had lost at least 1 parent in the Sichuan, China, Earthquake	40	Age range (mean): NR (14.5) Gender (% female): 68 BME (% non-white): NR Country: Israel Coexisting conditions: NR Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR Single or multiple incident index trauma: Single	Inclusion criteria: adolescents from two secondary schools, who had lost at least one parent in the earthquake, and scored≥18 on the CRIES-13
Ertl 2011/Neuner 2007	Trauma-focused CBT: Narrative exposure therapy for traumatized children and adolescents (KidNET)	PTSD diagnosis according to ICD/DSM criteria (including self-report of diagnosis)	Child soldiers - The duration of abduction ranged from several hours to 7.42 years, with a median of 2.47 months. Other than abduction, the most common traumatic event types reported by 81 or more of the 85 participants were exposure to a war zone,	85	Age range (mean): 12-25(18.4) Gender (% female): 55 BME (% non-white): NR Country: Uganda	Inclusion criteria: Former child soldiers aged 12-25 years, whose PTSD diagnoses were confirmed by clinical experts according to the Clinician-Administered PTSD Scale (CAPS). Exclusion criteria: psychotic symptoms.

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
			witnessing someone being killed, witnessing abduction, witnessing physical assault, and assaults with weapons. The likelihood of an event being indicated as the worst if present was highest for being forced to kill (55%), followed by witnessed killing (31%) and seeing someone being mutilated or seeing dead bodies (13%)		Coexisting conditions: NR Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR Single or multiple incident index trauma: Multiple	

BME-Black and minority ethnic; CAPS- Clinician administered PTSD scale; CBT-Cognitive Behaviour Therapy; DSM-Diagnostic and Statistical Manual of Mental Disorders; ICD-International Classification of Disease; NR-Not recorded; PTSD-Post-traumatic stress disorder;

Psychological: Eye movement desensitisation and reprocessing (EMDR)

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
Ahmad 2007/2008	EMDR: EMDR	PTSD diagnosis according to ICD/DSM criteria (including self-report of diagnosis)	Mixed - Maltreatment (36.4%), sexual abuse (21.2%), road accident (15.2%), witnessing unnatural death (12.1%) and other types of trauma (6.1%)	33	Age range (mean): 6-16 (9.9) Gender (% female): 61 BME (% non-white): NR Country: Sweden Coexisting conditions: 79% fulfilled DSM-IV	Inclusion criteria: a PTSD diagnosis, child aged at least 6 years, no manifest learning disabilities, experienced at least one traumatic experience, and grown up in at least one socially exposed condition (defined as the child having grown up with a family member with criminality, substance abuse, chronic illness, handicap, or having the caregiver physically or mentally unavailable for the child). Exclusion criteria: if children needed other types of treatment (such as medication,

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
					criteria for at least one additional diagnosis: Depression (46%); ADHD (30%); ODD (21%); separation anxiety (18%); conduct disorder (12%), overanxious disorder and autism spectrum (3%) Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR Single or multiple incident index trauma: Multiple	cognitive therapy or play therapy), or received social welfare service during the study
de Roos 2017	Trauma-focused CBT: Narrative exposure therapy (NET)	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Mixed - Physical abuse/assault (23%); Sexual abuse (26%); Accident/injury of a loved one (19%); Traumatic loss (18%); Disaster/other (13%)	103	Age range (mean): 8-18 (13.1) Gender (% female): 57 BME (% non-white): NR Country: Netherlands Coexisting conditions: 54% had one or more co-morbid disorder	Inclusion criteria: children aged 8-18 years; able to read/write and communicate in the Dutch language; have a primary DSM-IV diagnosis of PTSD or subthreshold PTSD, with the PTSD symptoms being tied to a single traumatic event that occurred at least one month prior to trial assessment. Exclusion criteria: the presence of symptoms other than PTSD in more urgent need of treatment (e.g., suicidal intent/acts, acute psychosis); ongoing exposure to a severe threat to the child's safety; starting psychotropic medication within three months of trial assessment; currently receiving another form of

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
					(assessed with ADIS-C) Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR Single or multiple incident index trauma: Single	psychological treatment; an IQ estimated to be < 80 based on information contained in the medical history or referral letter.
Soberman 2002	EMDR: EMDR	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Unclear (Not reported in details)	29	Age range (mean): 10-16 (NR) Gender (% female): 0 BME (% non-white): NR Country: US Coexisting conditions: Other primary diagnoses included: Conduct Disorder (59%); Attention Deficit Hyperactive Disorder (17%), Learning Disability (14%), Substance Abuse (13%), and Oppositional/Defiant Disorder (3%) Lifetime experience of trauma (mean	Participants were included if they were: (1) boys with conduct problems in residential or day treatment. Participants were excluded if they: (1) had psychosis; (2) had suicidal or homicidal ideation; (3) had epilepsy; (4) had medical instability; (5) had low motivation to participate (3 or lower on a 0-10 scale); (6) were unable to identify a sufficiently traumatic memory (rating of 4 or higher on the 0-10 Subjective Units of Distress Scale (SUDS))

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
					number of prior traumas/% with previous trauma): NR Single or multiple incident index trauma: Unclear	

BME-Black and minority ethnic; DSM-Diagnostic and statistical manual of mental disorders; EMDR-Eye movement desensitisation and reprocessing; NR-Not recorded; PTSD-Post-traumatic stress disorder; NET-Narrative exposure therapy; SUDS-Subjective units of distress scale.

Psychological: Parent training/family interventions

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
Deblinger 1996/1999	Trauma-focused CBT: Exposure therapy/prolonged exposure (PE)	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Childhood sexual abuse (Contact sexual abuse. 18% experienced 1 sexually abusive incident, 47% 2-10 episodes, 22% 11-50 episodes, and 13% >50 abusive incidents)	100	Age range (mean): 7-13(9.8) Gender (% female): 83 BME (% non-white): 28 Country: US Coexisting conditions: 29% major depression; 30% oppositional defiant disorder; 20% ADHD; 11% separation anxiety; 6%	Inclusion criteria: contact childhood sexual abuse substantiated by an investigation conducted by the Division of Youth and Family Services (DYFS) or the prosecutor's office; children aged 7-13 years; consent to participate in the study completed by child and legal guardian; presence of a total of three posttraumatic stress symptoms including at least one symptom of avoidance or re-experiencing. Exclusion criteria: severe developmental delay; psychosis; ongoing, unsupervised contact with the alleged perpetrator; female caretaker not willing to participate; danger to themselves or others

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
					conduct disorder; 5% specific phobia; 1% OCD Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR Single or multiple incident index trauma: Single	
Kazak 2004	Family therapy: Family therapy group	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Diagnosis of life-threatening condition - Diagnoses included leukaemia (25%), solid tumours (22%), lymphoma (21%), bone tumours (8%), and other (24%)	150	Age range (mean): 10-19(14.6) Gender (% female): 52 BME (% non-white): 12 Country: US Coexisting conditions: NR Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR	Participants were included if they were: (1) childhood cancer survivors aged 11-19 years; (2) had completed treatment 1–10 years previously; (3) on the oncology tumour registry. Participants were excluded if they: (1) experienced a relapse; (2) had mental retardation; (3) were not fluent in English; (4) resided more than 150 miles from the hospital

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
					Single or multiple incident index trauma: Single	

ADHD-Attention deficit hyperactivity disorder; BME-Black and minority ethnic; CBT-Cognitive Behaviour Therapy; DYFS-Division of Youth and Family Services; NR-Not recorded; OCD-Obsessive Compulsive Disorder; PE-Prolonged exposure; PTSD-Post-traumatic stress disorder.

Psychological: Combined somatic and cognitive therapies

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
Al-Hadethe 2015	Trauma-focused CBT: Narrative exposure therapy for traumatized children and adolescents (KidNET)	PTSD diagnosis according to ICD/DSM criteria (including self-report of diagnosis)	Unclear (Not reported in details)	60	Age range (mean): 16-19 (NR) Gender (% female): 0 BME (% non-white): Unclear Country: Iraq Coexisting conditions: NR Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR Single or multiple incident index trauma: Unclear	Inclusion criteria: male secondary school students aged 16-19 years old, who met DSM-IV criteria for PTSD as measured by the Scale of Posttraumatic Stress Symptoms (SPTSS)

BME-Black and minority ethnic; CBT-Cognitive Behaviour Therapy; DSM-Diagnostic and Statistical Manual of Mental Disorders; ICD-International Classification of Disease; NR-Not reported; PTSD-Post-traumatic stress disorder.

Psychological: Play therapy

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
Deeba 2015	Play therapy: Play therapy	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Mixed - Most of the children (90%) had lost one or both parents following natural disasters or accidents or due to domestic violence and witnessed direct or indirect violence against a parent (mostly towards the mother)	131	Age range (mean): 5-9 (7.2) Gender (% female): 37 BME (% non-white): NR Country: Bangladesh Coexisting conditions: NR Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR Single or multiple incident index trauma: Multiple	Inclusion criteria: aged 5-9 years; lived in one of two shelter homes (children were accepted to both institutions following loss or abandonment by their parents and an absence of relatives able or willing to care for them); witnessed or experienced at least one severe DSM-IV traumatic event; provided assent to participate. Exclusion criteria: serious health conditions; psychotic features; severe ADHD; any developmental disorders; inability to comprehend simple instructions
Lieberman 2005/2006/Ghosh Ippen 2011	Play therapy: Child-Parent Psychotherapy using play	Clinically important PTSD symptoms (scoring above a	Domestic violence (not reported in details)	75	Age range (mean): 3-5 (4.1)	Child–mother dyads were recruited if the child was 3 to 5 years old, had been exposed to marital violence as confirmed by mother's report on the Conflict Tactics Scale 2 (Straus 1996),

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
		threshold on validated scale)			Gender (% female): 52 BME (% non-white): 91 Country: US Coexisting conditions: NR Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): Multiple stressors, including exposure to community violence (46.7%), physical abuse (18.7%), sexual abuse (14.7%), or both (4%). During the study, 33.3% of the mothers reported new traumas that affected the dyad and 17.3% of the mothers	and the perpetrator was not living in the home. Exclusionary criteria for the mothers were documented abuse of the target child, current substance abuse and homelessness, mental retardation, and psychosis. Children with mental retardation or autistic spectrum disorder were also excluded

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
					reported either returning to their violent partners or entering a new violent relationship Single or multiple incident index trauma: Multiple	
Schottelkorb 2012	Play therapy: Play therapy	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Witnessing war as a civilian (Childhood Refugee Trauma)	31	Age range (mean): 6-13 (9.2) Gender (% female): 45 BME (% non-white): 67 Country: US Coexisting conditions: NR Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR Single or multiple incident index	Inclusion criteria: refugee children at one of three elementary schools; met criteria for full or partial PTSD assessed with the UCLA PTSD Index for DSM–IV or a score in the clinical range on the Parent Report of Posttraumatic Symptoms. Exclusion criteria: participating in counselling outside of the study

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
					trauma: Multiple	

ADHD-Attentions deficit hyperactivity disorder; DSM-Diagnostic and Statistical Manual of Mental Disease; NR-Not recorded; PTSD-Post-traumatic stress disorder.

Psychosocial: Art therapy

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
Lyshak-Stelzer 2007	Art therapy: Trauma-focused expressive art therapy	Clinically important PTSD symptoms (scoring above a threshold on validated scale)	Mixed (Frequently reported trauma types included: Physically abused or threatened with physical abuse at home (62%); Witnessing physical abuse at home (50%); Being in a bad accident (50%); Witnessing shooting, beating, or threats in neighbourhood (47%); Sexual abuse (46%); Beaten, shot at, or threatened in neighbourhood (45%); Serious medical problem (40%); Being in a disaster (weather, fire, etc.) (19%))	77	Age range (mean): 13-17 (15.1) Gender (% female): 45 BME (% non-white): 82 Country: US Coexisting conditions: NR Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR Single or multiple incident index trauma: Multiple	Inclusion criteria: participants aged 13-18 years; were able to sustain a school programme for 2 weeks running; were expected to stay at the hospital for at least 16 weeks from the date of parent or guardian consent. Exclusion criteria (at the Long Island facility only): Participants who were court-mandated

NR-Not reported; PTSD-Post-traumatic stress disorder.

Psychosocial: Meditation

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
Gordon 2006/2008	Meditation: Mind-body skills group	PTSD diagnosis according to ICD/DSM criteria (including self-report of diagnosis)	Witnessing war as a civilian (Kosovar adolescents)	82	Age range (mean): 14-18(16.3) Gender (% female): 76 BME (% non-white): NR Country: Kosovo Coexisting conditions: NR Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR Single or multiple incident index trauma: Multiple	Students at the high school under investigation who met criteria for PTSD (defined by meeting a threshold on the Albanian translation of the HTQ)

DSM-Diagnostic and Statistical Manual of Mental Disorders; ICD-International Classification of Disease; NR-Not reported; PTSD-Post-traumatic stress disorder.

Appendix E – Forest plots

Forest plots for "For children and young people with clinically important post-traumatic stress symptoms, what are the relative benefits and harms of psychological, psychosocial or other non-pharmacological interventions targeted at PTSD symptoms?"

Psychological: Trauma-focused CBT

Trauma-focused CBT versus meditation for the early treatment (1-3 months) of clinically important symptoms/PTSD

Figure 2: Trauma-focused CBT versus meditation for the early treatment (1-3 months) of clinically important symptoms/PTSD: PTSD symptomatology clinician-rated at 1-month follow-up (CPTS–RI change score)

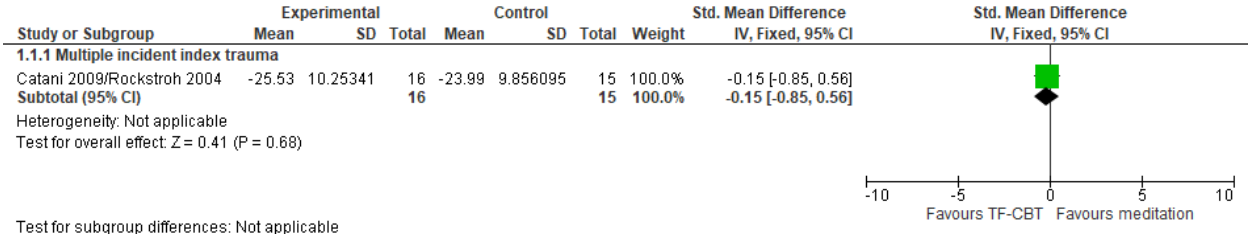


Figure 3: Trauma-focused CBT versus meditation for the early treatment (1-3 months) of clinically important symptoms/PTSD: PTSD symptomatology clinician-rated at 6-month follow-up (CPTS–RI change score)

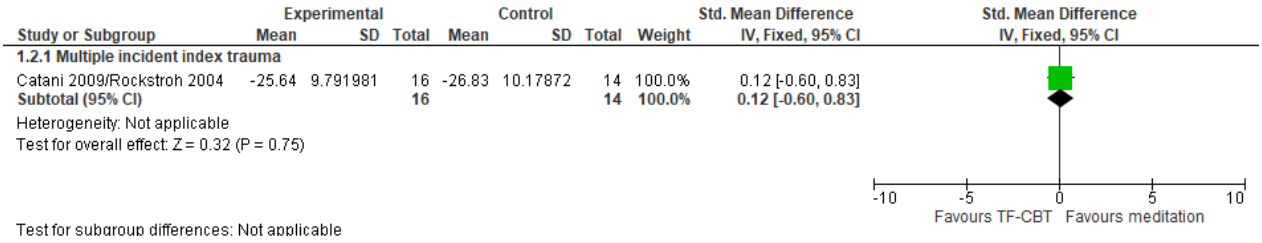


Figure 4: Trauma-focused CBT versus meditation for the early treatment (1-3 months) of clinically important symptoms/PTSD: Diagnosis at 1-month follow-up (number of people who met criteria for a diagnosis of PTSD)

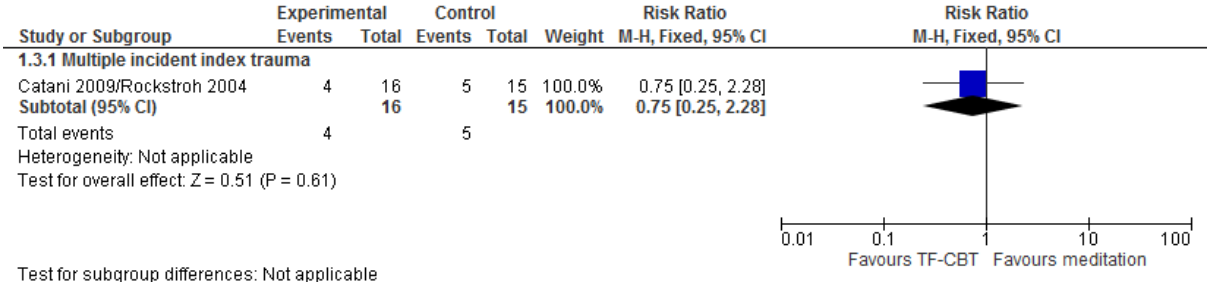
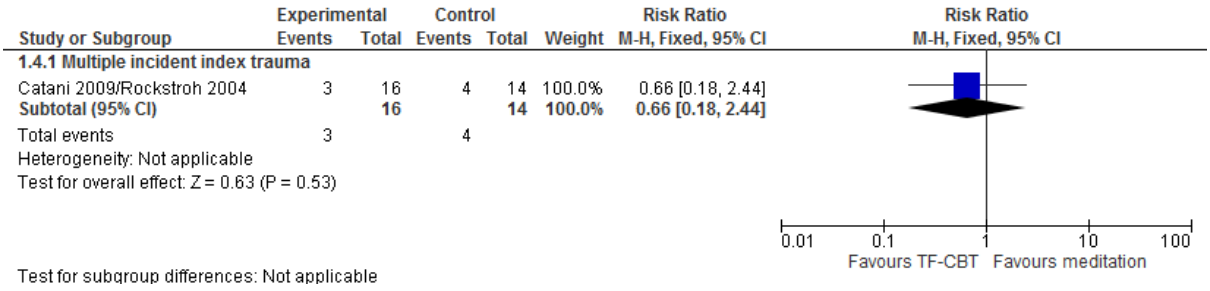


Figure 5: Trauma-focused CBT versus meditation for the early treatment (1-3 months) of clinically important symptoms/PTSD: Diagnosis at 6-month follow-up (number of people who met criteria for a diagnosis of PTSD)



Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 6: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD

symptomatology self-rated at endpoint (SPTSS/CPSS/CRIES/CRTI/UCLA PTSD-RI/CPTS–RI change score)

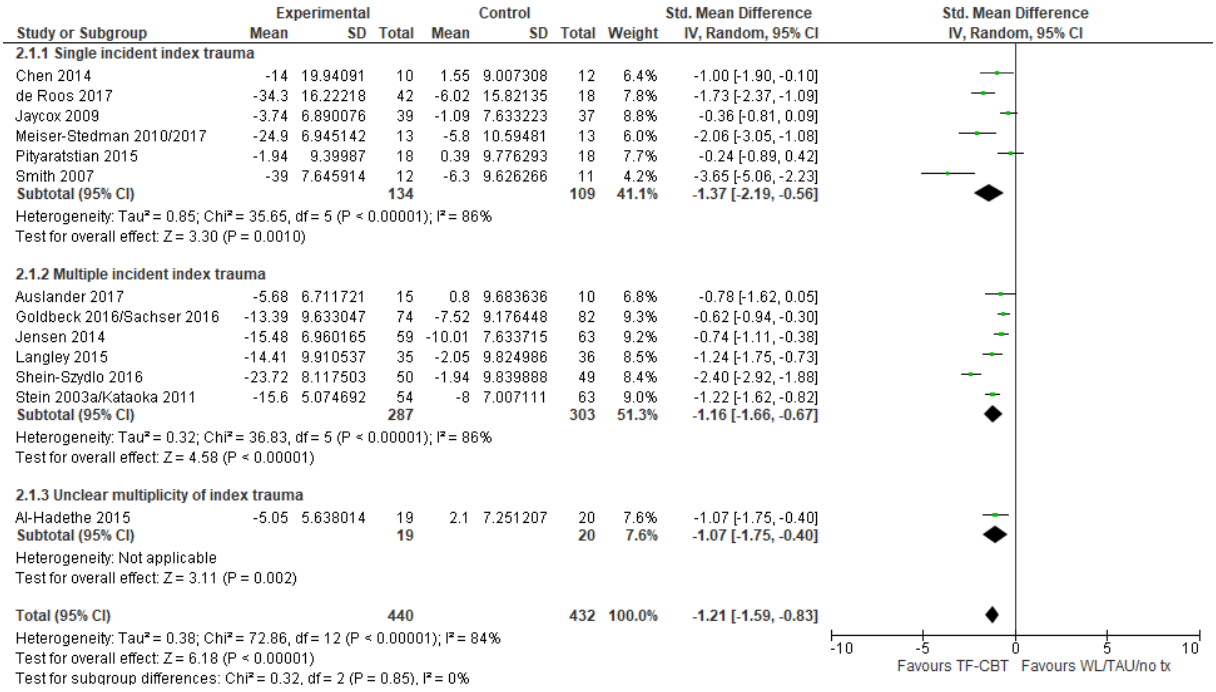


Figure 7: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology self-rated at 1-3 month follow-up (IES/SPTSS/CRIES/UCLA PTSD-RI/CPTS-RI change score)

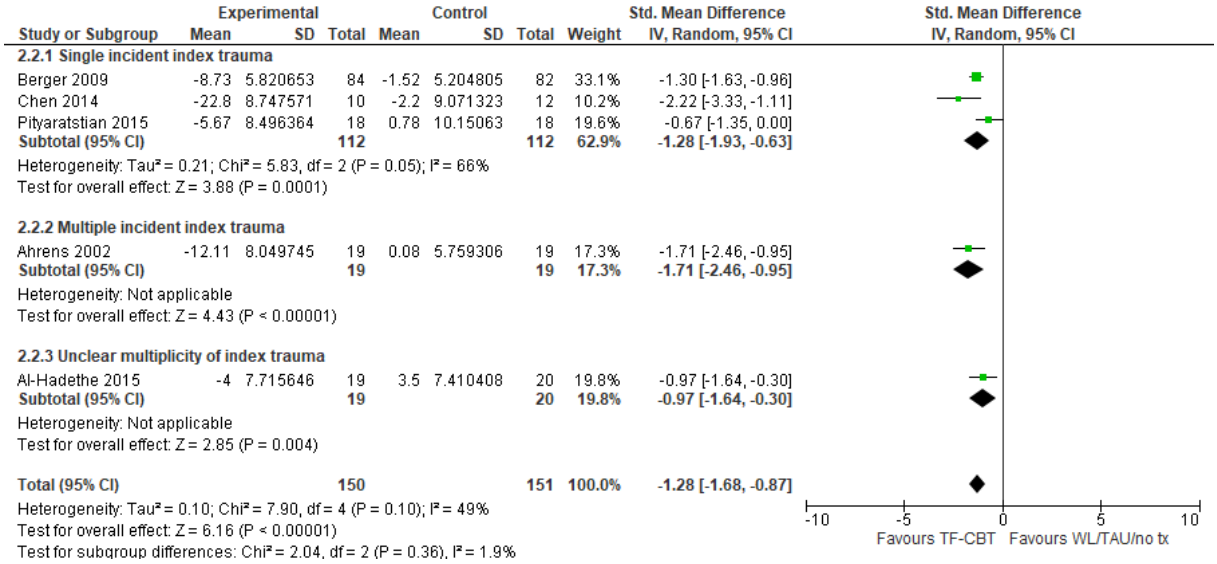


Figure 8: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology self-rated at 6-month follow-up (SPTSS change score)

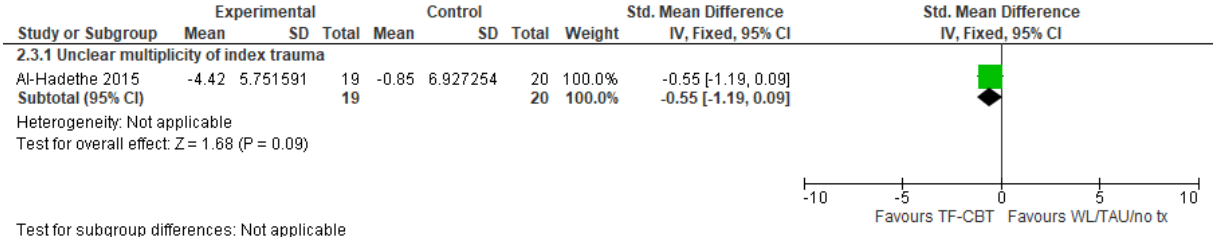


Figure 9: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology self-rated at 12-month follow-up (SPTSS change score)

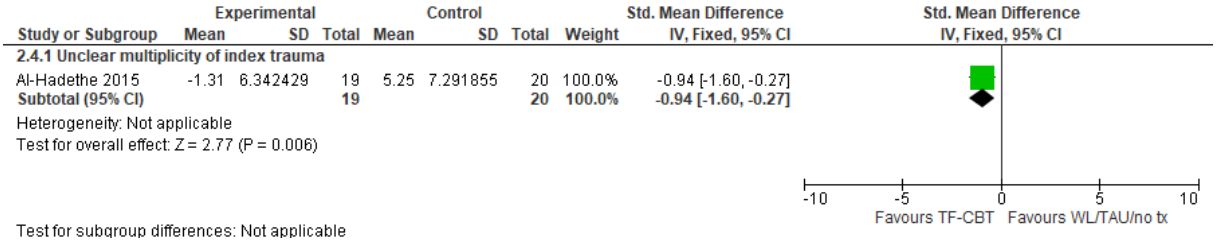


Figure 10: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology clinician-rated at endpoint (CAPS/K-SADS-E: PTSD/ADIS-C:PTSD/CPTSDI; change score)

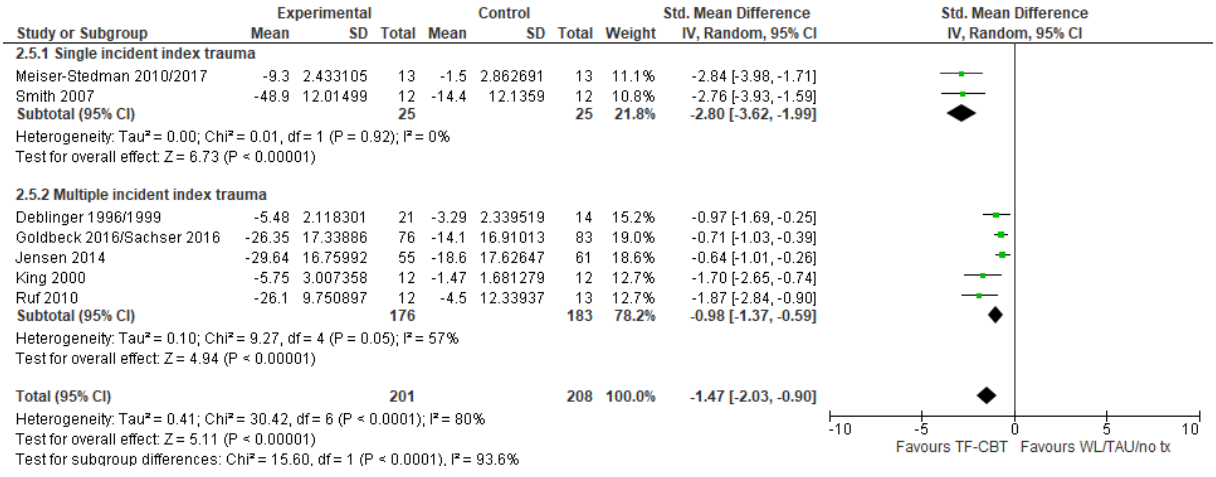


Figure 11: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD

symptomatology clinician-rated at follow-up (CAPS/K-SADS-E: PTSD/ADIS-C:PTSD/CPTSDI; change score); multiple incident index trauma

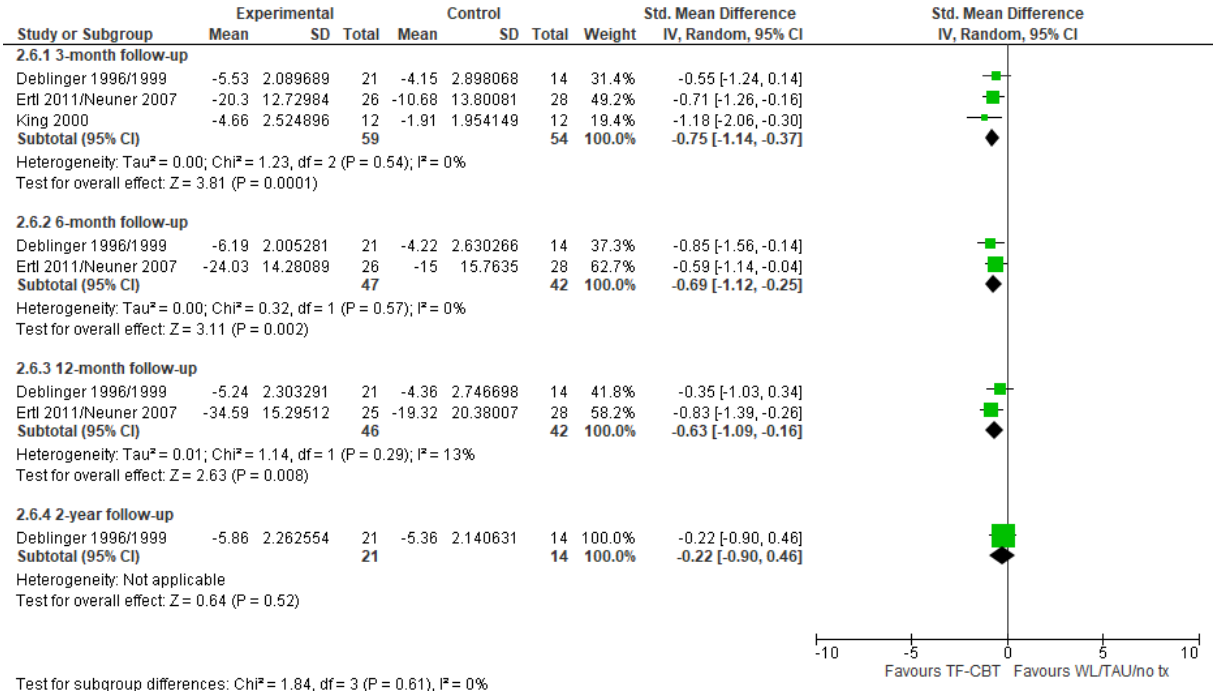


Figure 12: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Remission at endpoint (number of people no longer meeting diagnostic criteria for PTSD)

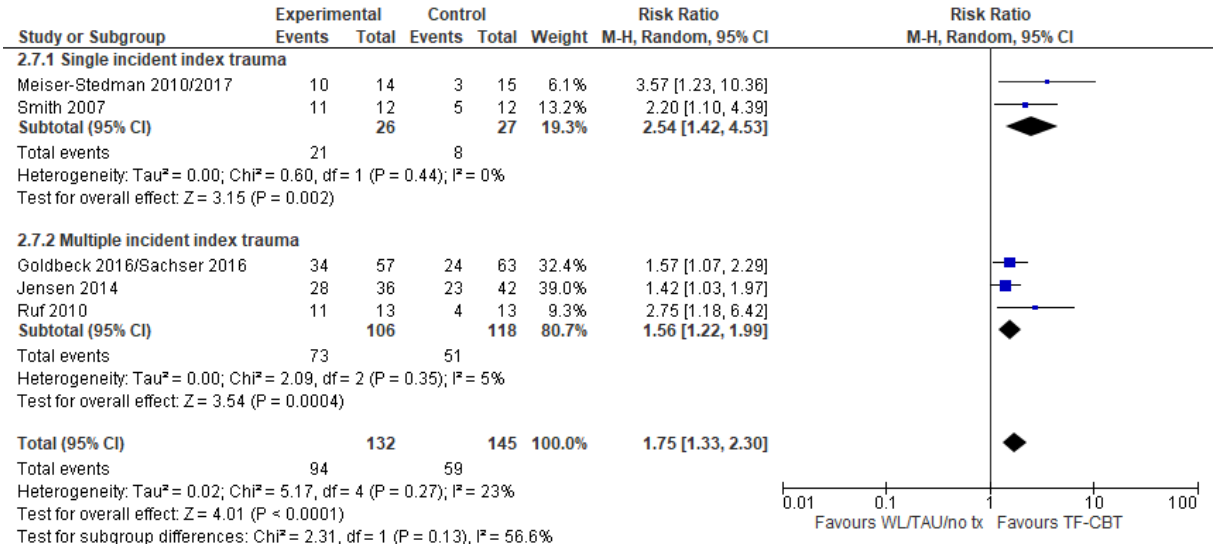


Figure 13: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Remission at

1-3 month follow-up (number of people no longer above threshold on a scale for PTSD or meeting diagnostic criteria for PTSD)

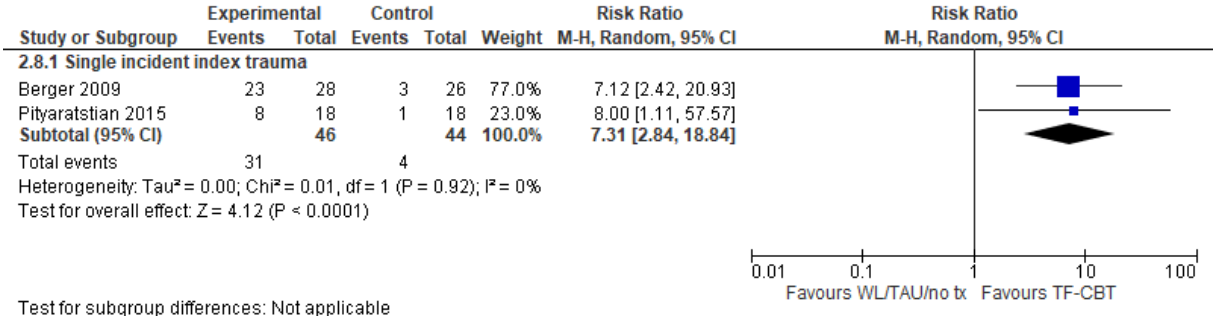


Figure 14: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Remission at 12-month follow-up (number of people no longer meeting diagnostic criteria for PTSD)

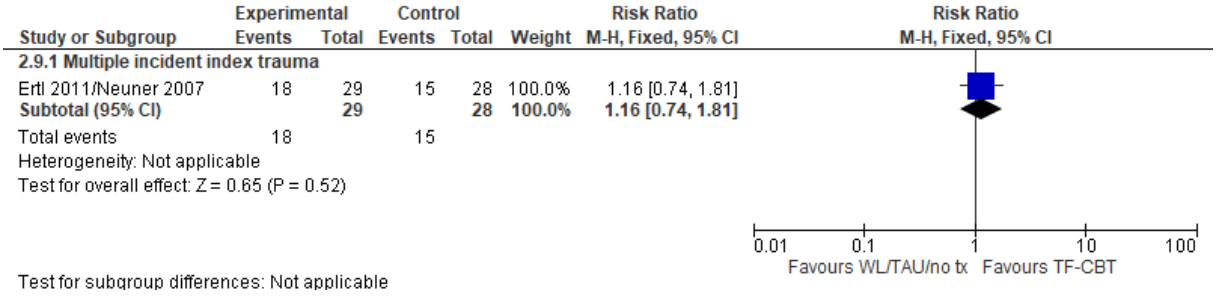


Figure 15: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Response at endpoint (number of people showing clinically significant improvement, based on reliable change indices [RCI]/rated as 'much/very much improved' on CGI)

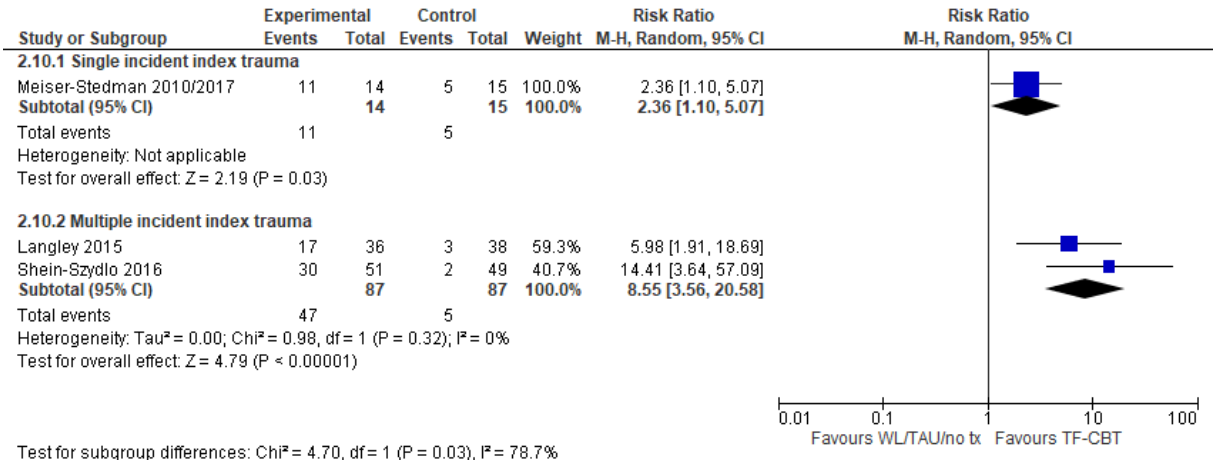


Figure 16: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Anxiety symptoms at endpoint (HADS-A/SCARED/RCMAS/SCAS/BAI change score)

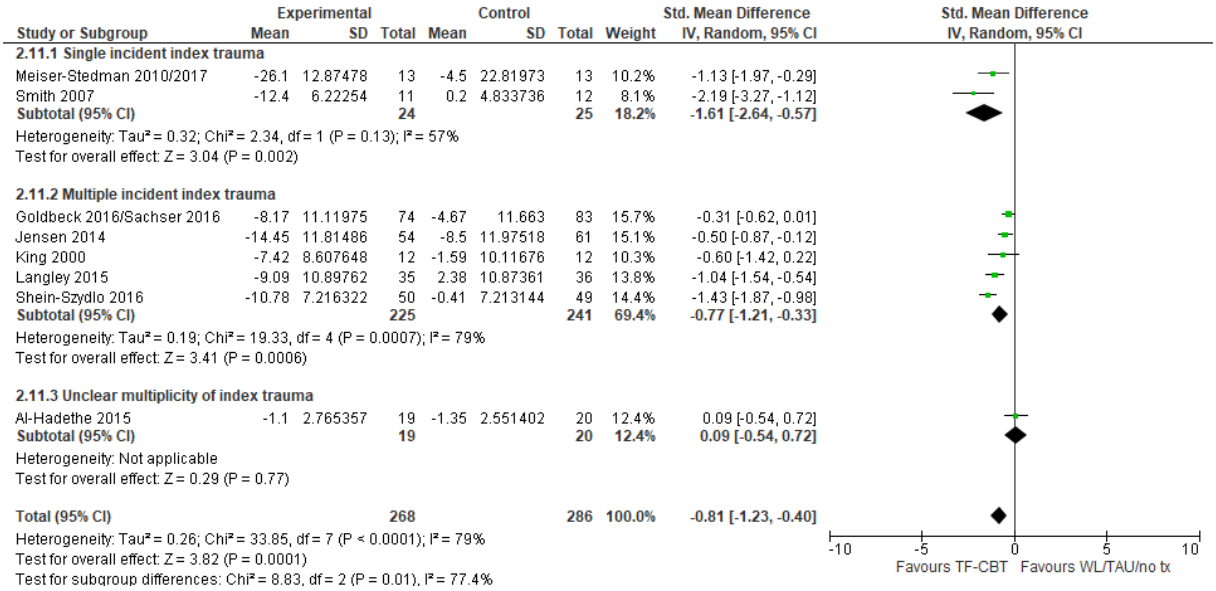


Figure 17: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Anxiety symptoms at 3-month follow-up (HADS-A/RCMAS change score)

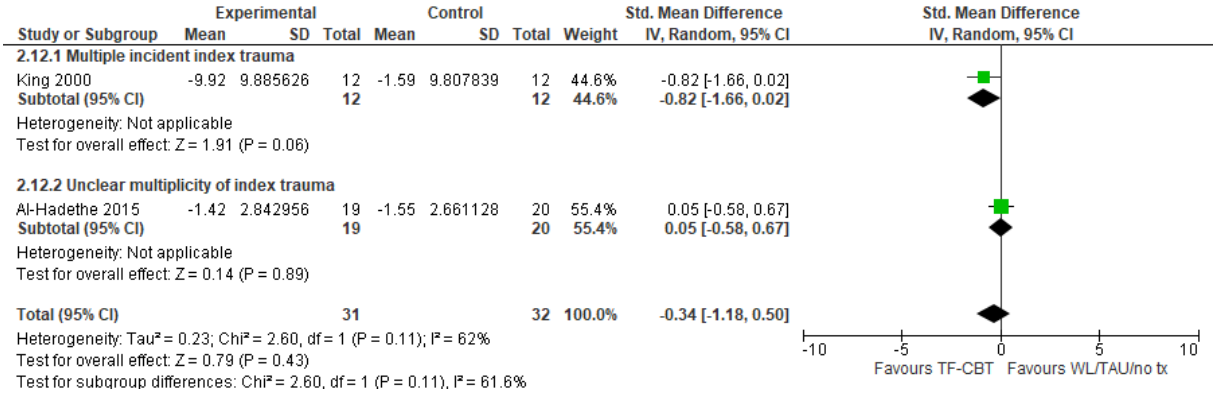


Figure 18: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Anxiety symptoms at 6-month follow-up (HADS-A change score)

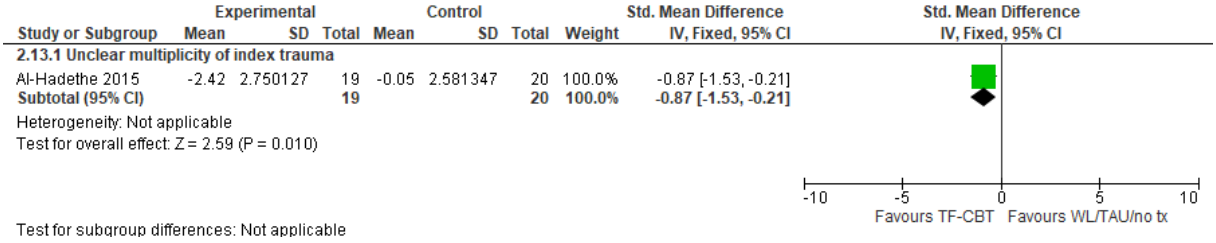


Figure 19: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Anxiety symptoms at 12-month follow-up (HADS-A change score)

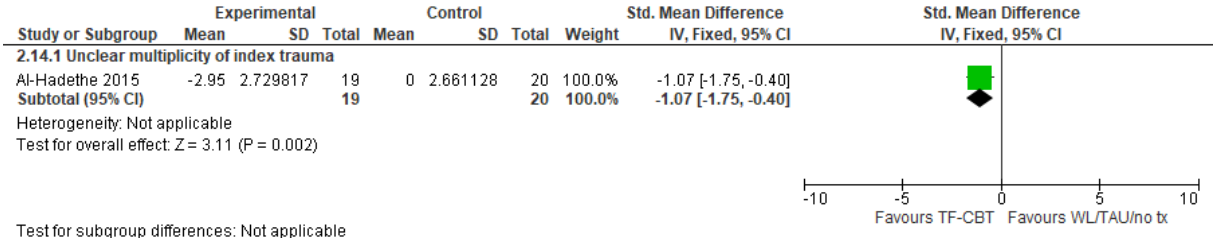


Figure 20: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Depression symptoms at endpoint (HADS-D/CES-D/CDI/MFQ/DSRS/BDI change score)

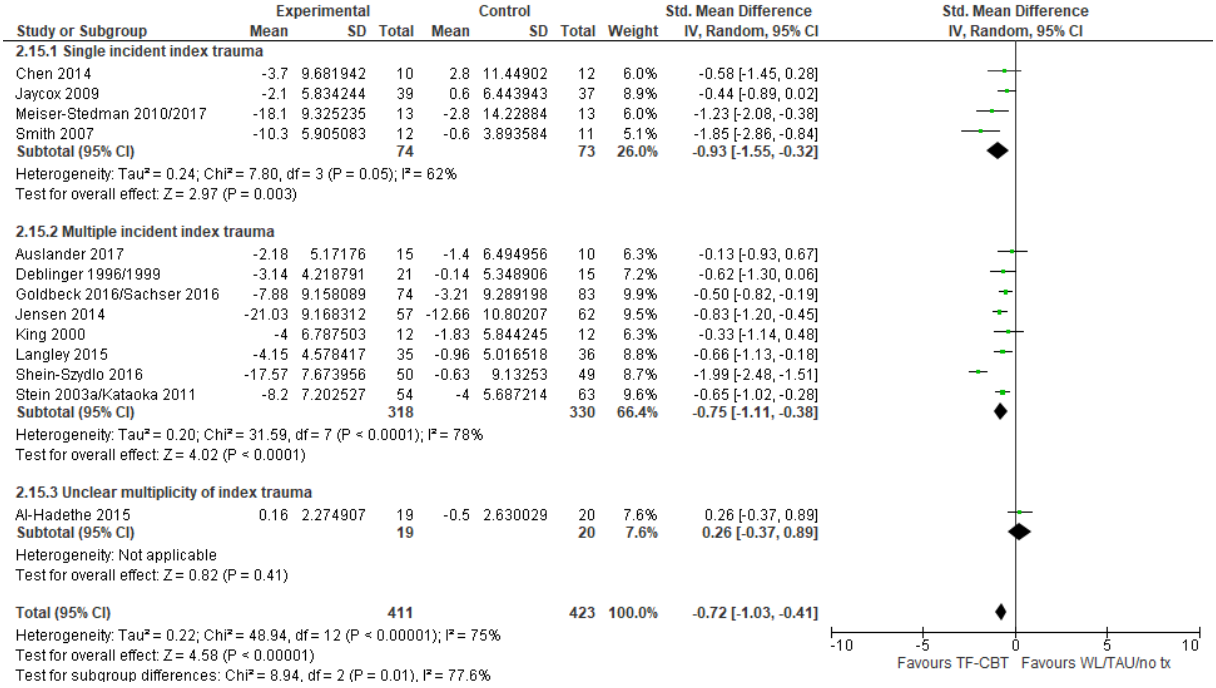


Figure 21: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Depression symptoms at 1-3 month follow-up (BDI/HADS-D/CES-D/CDI/MINI:Depression /DSRS change score)

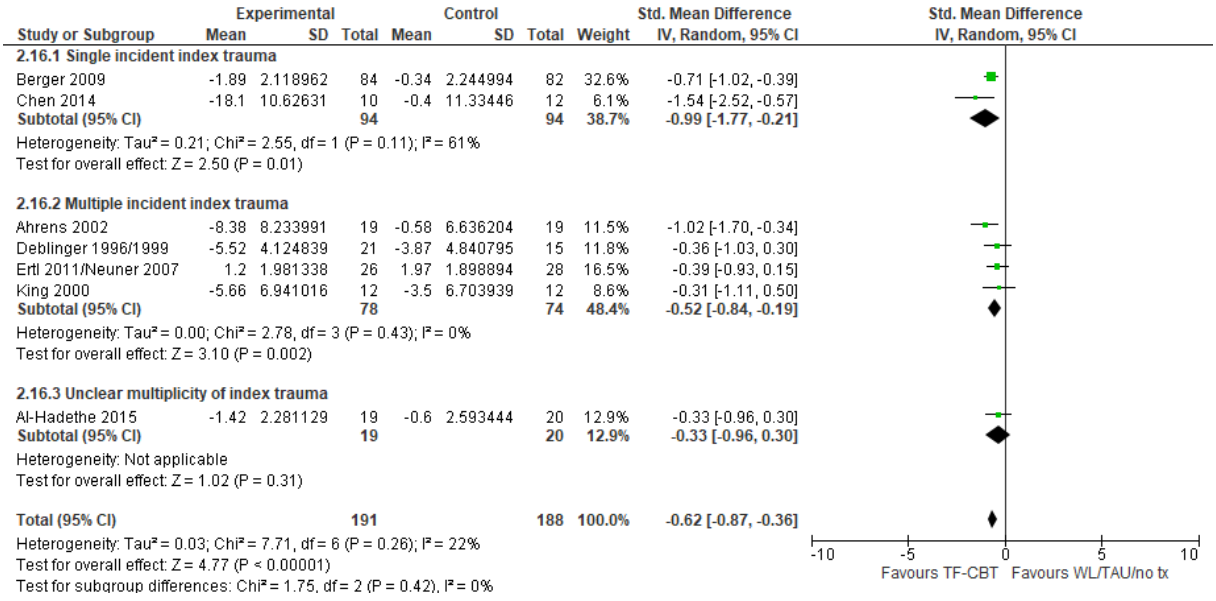


Figure 22: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Depression symptoms at 6-month follow-up (HADS-D/CDI/MINI:Depression change score)

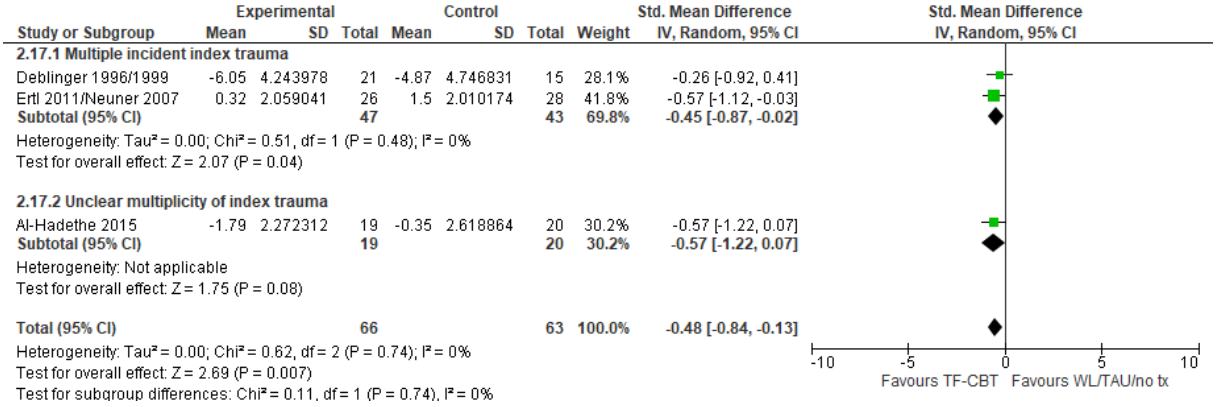


Figure 23: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Depression symptoms at 12-month follow-up (HADS-D/CDI/MINI:Depression change score)

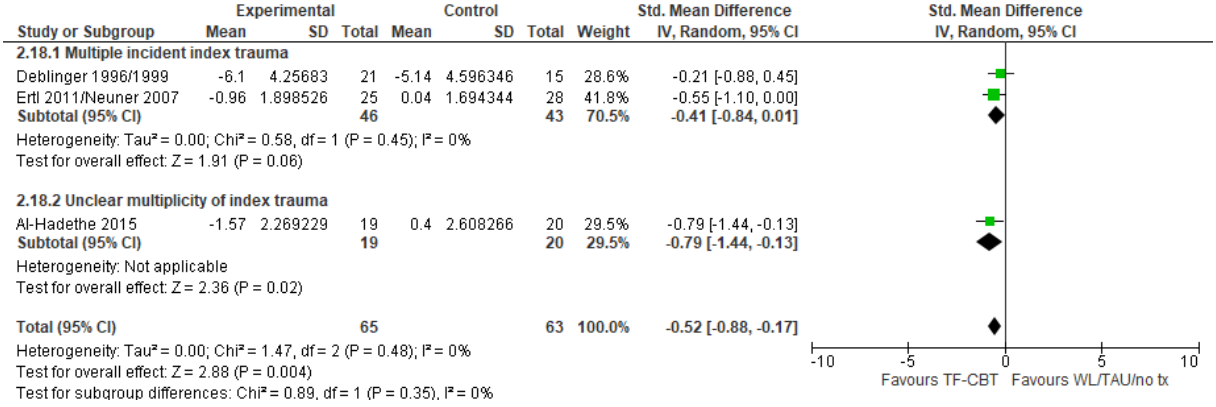


Figure 24: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Depression symptoms at 2 year follow-up (CDI change score)

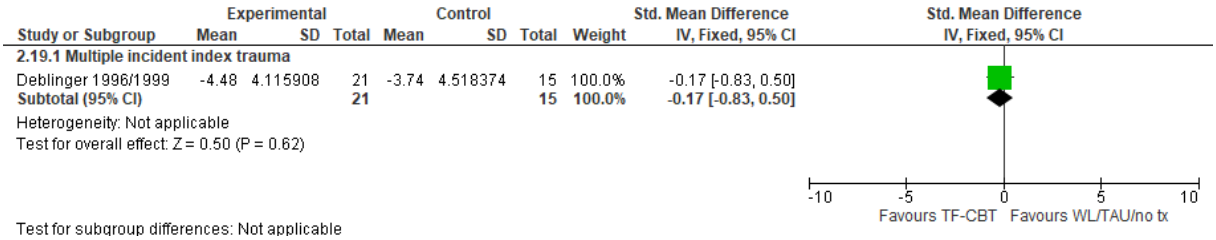


Figure 25: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Emotional and behavioural problems (SDQ-A change score)

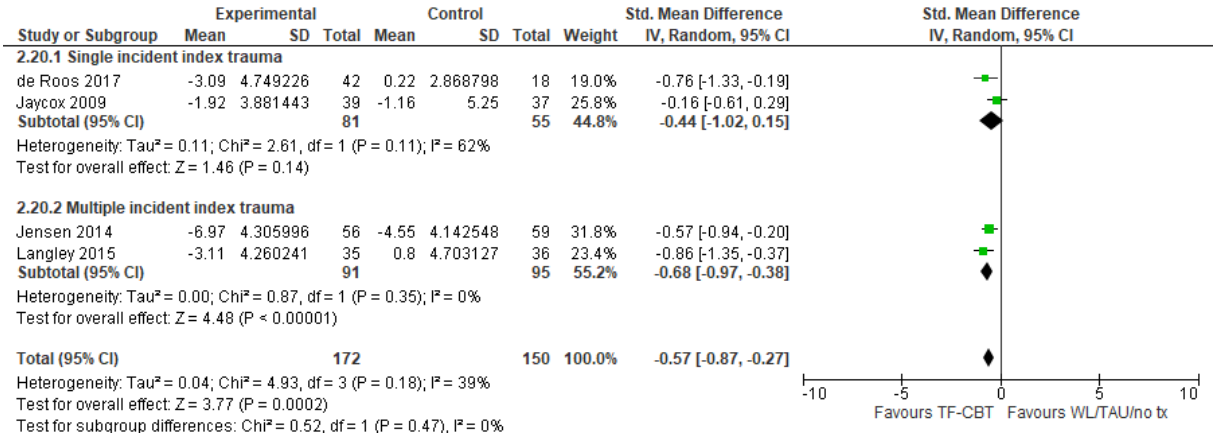


Figure 26: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Emotional and behavioural problems-Externalizing (CBCL Externalizing change score); Multiple incident index trauma

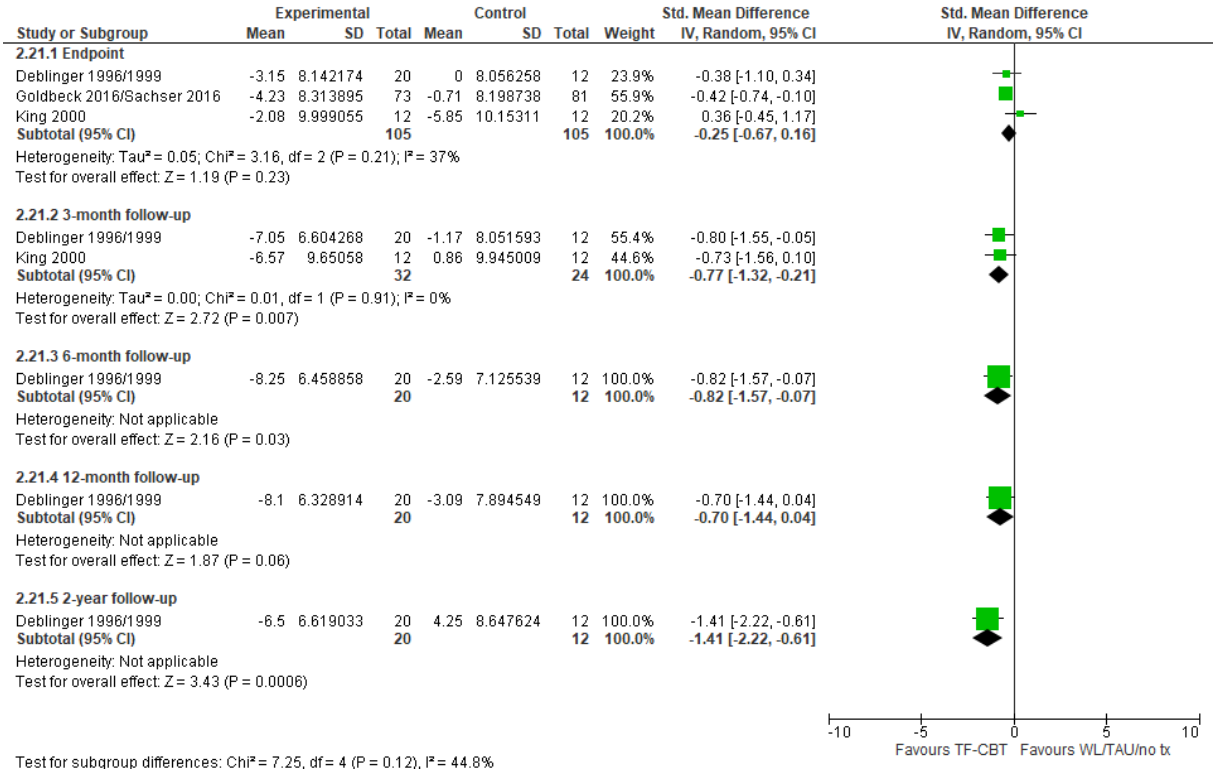


Figure 27: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Emotional and behavioural problems-Internalizing (CBCL Internalizing change score); Multiple incident index trauma

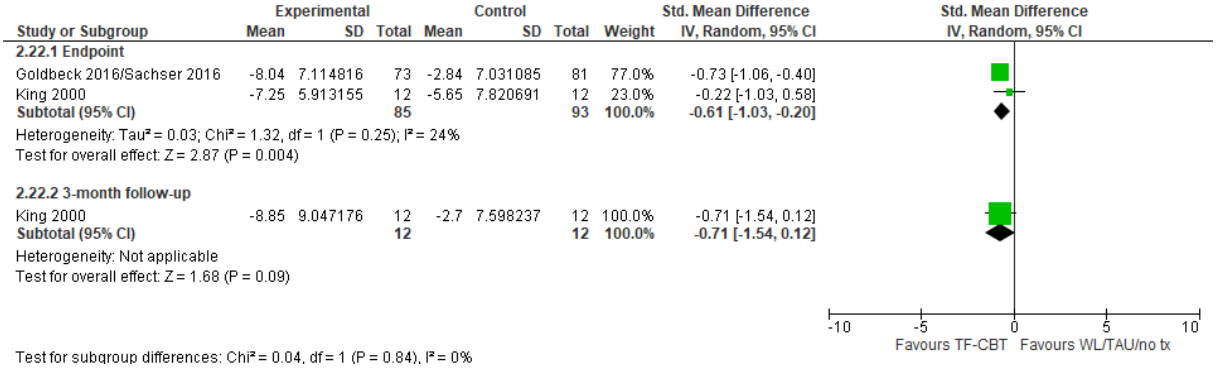


Figure 28: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Behaviour problems (CBCL total score; change score)

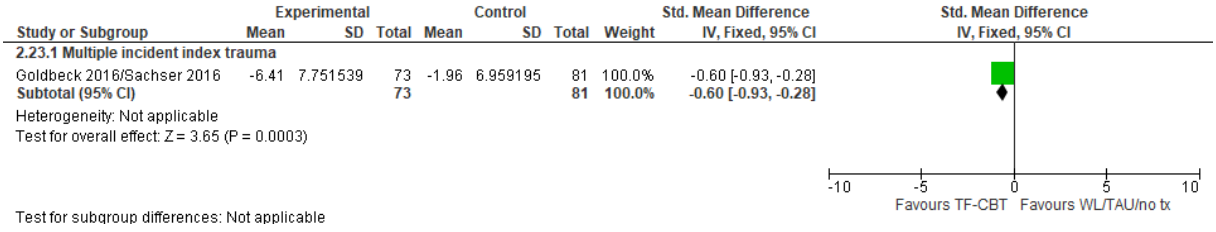


Figure 29: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Quality of life (KIDSCREEN-27: Global HRQoL T-scores/ILK; change score)

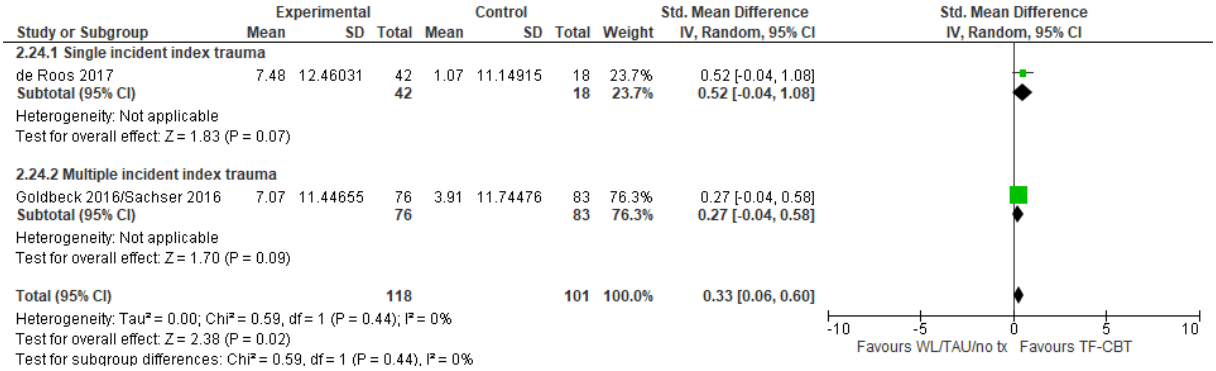


Figure 30: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Functional impairment at endpoint (CAPS: Functional impairment/SAS-SR-Y/Child Diagnostic Interview Schedule:Sum score of 7 areas of funcctional impairment; change score)

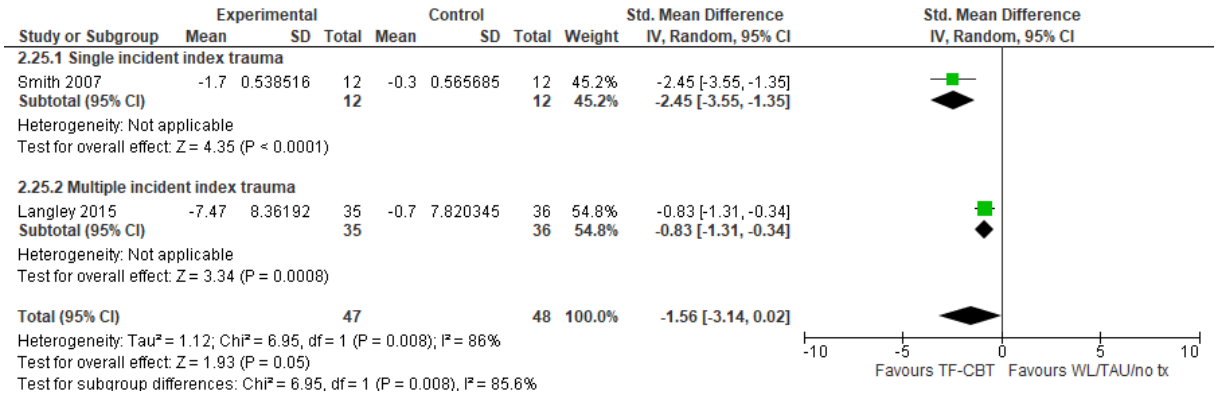


Figure 31: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Functional impairment at 3-month follow-up (CAPS: Functional impairment; change score)

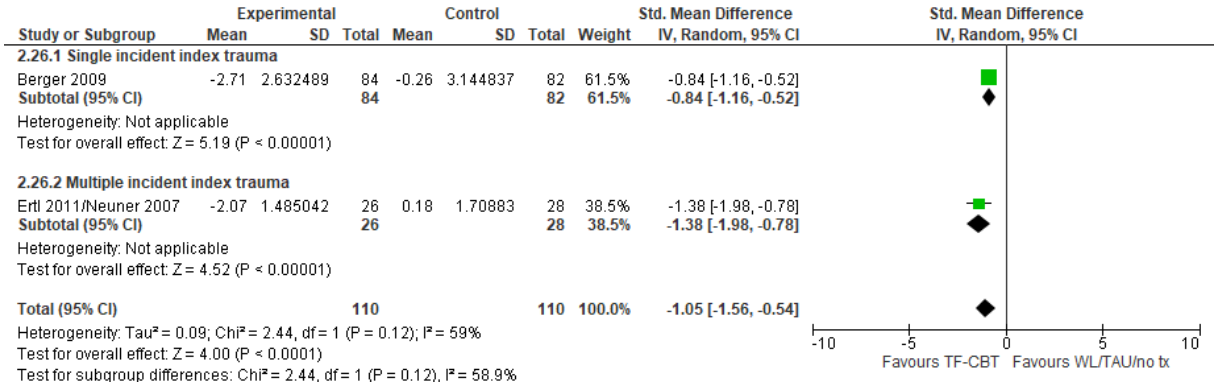


Figure 32: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Functional

impairment at 6-12 month follow-up (CAPS: Functional impairment; change score); Multiple incident index trauma

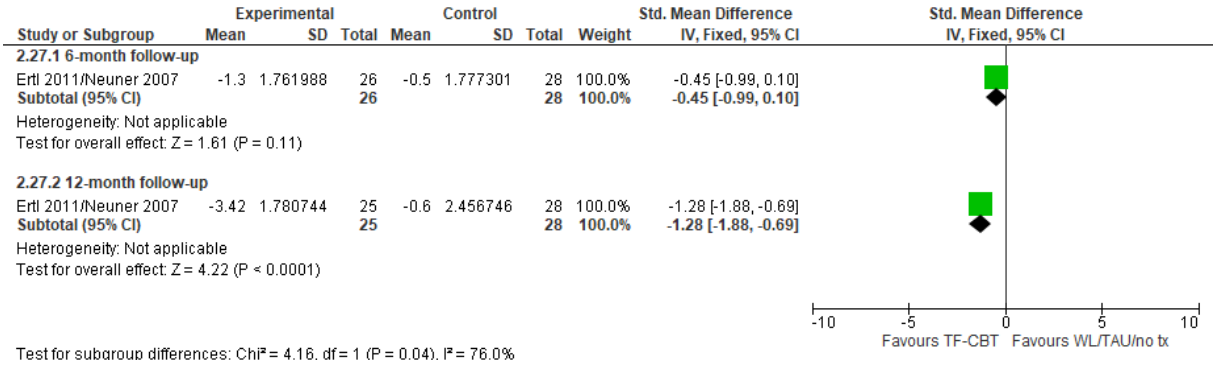


Figure 33: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Global functioning at endpoint (CGAS/fCPSS/GAF change score)

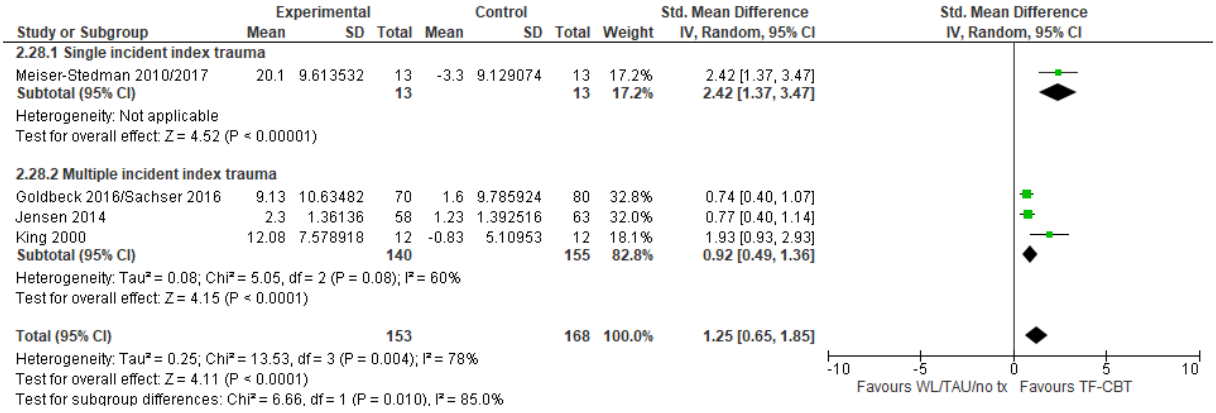


Figure 34: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Global functioning at 3-month follow-up (GAF; change score)

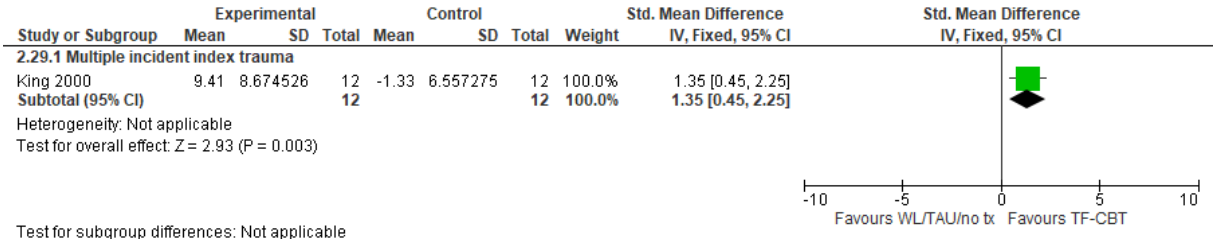
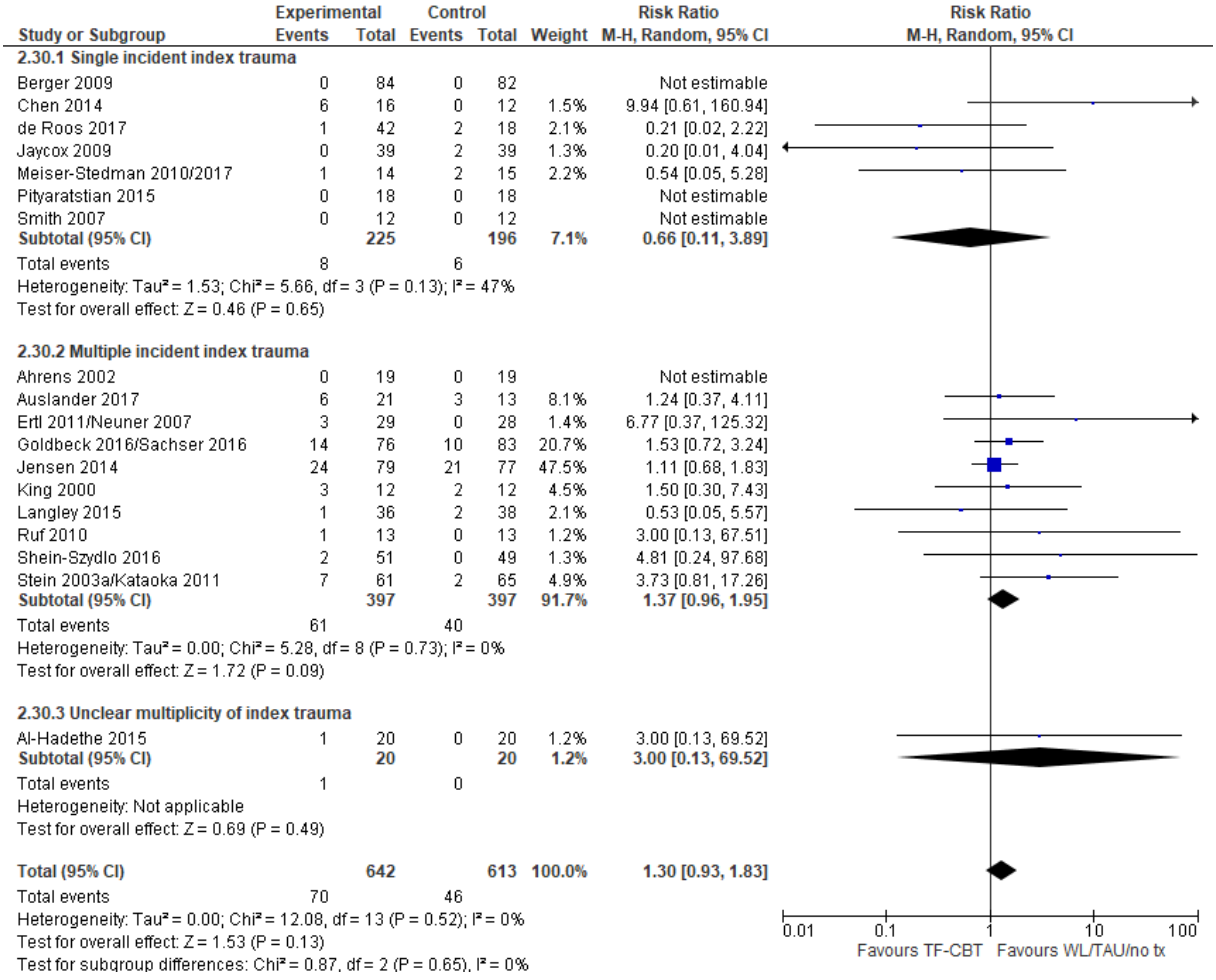


Figure 35: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Discontinuation (loss to follow-up)



Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 36: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD

symptomatology self-rated at endpoint (CRIES/TSCC-PTSD/UCLA PTSD-RI/CPSS change score)

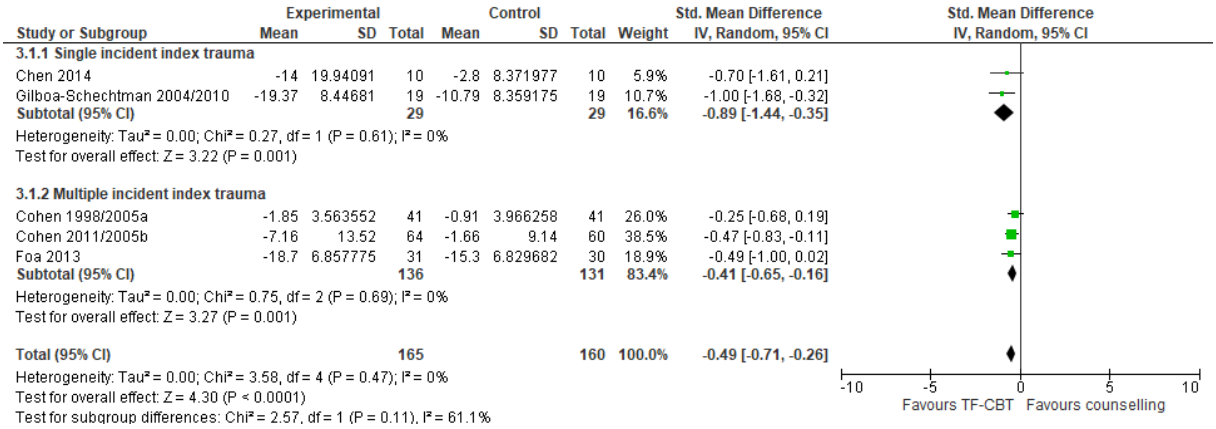


Figure 37: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology self-rated at 3-month follow-up (CRIES change score)

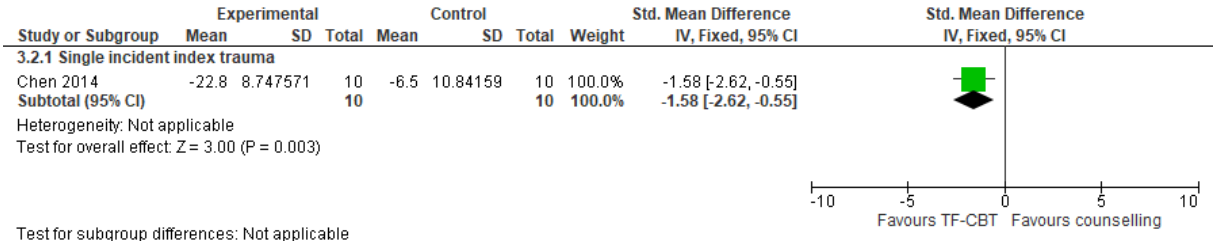


Figure 38: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology self-rated at 6-month follow-up (TSCC-PTSD/VCPSS change score)

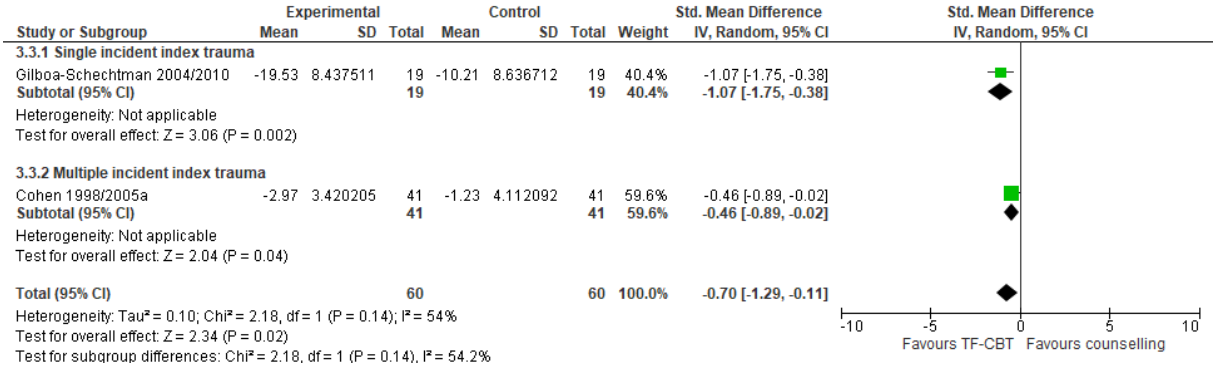


Figure 39: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD

symptomatology self-rated at 12-17 month follow-up (TSCC-PTSD/CPSS change score)

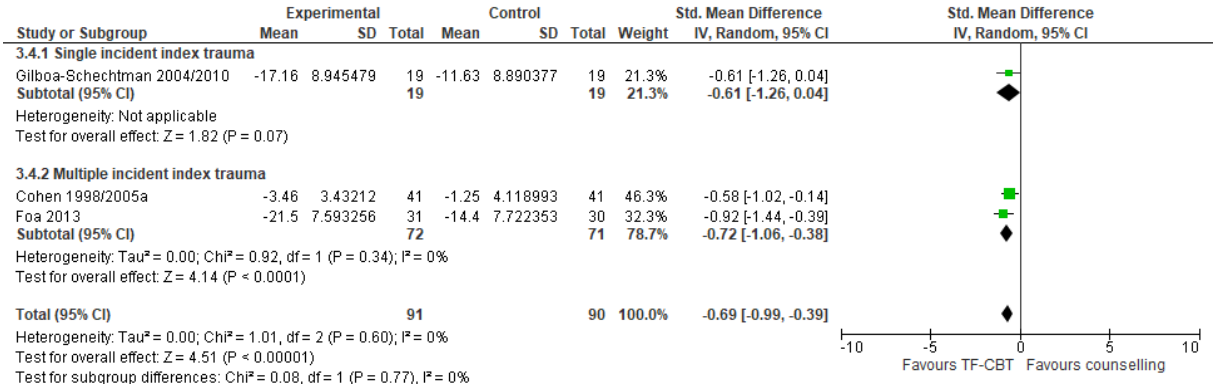


Figure 40: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology clinician-rated at endpoint (K-SADS-PL: PTSD/CPSS-I/CAPS; change score)

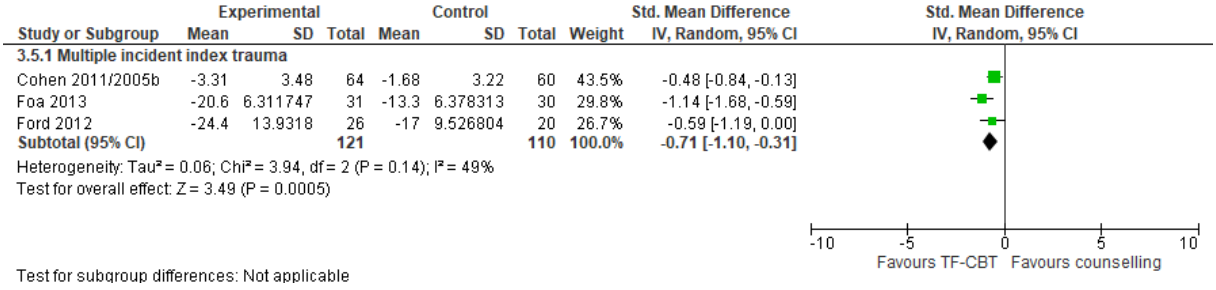


Figure 41: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology clinician-rated at 3-month follow-up (CAPS change score)

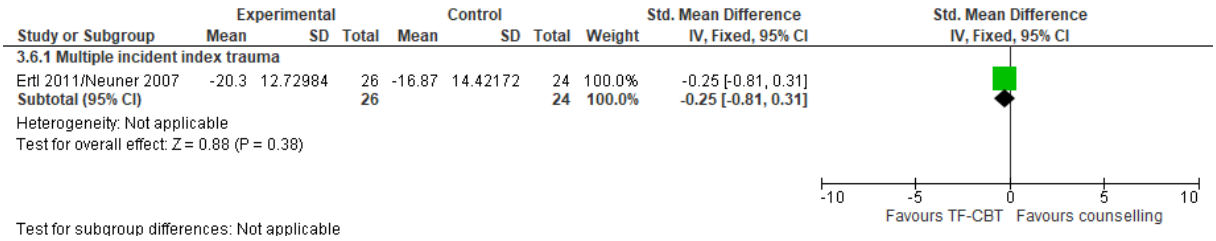


Figure 42: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology clinician-rated at 6-month follow-up (CAPS change score)

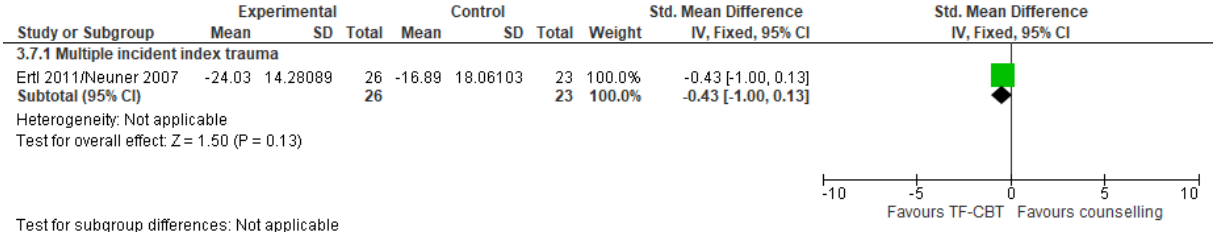


Figure 43: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology clinician-rated at 12-month follow-up (CAPS/CPSS-I change score)

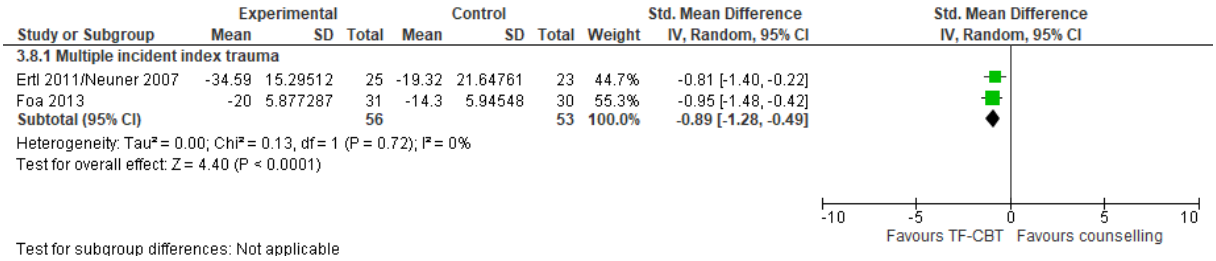


Figure 44: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Remission at endpoint (number of people no longer meeting diagnostic criteria for PTSD)

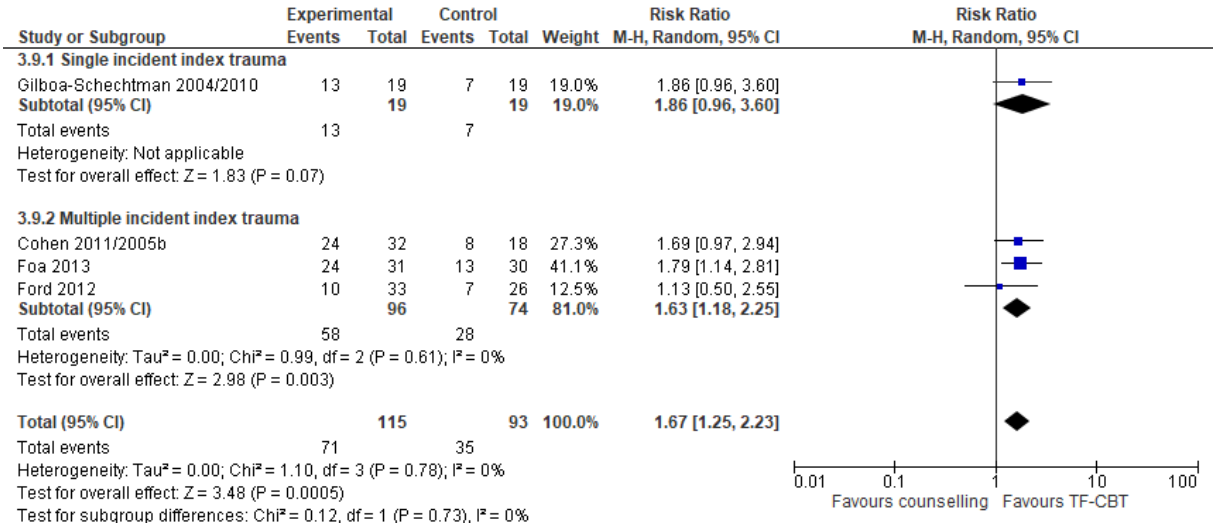


Figure 45: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Remission at

6-month follow-up (number of people no longer meeting diagnostic criteria for PTSD)

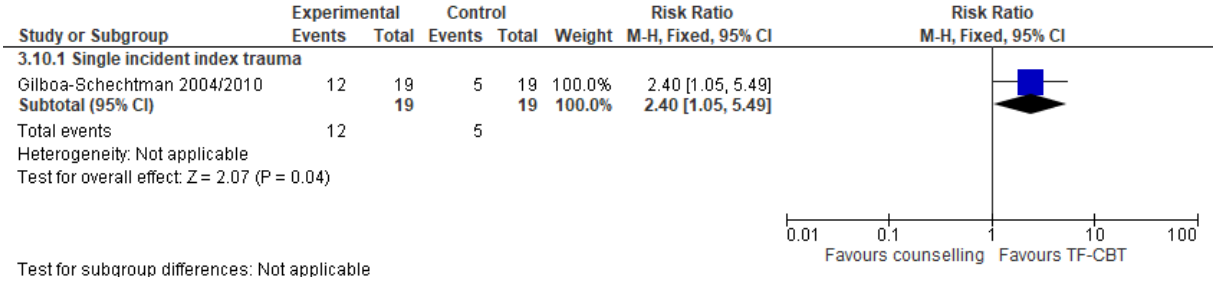


Figure 46: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Remission at 12-month follow-up (number of people no longer meeting diagnostic criteria for PTSD)

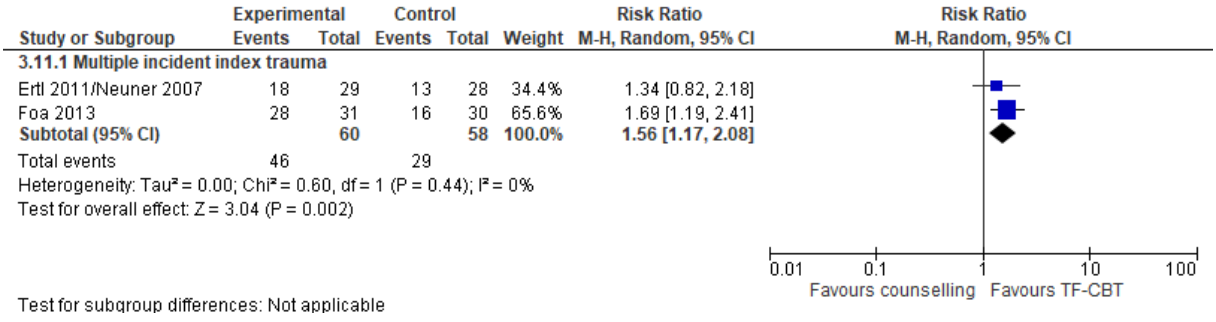


Figure 47: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Response at endpoint (number of people showing clinically significant improvement [based on RCI])

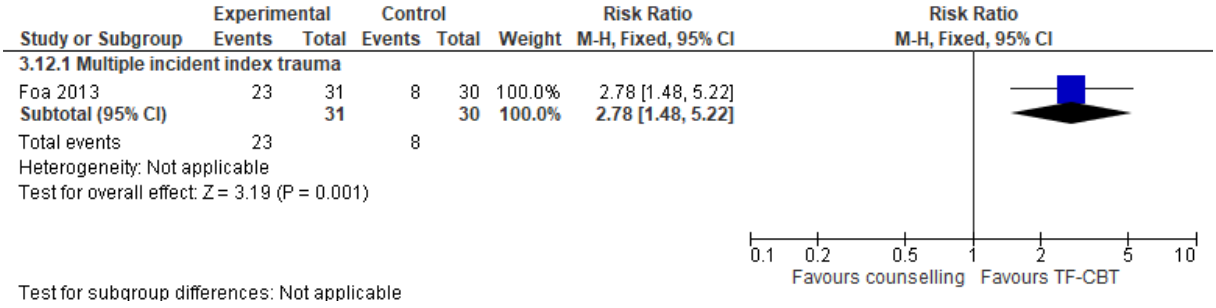


Figure 48: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Response at

12-month follow-up (number of people showing clinically significant improvement [based on RCI])

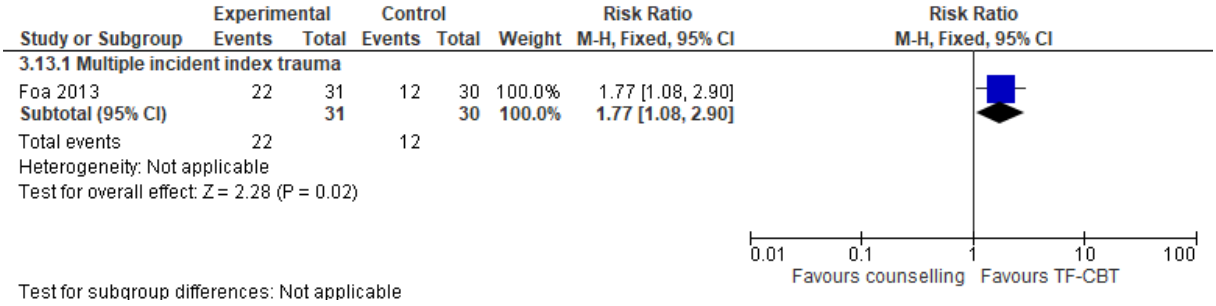


Figure 49: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Dissociative symptoms (TSCC-Dissociation change score); multiple incident index trauma

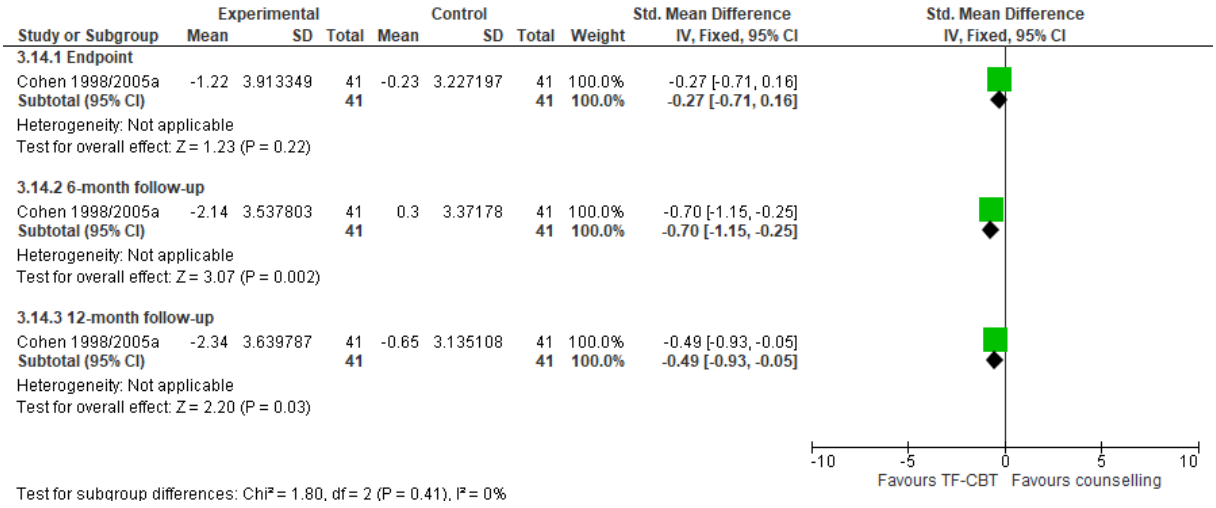


Figure 50: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Anxiety

symptoms (STAI-State/SCARED/TSCC:Anxiety change score); Multiple incident index trauma

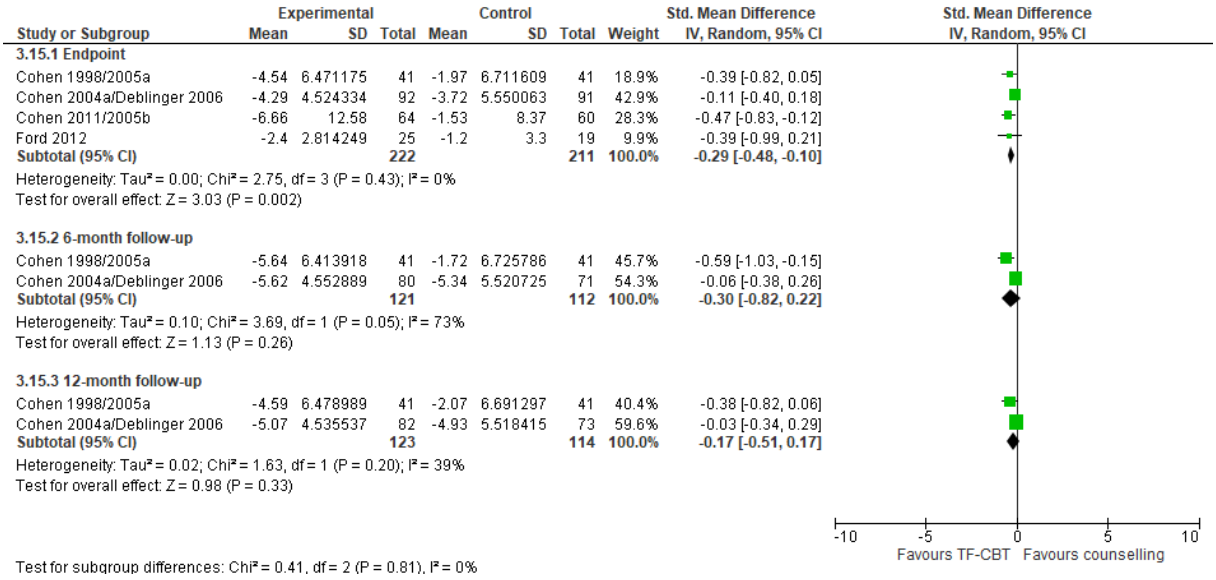


Figure 51: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Depression symptoms at endpoint (BDI/CES-D/CDI/TSCC:Depression change score)

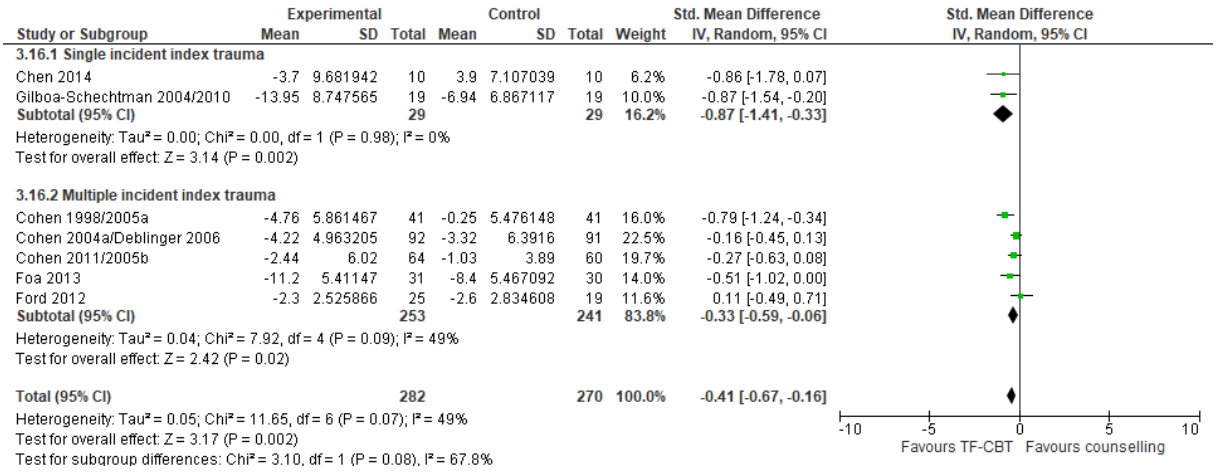


Figure 52: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Depression symptoms at 3-month follow-up (CES-D/MINI:Depression change score)

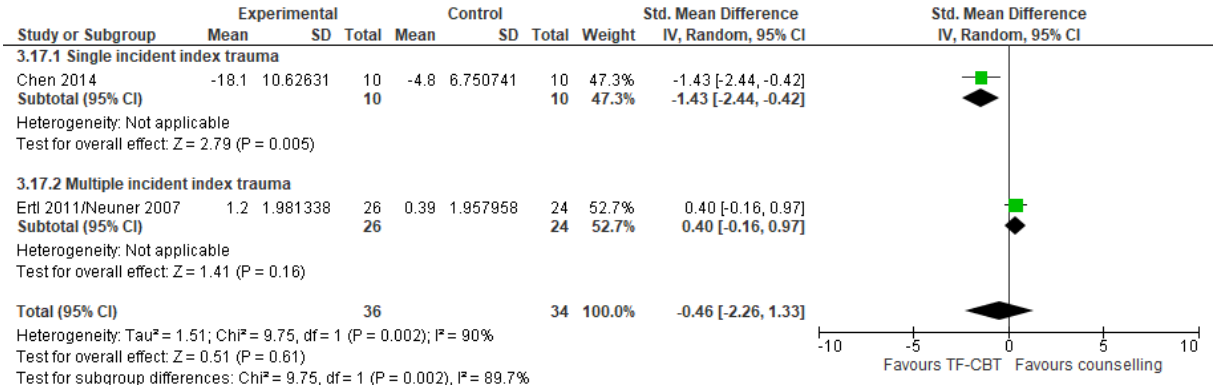


Figure 53: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Depression symptoms at 6-month follow-up (BDI/CDI/MINI:Depression change score)

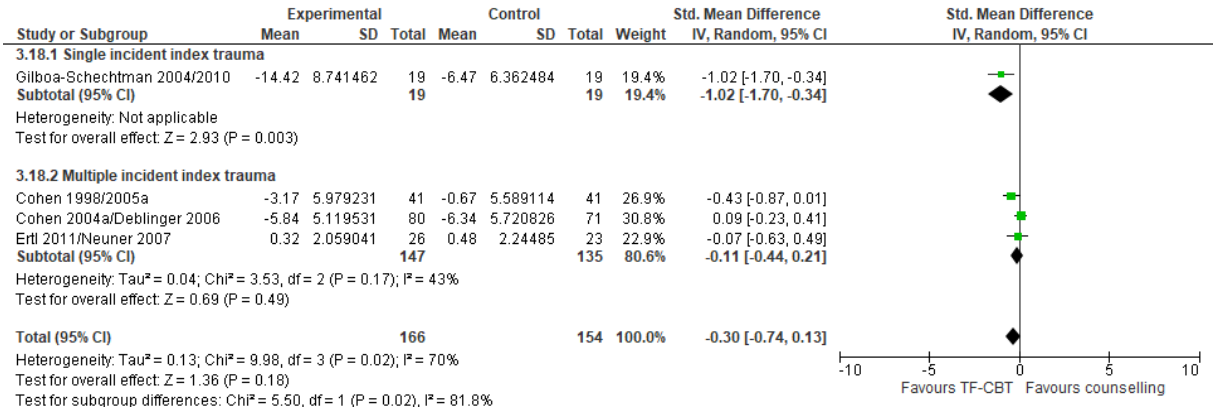


Figure 54: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Depression

symptoms at 12-17 month follow-up (BDI/CDI/MINI:Depression change score)

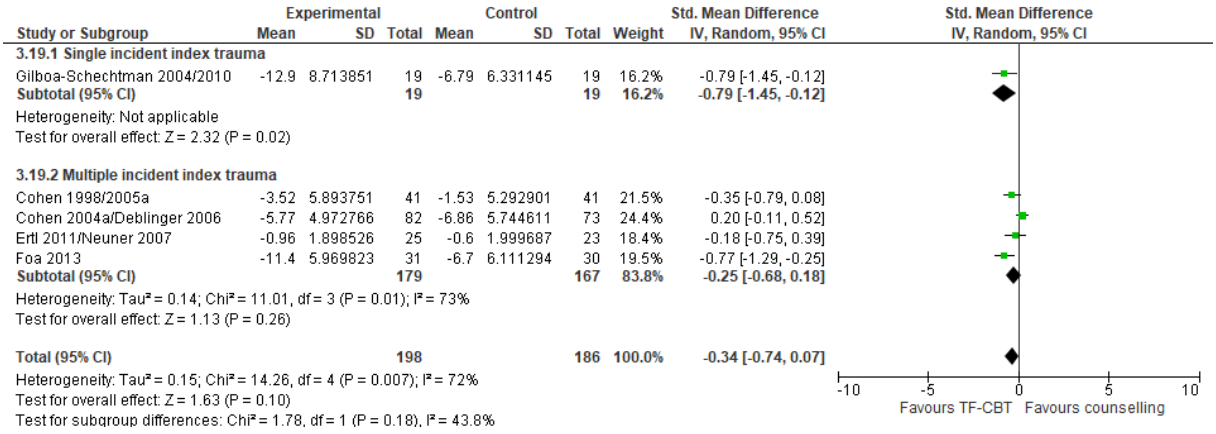


Figure 55: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Emotional and behavioural problems-Internalizing (CBCL Internalizing change score); Multiple incident index trauma

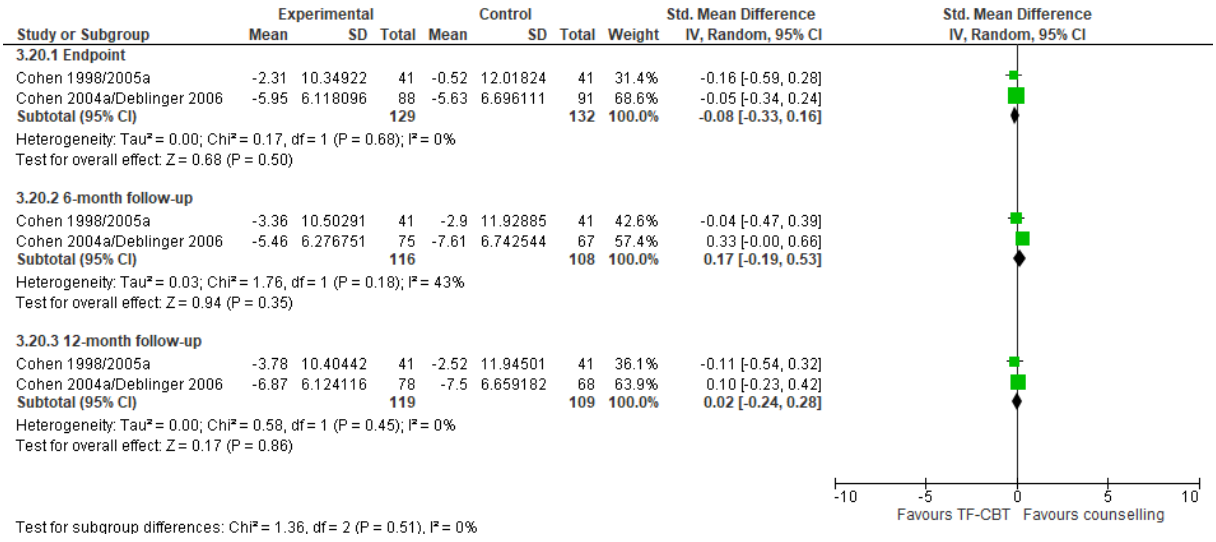


Figure 56: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Emotional

and behavioural problems-Externalizing (CBCL Externalizing change score); Multiple incident index trauma

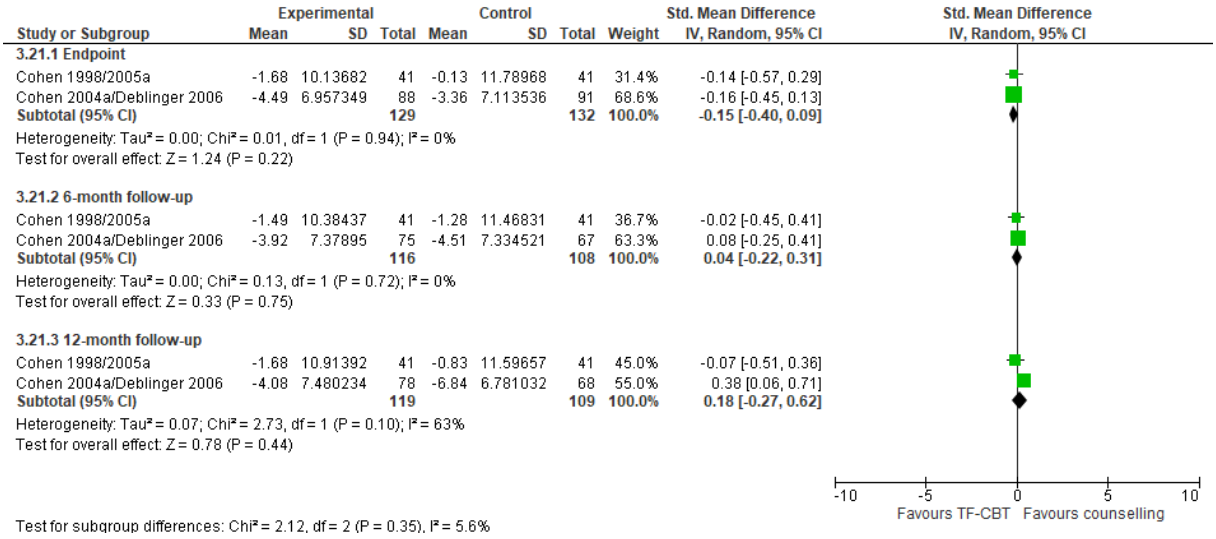


Figure 57: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Behaviour problems (CBCL total score; change score); multiple incident index trauma

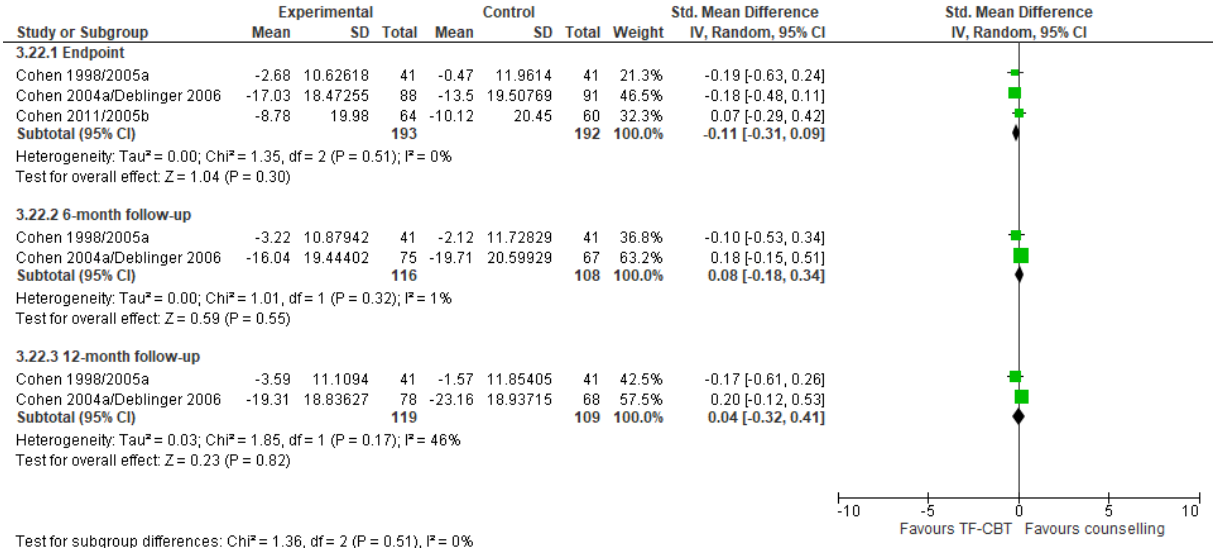


Figure 58: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Functional

impairment (CAPS: Functional impairment; change score); Multiple incident index trauma

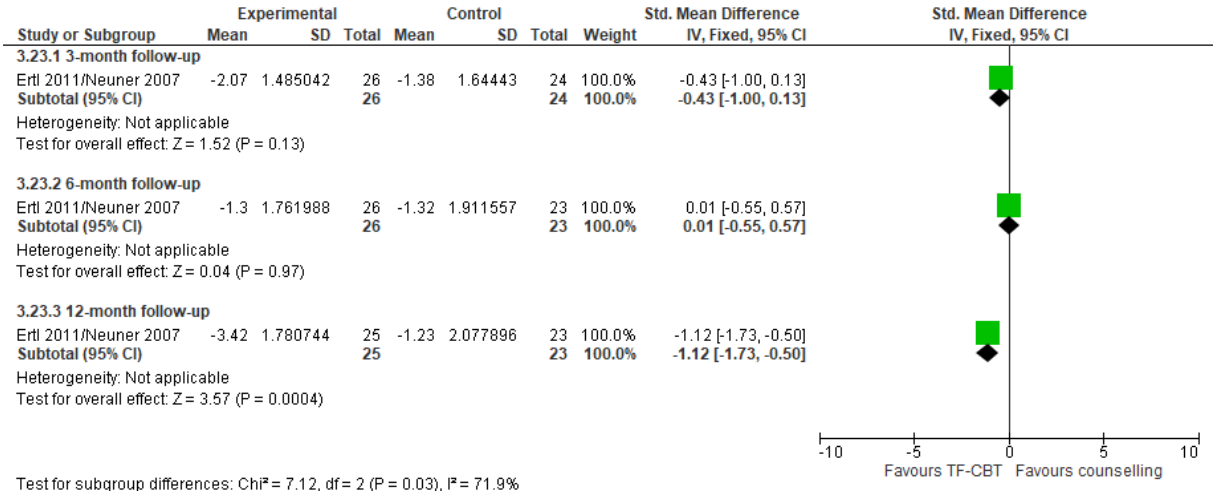


Figure 59: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Global functioning at endpoint (CGAS; change score)

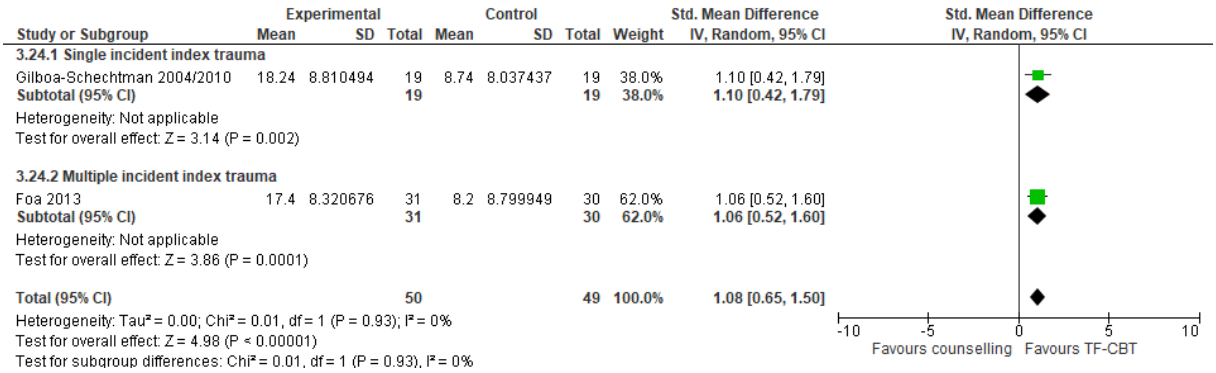


Figure 60: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Global functioning at 6-month follow-up (CGAS; change score)

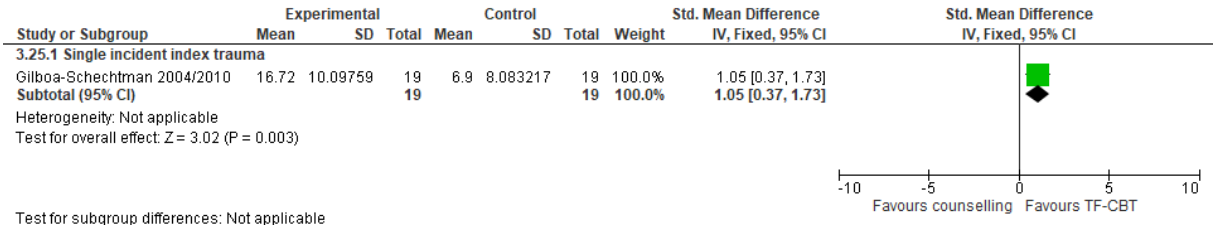


Figure 61: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Global functioning at 12-month follow-up (CGAS; change score)

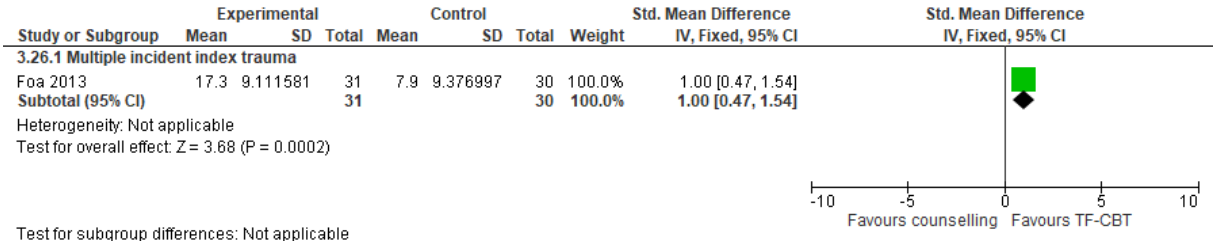
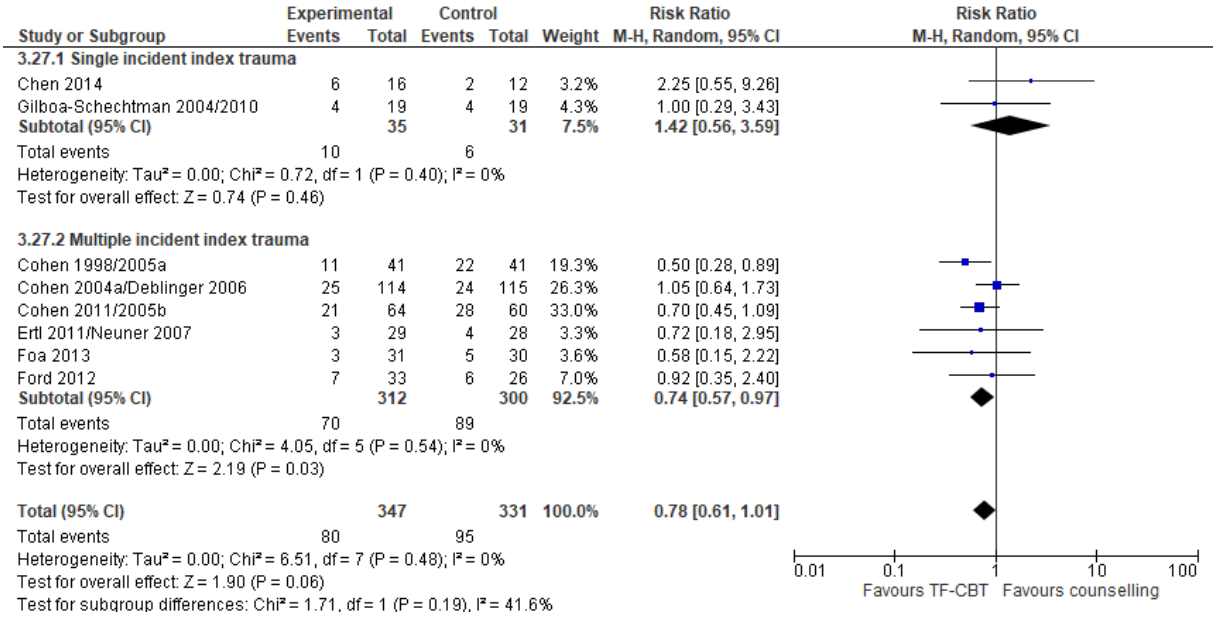


Figure 62: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Discontinuation (loss to follow-up)



Trauma-focused CBT versus eye movement desensitisation and reprocessing (EMDR) for the delayed treatment (>3 months) of clinically important symptoms/PTSD - Single incident index trauma

Figure 63: Trauma-focused CBT versus eye movement desensitisation and reprocessing (EMDR) for the delayed treatment (>3 months) of clinically

important symptoms/PTSD: PTSD symptomatology self-rated (CRTI change score); Single incident index trauma

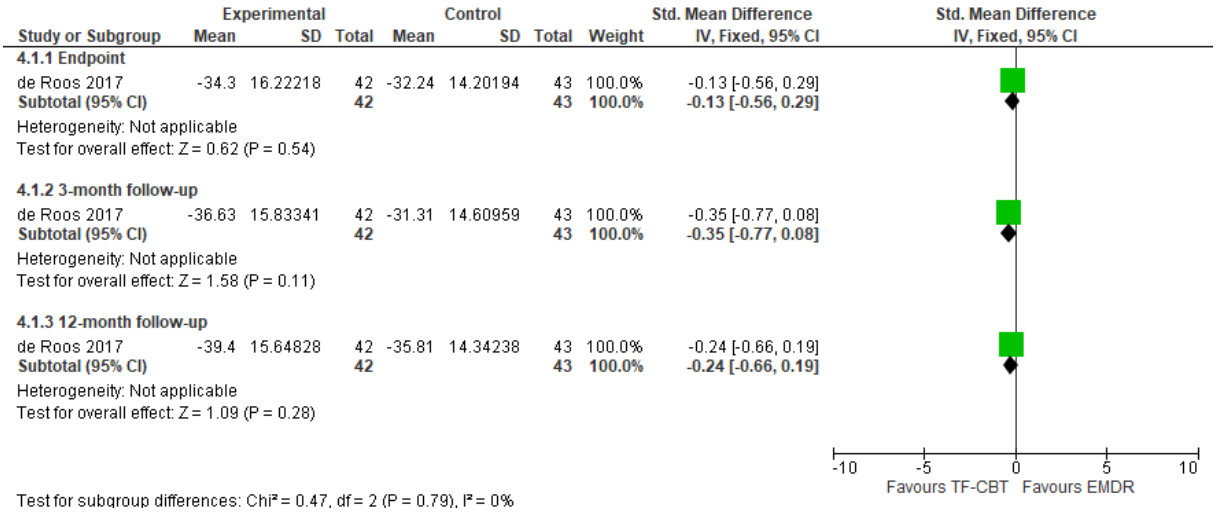


Figure 64: Trauma-focused CBT versus eye movement desensitisation and reprocessing (EMDR) for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology clinician-rated (CAPS-CA change score)

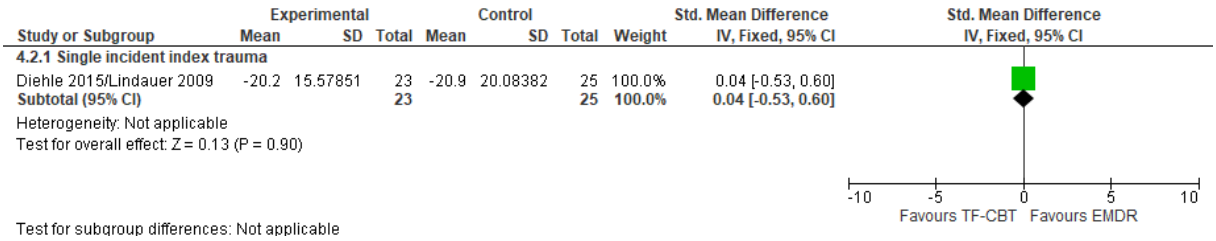


Figure 65: Trauma-focused CBT versus eye movement desensitisation and reprocessing (EMDR) for the delayed treatment (>3 months) of clinically

important symptoms/PTSD: Emotional and behavioural problems (SDQ-A change score); Single incident index trauma

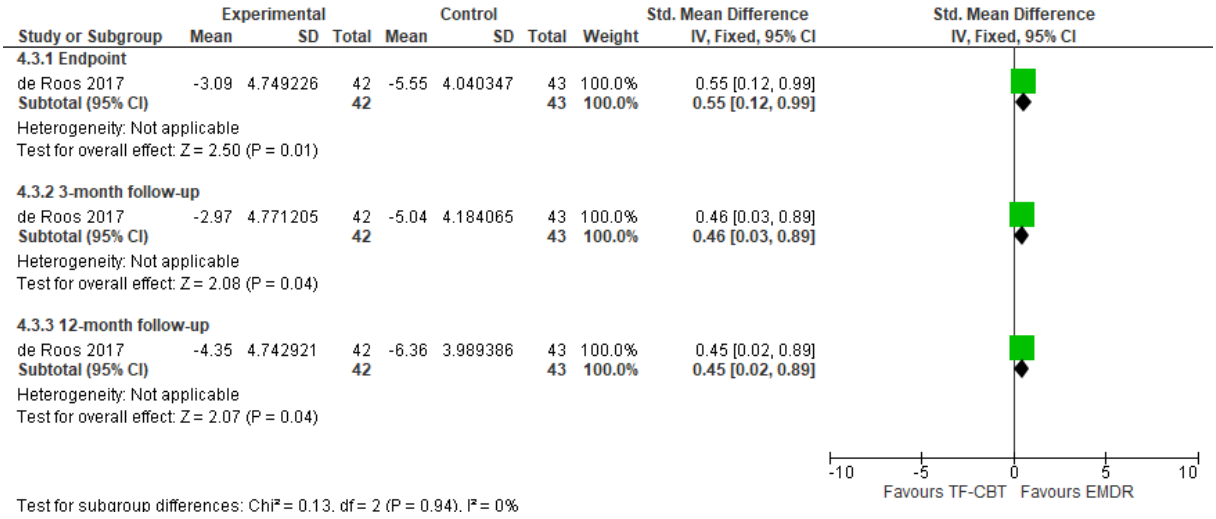


Figure 66: Trauma-focused CBT versus eye movement desensitisation and reprocessing (EMDR) for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Quality of life (KIDSCREEN-27: Global HRQoL T-scores; change score); Single incident index trauma

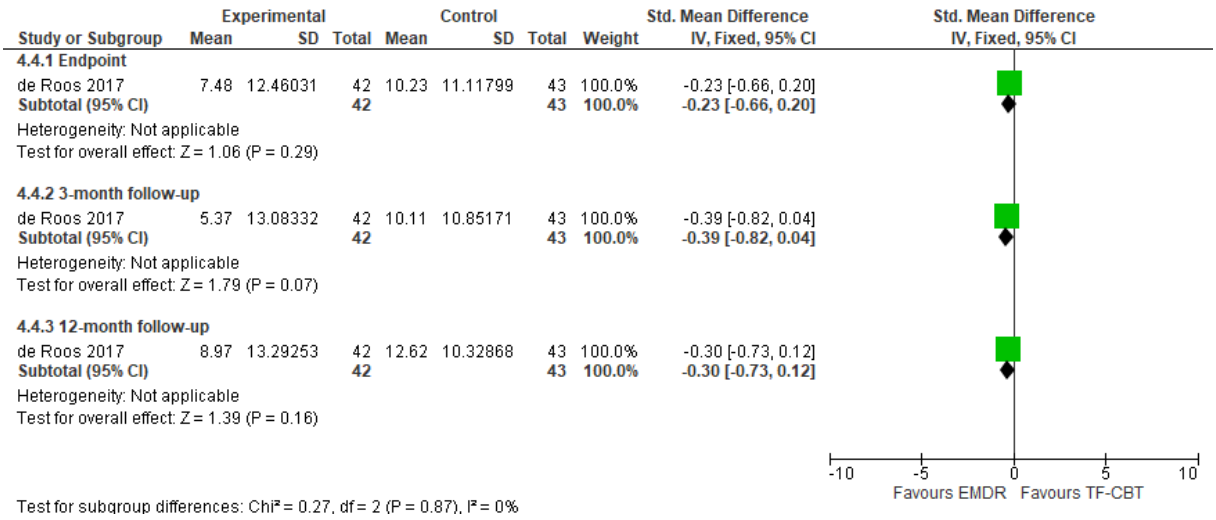
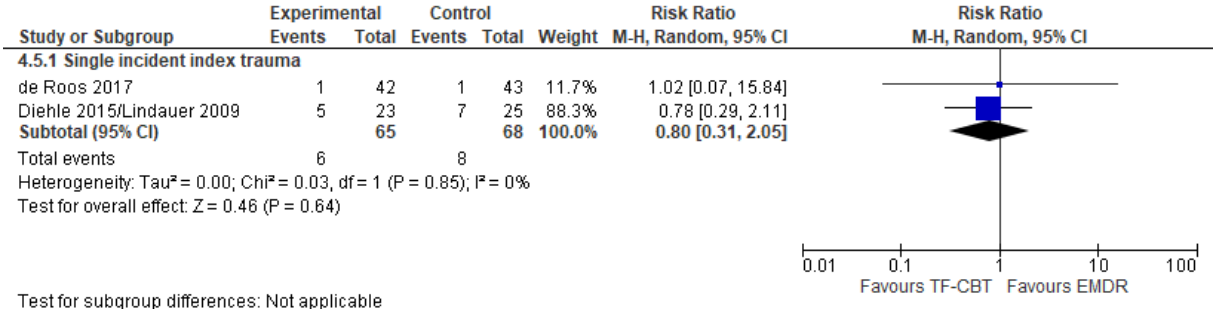


Figure 67: Trauma-focused CBT versus eye movement desensitisation and reprocessing (EMDR) for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Discontinuation (loss to follow-up)



Trauma-focused CBT versus combined somatic and cognitive therapies for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 68: Trauma-focused CBT versus combined somatic and cognitive therapies for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology self-rated (SPTSS change score); Unclear multiplicity of trauma

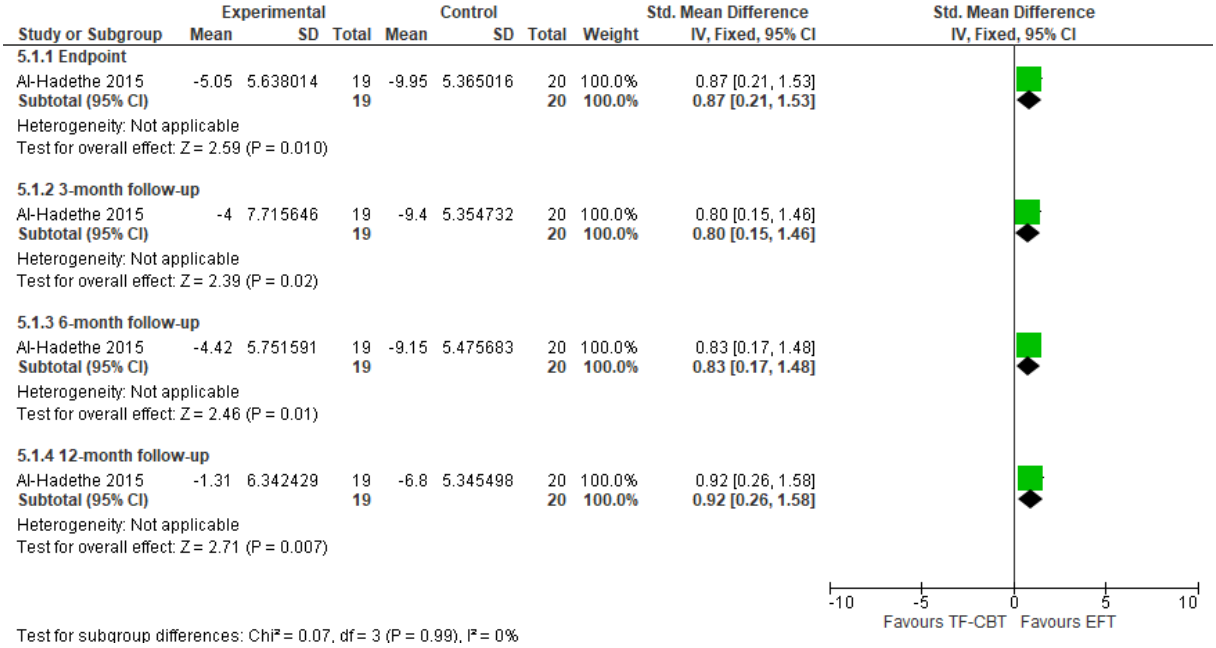


Figure 69: Trauma-focused CBT versus combined somatic and cognitive therapies for the delayed treatment (>3 months) of clinically important symptoms/PTSD:

Anxiety symptoms (HADS-A change score); Unclear multiplicity of index trauma

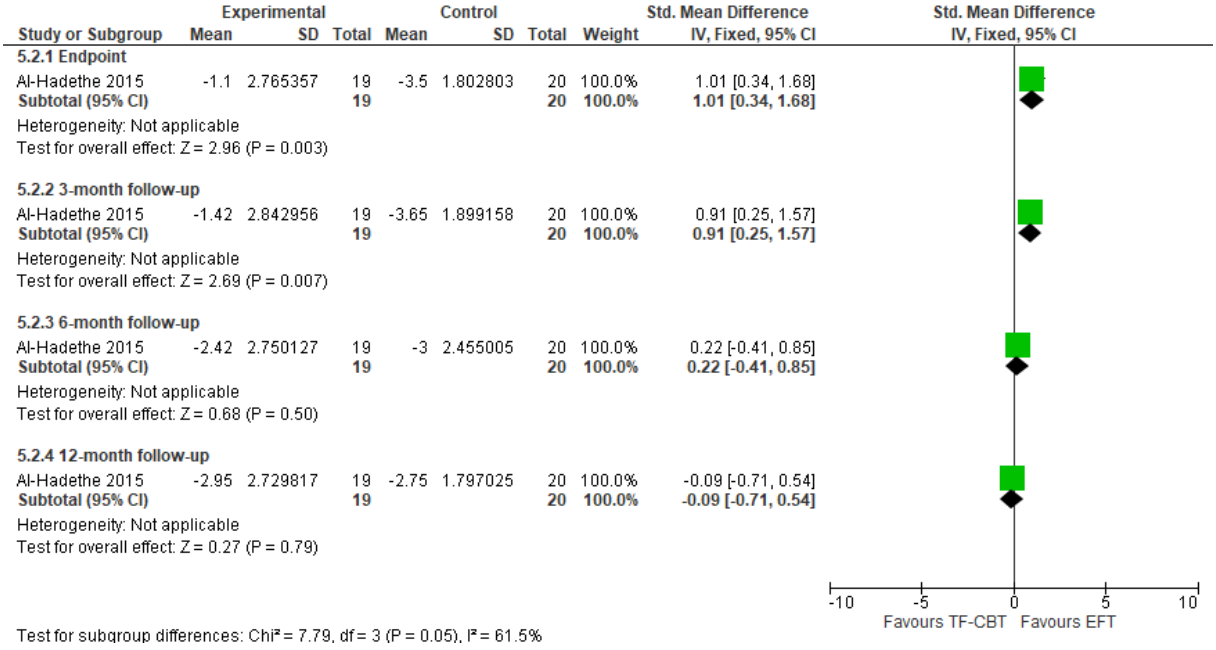


Figure 70: Trauma-focused CBT versus combined somatic and cognitive therapies for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Depression symptoms (HADS-D change score); Unclear multiplicity of index trauma

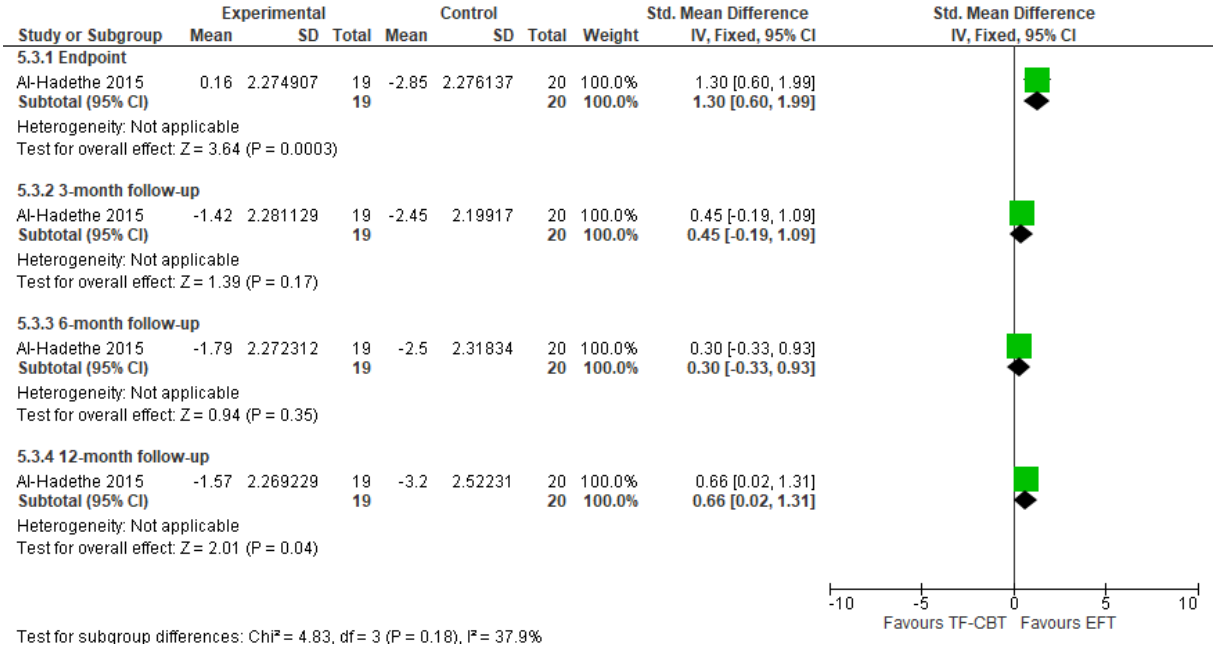
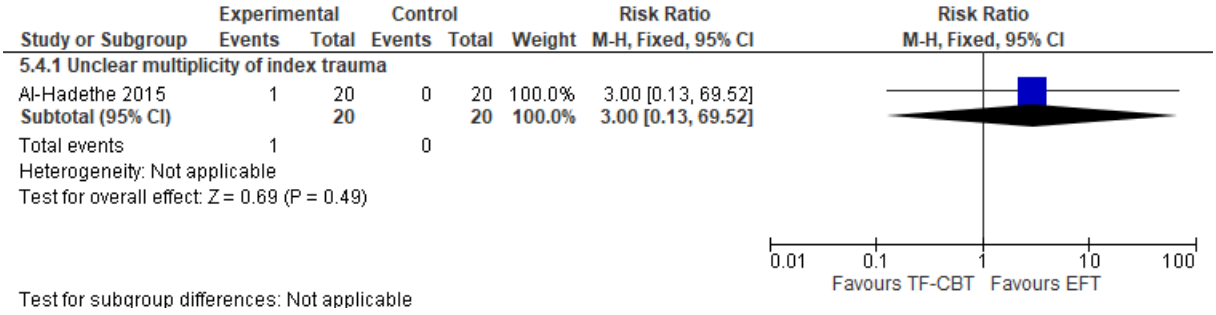


Figure 71: Trauma-focused CBT versus combined somatic and cognitive therapies for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Discontinuation (loss to follow-up)



Trauma-focused CBT + parent training versus waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 72: Trauma-focused CBT + parent training versus waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology clinician-rated (ADIS-C: PTSD; change score); Multiple incident index trauma

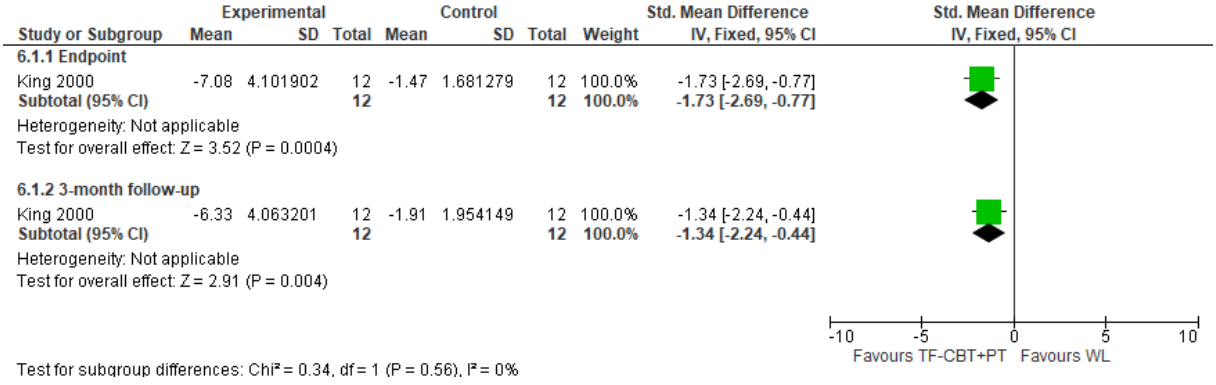


Figure 73: Trauma-focused CBT + parent training versus waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Anxiety symptoms (RCMAS; change score); Multiple incident index trauma

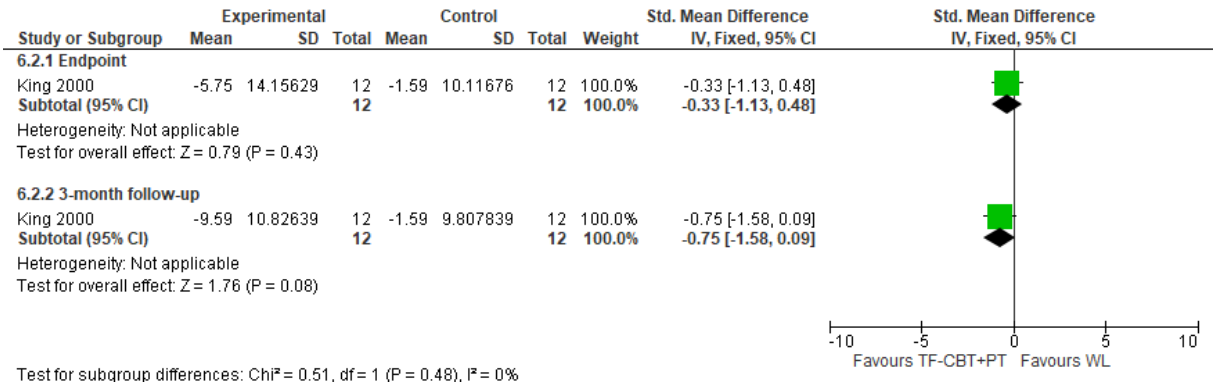


Figure 74: Trauma-focused CBT + parent training versus waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Depression symptoms (CDI; change score); Multiple incident index trauma

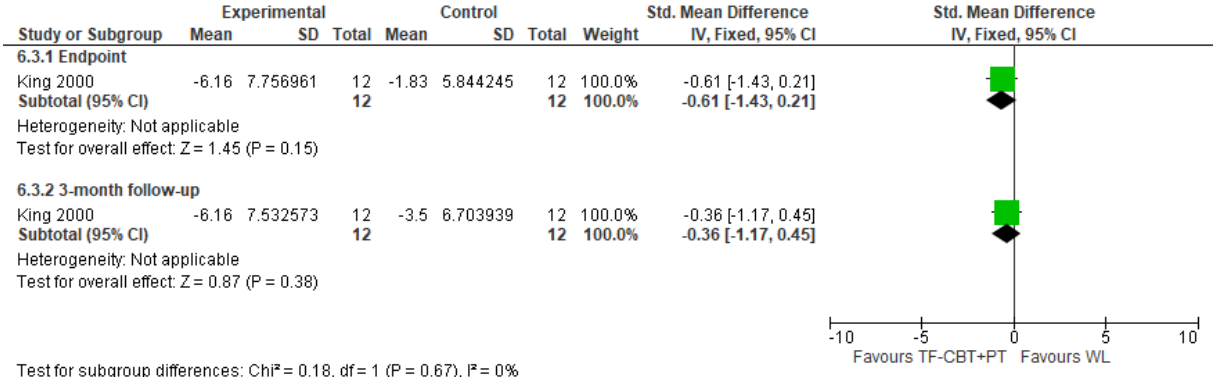


Figure 75: Trauma-focused CBT + parent training versus waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Emotional and behavioural problems-Internalizing (CBCL: Internalizing; change score); Multiple incident index trauma

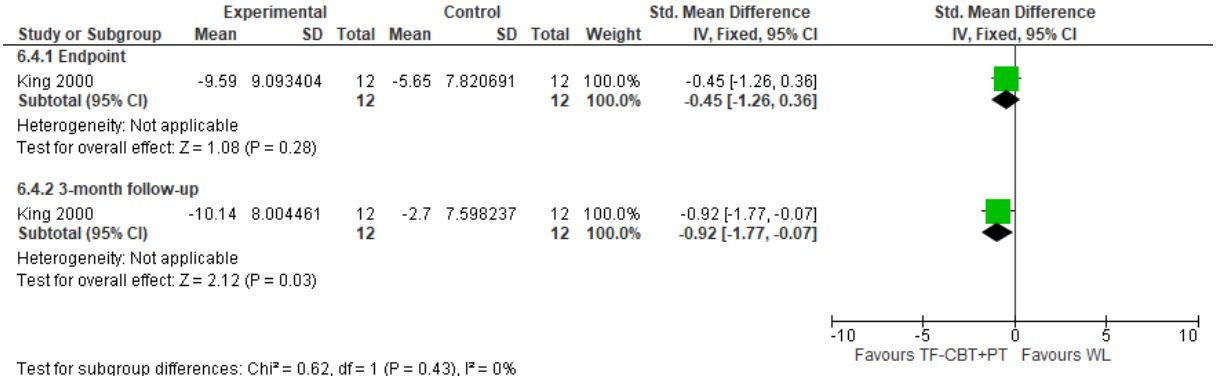


Figure 76: Trauma-focused CBT + parent training versus waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Emotional and behavioural problems-Externalizing (CBCL: Externalizing; change score); Multiple incident index trauma

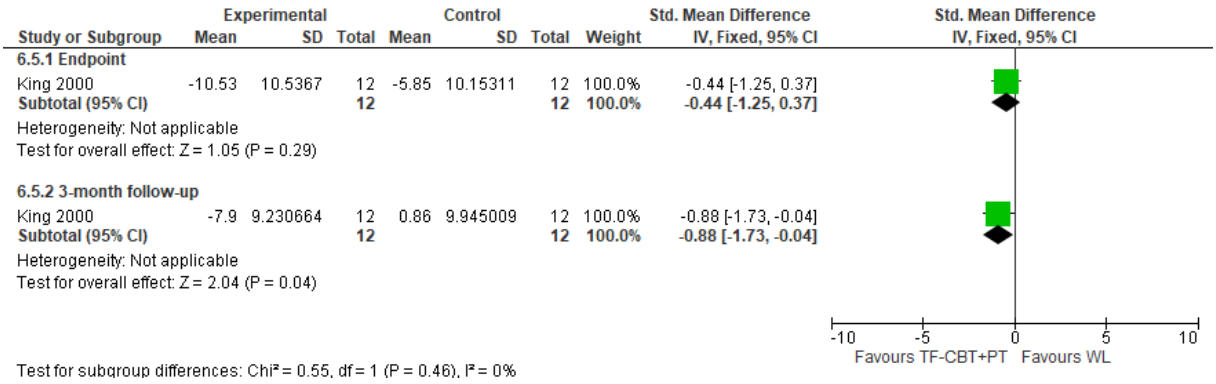


Figure 77: Trauma-focused CBT + parent training versus waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Global functioning (GAF; change score); Multiple incident index trauma

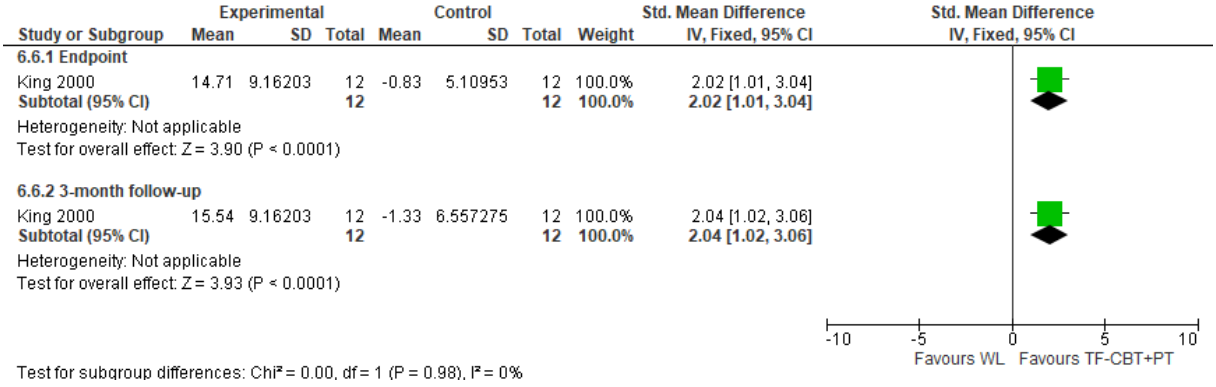
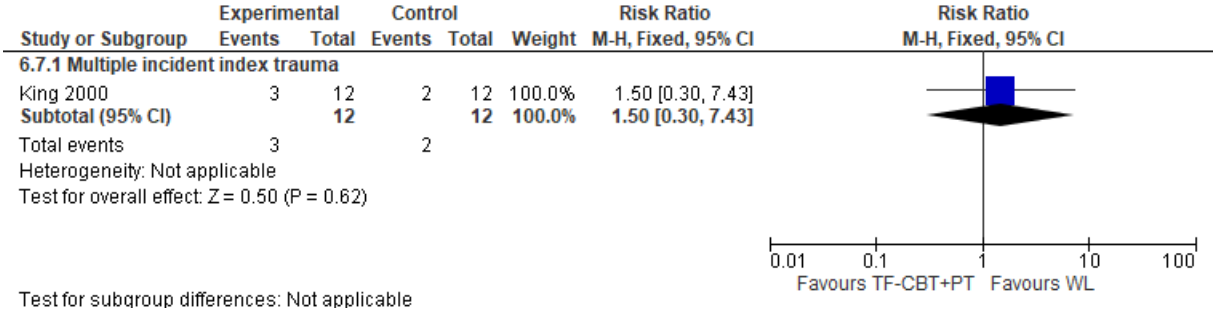


Figure 78: Trauma-focused CBT + parent training versus waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Discontinuation (loss to follow-up)



Trauma-focused CBT + parent training versus trauma-focused CBT (child only) for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 79: Trauma-focused CBT + parent training versus trauma-focused CBT (child only) for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology clinician-rated (ADIS-C: PTSD; change score); Multiple incident index trauma

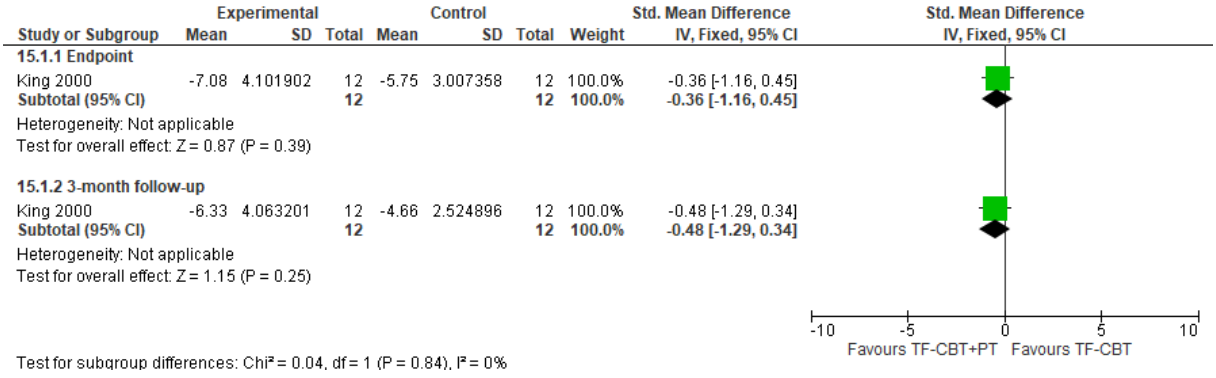


Figure 80: Trauma-focused CBT + parent training versus trauma-focused CBT (child only) for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Anxiety symptoms (RCMAS; change score); Multiple incident index trauma

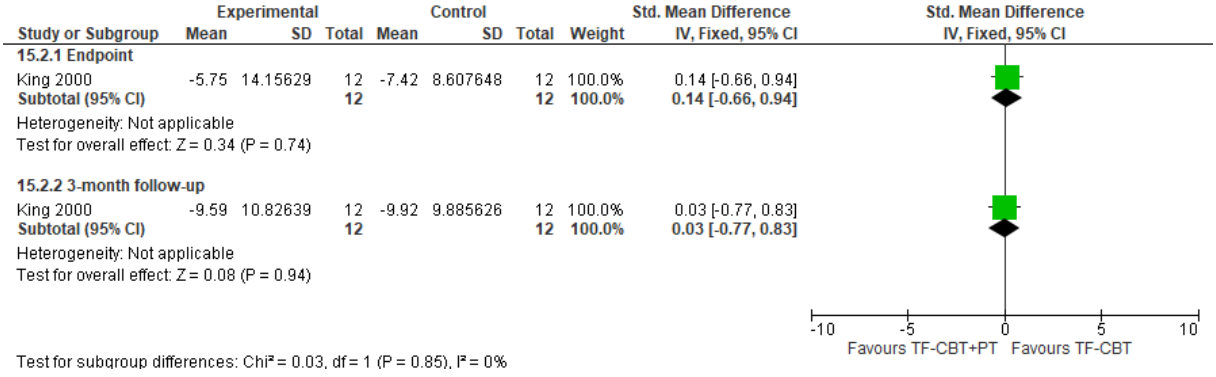


Figure 81: Trauma-focused CBT + parent training versus trauma-focused CBT (child only) for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Depression symptoms (CDI; change score); Multiple incident index trauma

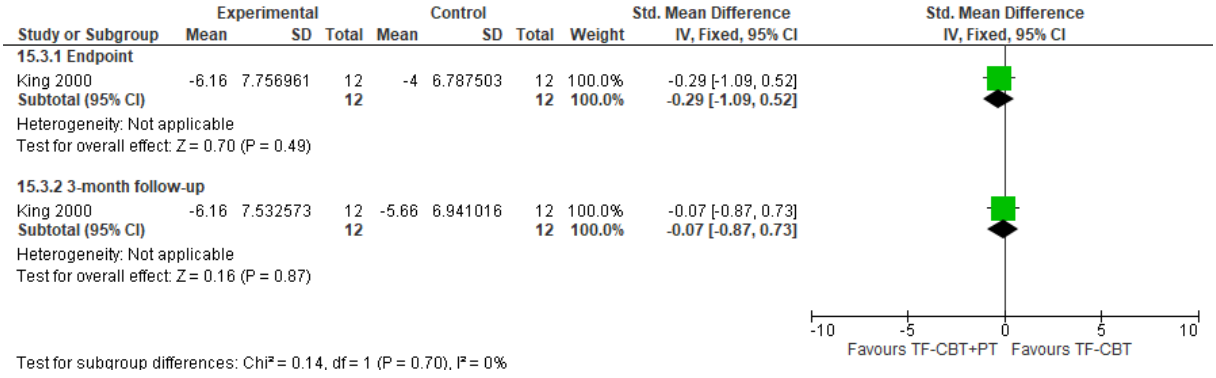


Figure 82: Trauma-focused CBT + parent training versus trauma-focused CBT (child only) for the delayed treatment (>3 months) of clinically important

symptoms/PTSD: Emotional and behavioural problems-Internalizing (CBCL: Internalizing; change score); Multiple incident index trauma

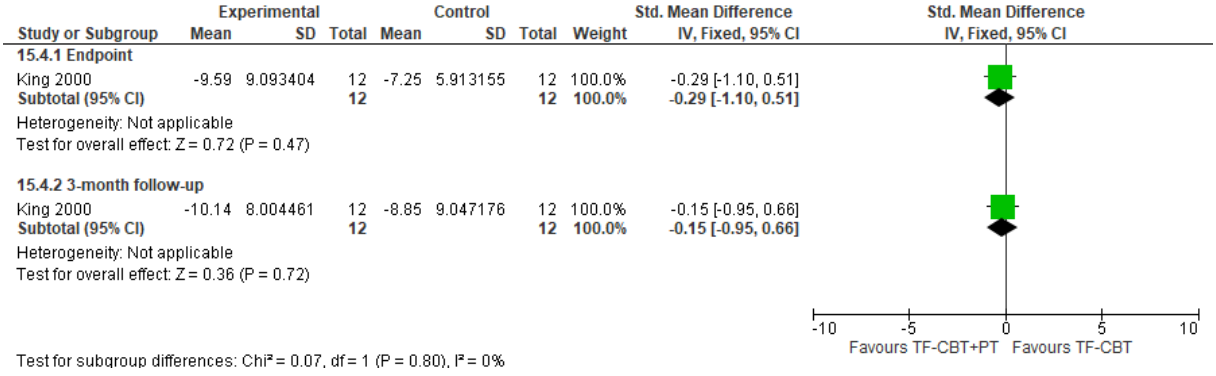


Figure 83: Trauma-focused CBT + parent training versus trauma-focused CBT (child only) for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Emotional and behavioural problems-Externalizing (CBCL: Externalizing; change score); Multiple incident index trauma

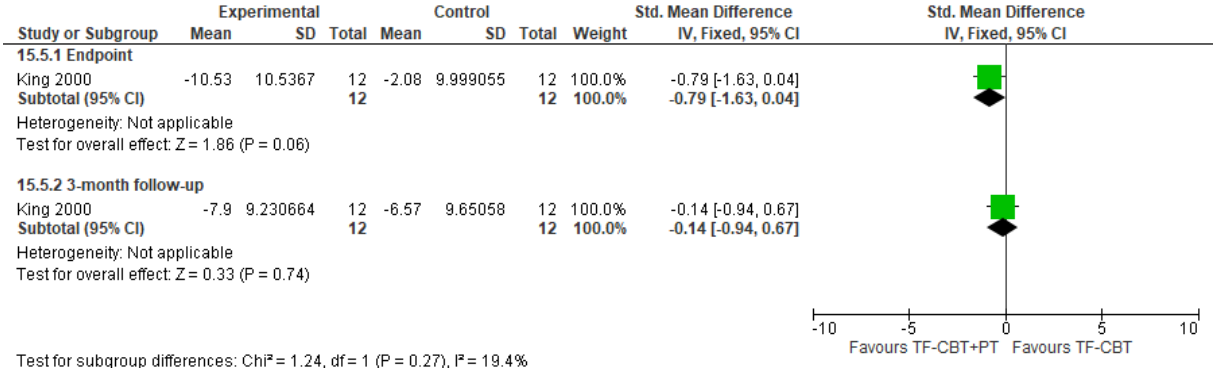


Figure 84: Trauma-focused CBT + parent training versus trauma-focused CBT (child only) for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Global functioning (GAF; change score); Multiple incident index trauma

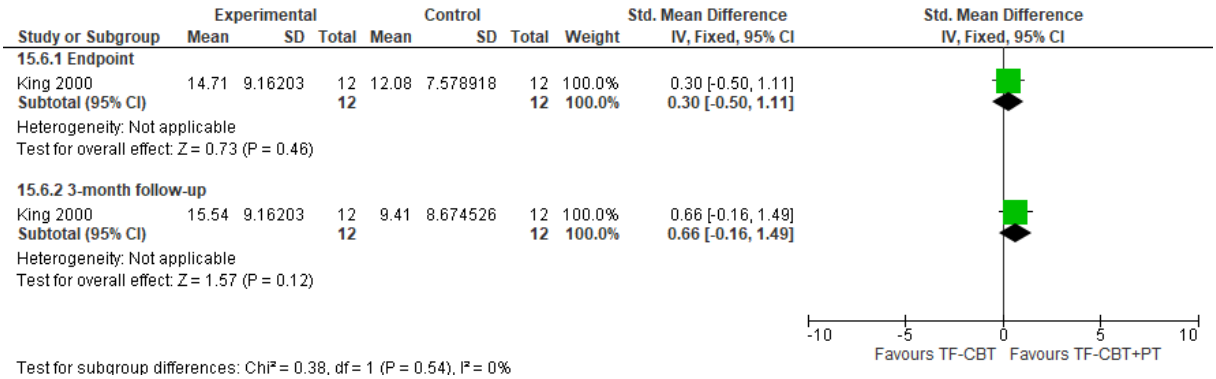
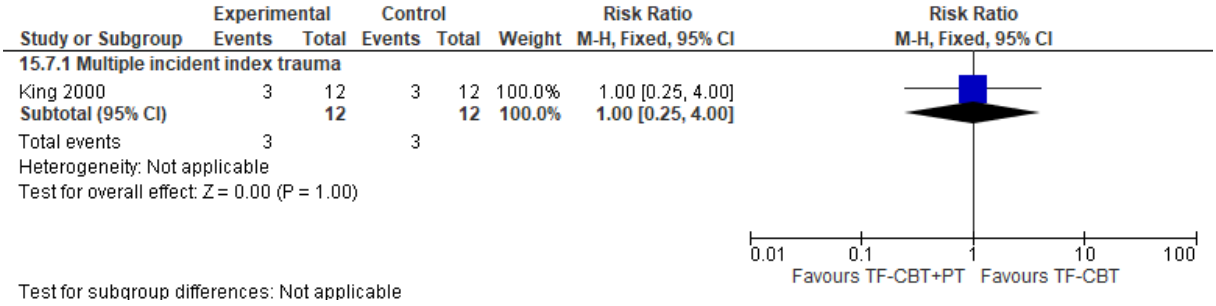


Figure 85: Trauma-focused CBT + parent training versus trauma-focused CBT (child only) for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Discontinuation (loss to follow-up)



Trauma-focused CBT versus parent training (CBT with parent-only) for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 86: Trauma-focused CBT versus parent training (CBT with parent-only) for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology clinician-rated (K-SADS-E: PTSD; change score); Multiple incident index trauma

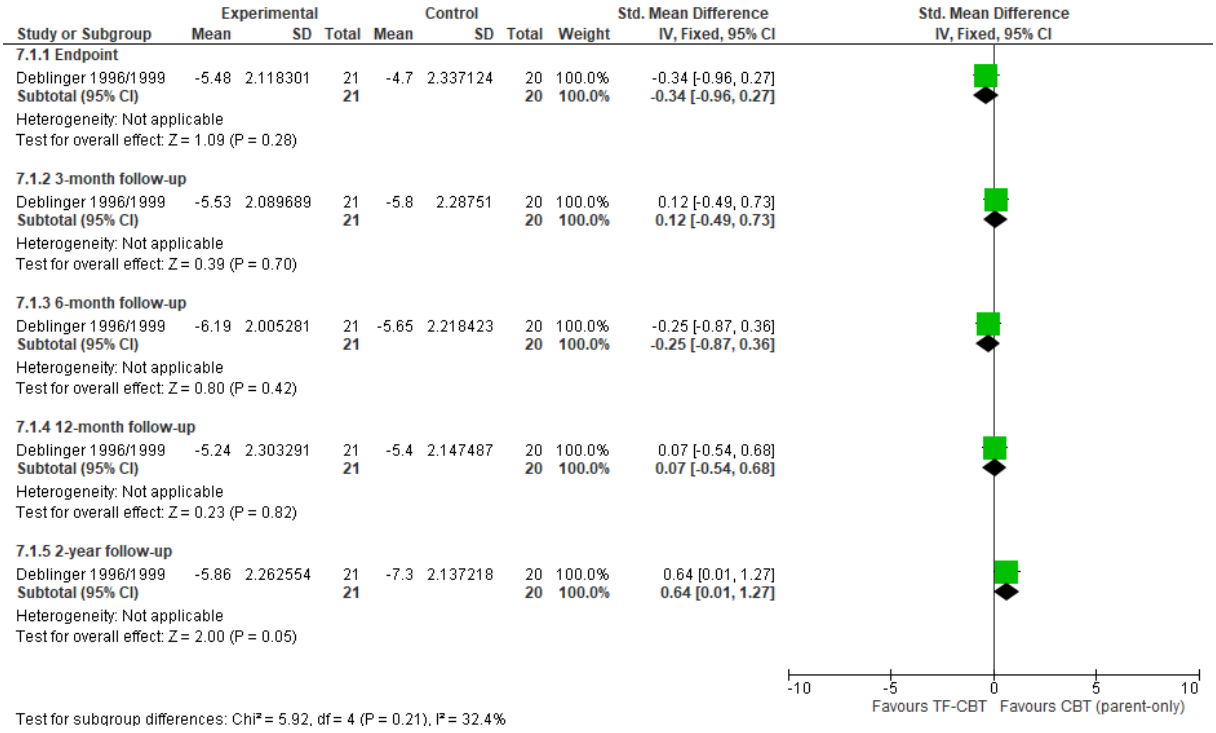


Figure 87: Trauma-focused CBT versus parent training (CBT with parent-only) for the delayed treatment (>3 months) of clinically important symptoms/PTSD:

Emotional and behavioural problems-Externalizing (CBCL Externalizing change score); Multiple incident index trauma

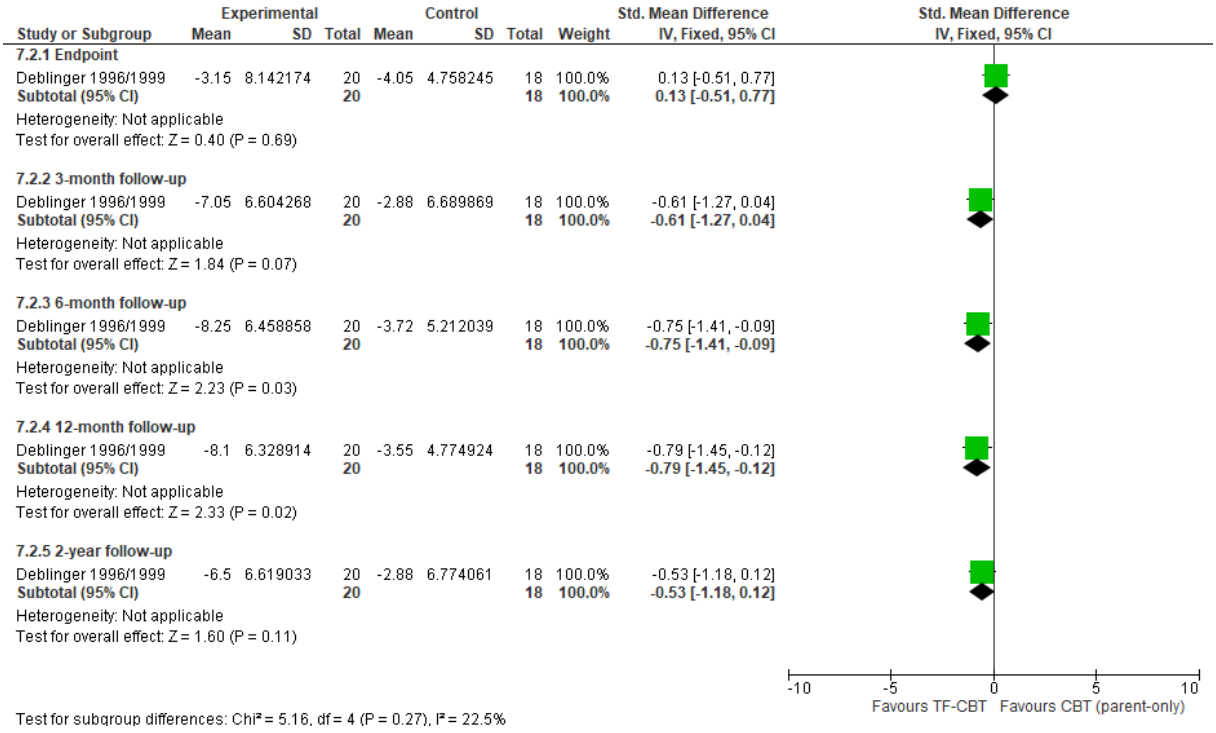
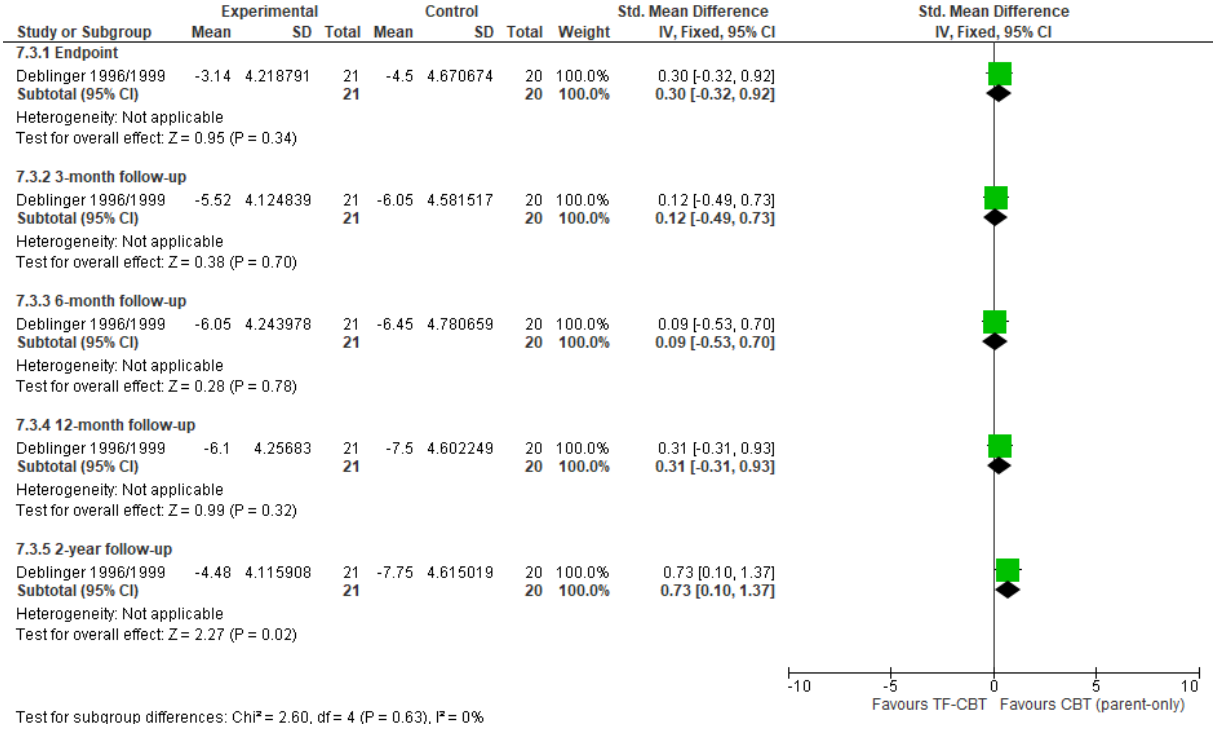


Figure 88: Trauma-focused CBT versus parent training (CBT with parent-only) for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Depression symptoms (CDI change score); Multiple incident index trauma



Trauma-focused CBT (+ psychoeducational group) versus psychoeducational group for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 89: Trauma-focused CBT (+ psychoeducational group) versus psychoeducational group for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology self-rated at endpoint (SPTSS/CPSS/CRIES/CRTI/UCLA PTSD-RI/CPTS–RI change score)

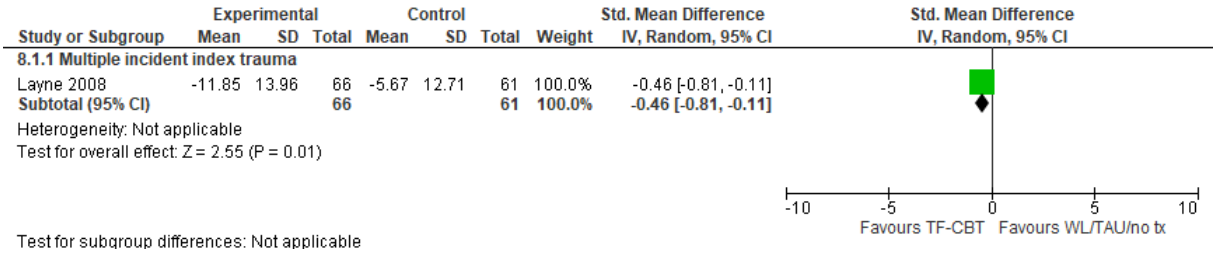


Figure 90: Trauma-focused CBT (+ psychoeducational group) versus psychoeducational group for the delayed treatment (>3 months) of clinically

important symptoms/PTSD: PTSD symptomatology self-rated at 4 month follow-up (IES/SPTSS/CRIES/UCLA PTSD-RI/CPTS-RI change score)

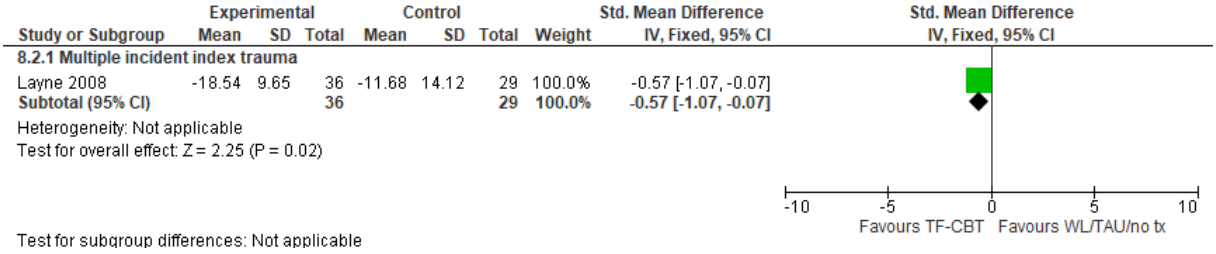


Figure 91: Trauma-focused CBT (+ psychoeducational group) versus psychoeducational group for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Response at endpoint (number of people showing clinically significant improvement, based on reliable change indices [RCI]/rated as 'much/very much improved' on CGI)

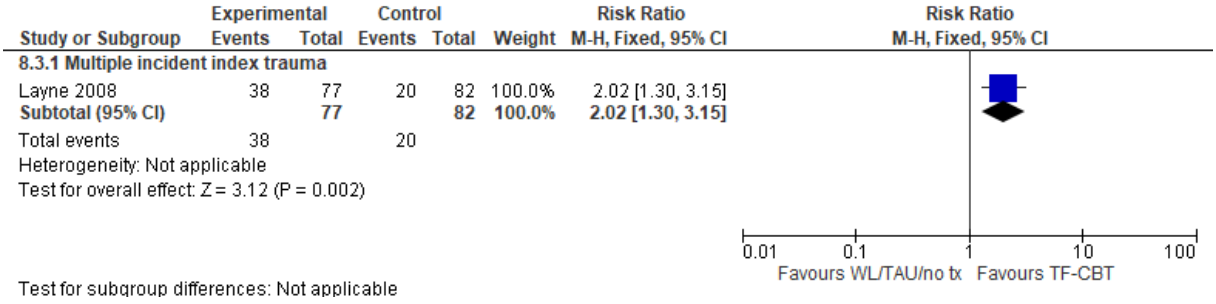


Figure 92: Trauma-focused CBT (+ psychoeducational group) versus psychoeducational group for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Response at 4-month follow-up (number of people showing clinically significant improvement, based on reliable change indices [RCI])

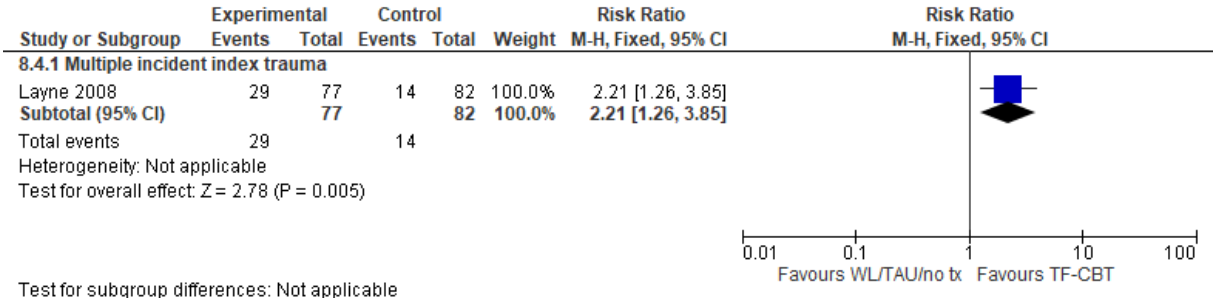


Figure 93: Trauma-focused CBT (+ psychoeducational group) versus psychoeducational group for the delayed treatment (>3 months) of clinically

important symptoms/PTSD: Depression symptoms at endpoint (HADS-D/CES-D/CDI/MFQ/DSRS/BDI change score)

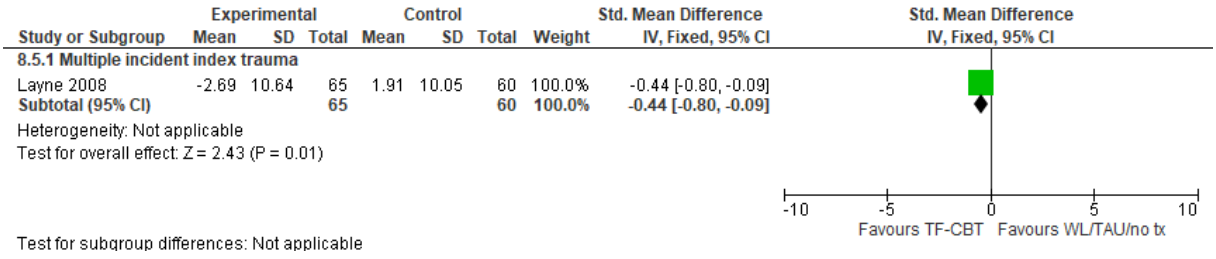


Figure 94: Trauma-focused CBT (+ psychoeducational group) versus psychoeducational group for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Depression symptoms at 4 month follow-up (BDI/HADS-D/CES-D/CDI/MINI:Depression /DSRS change score)

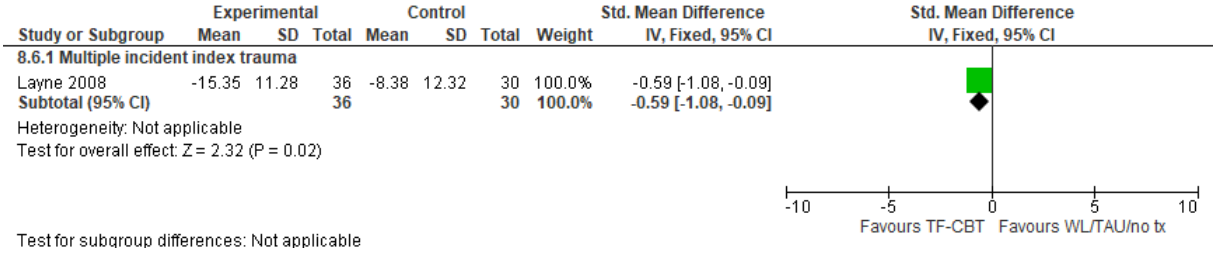
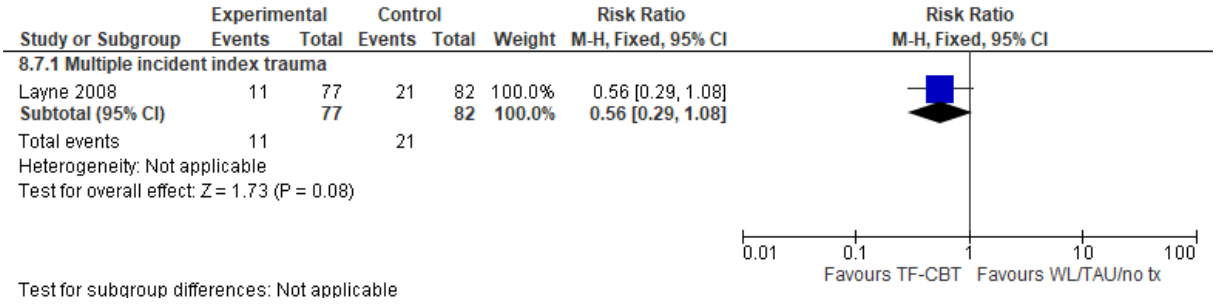


Figure 95: Trauma-focused CBT (+ psychoeducational group) versus psychoeducational group for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Discontinuation (loss to follow-up)



Sub-analysis by specific intervention: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 96: Sub-analysis by specific intervention: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically

important symptoms/PTSD: PTSD symptomatology self-rated at endpoint (SPTSS/CPSS/CRIES/CRTI/UCLA PTSD-RI/CPTS–RI change score)

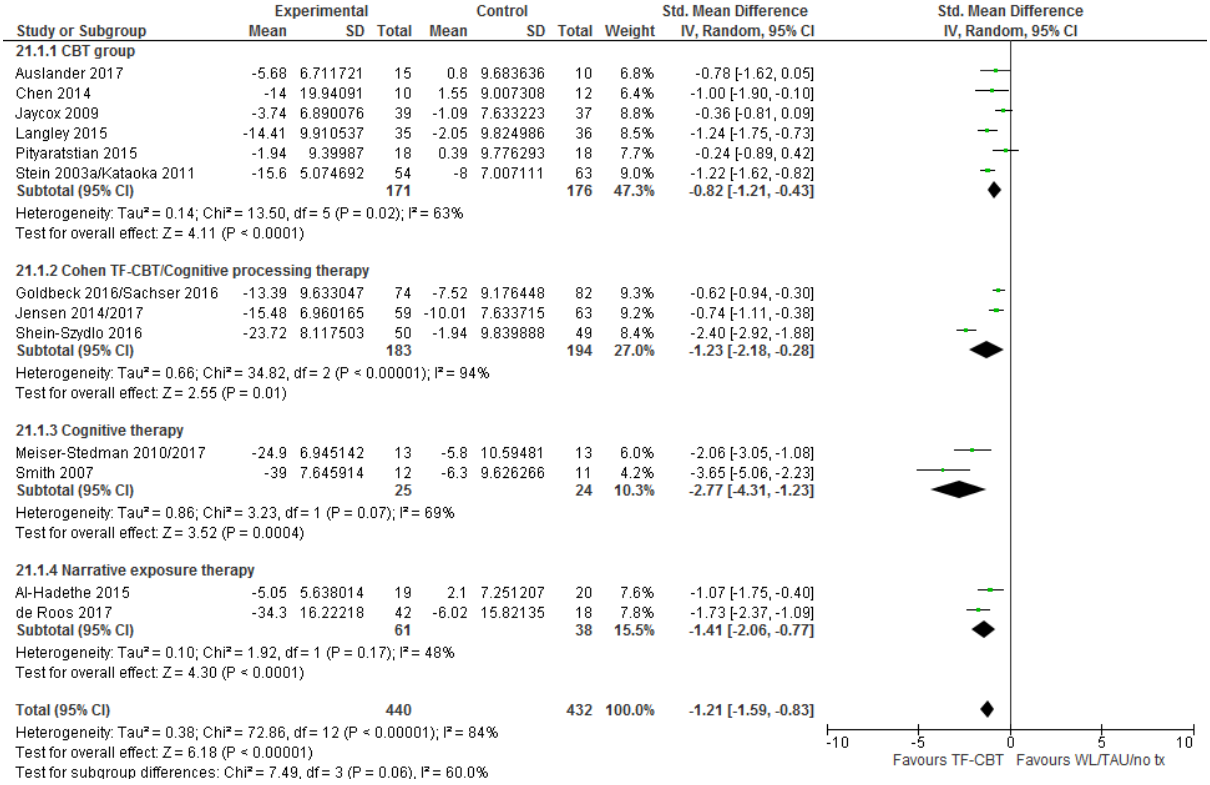


Figure 97: Sub-analysis by specific intervention: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically

important symptoms/PTSD: PTSD symptomatology clinician-rated at endpoint (CAPS/K-SADS-E: PTSD/ADIS-C:PTSD/CPTSDI; change score)

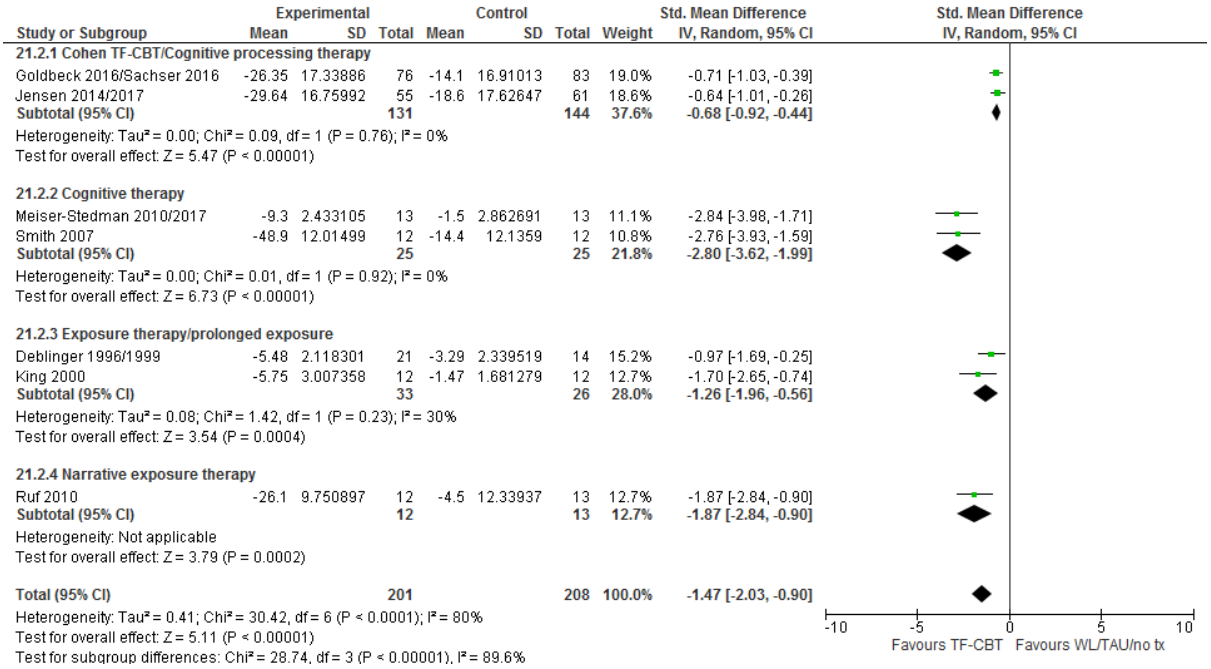
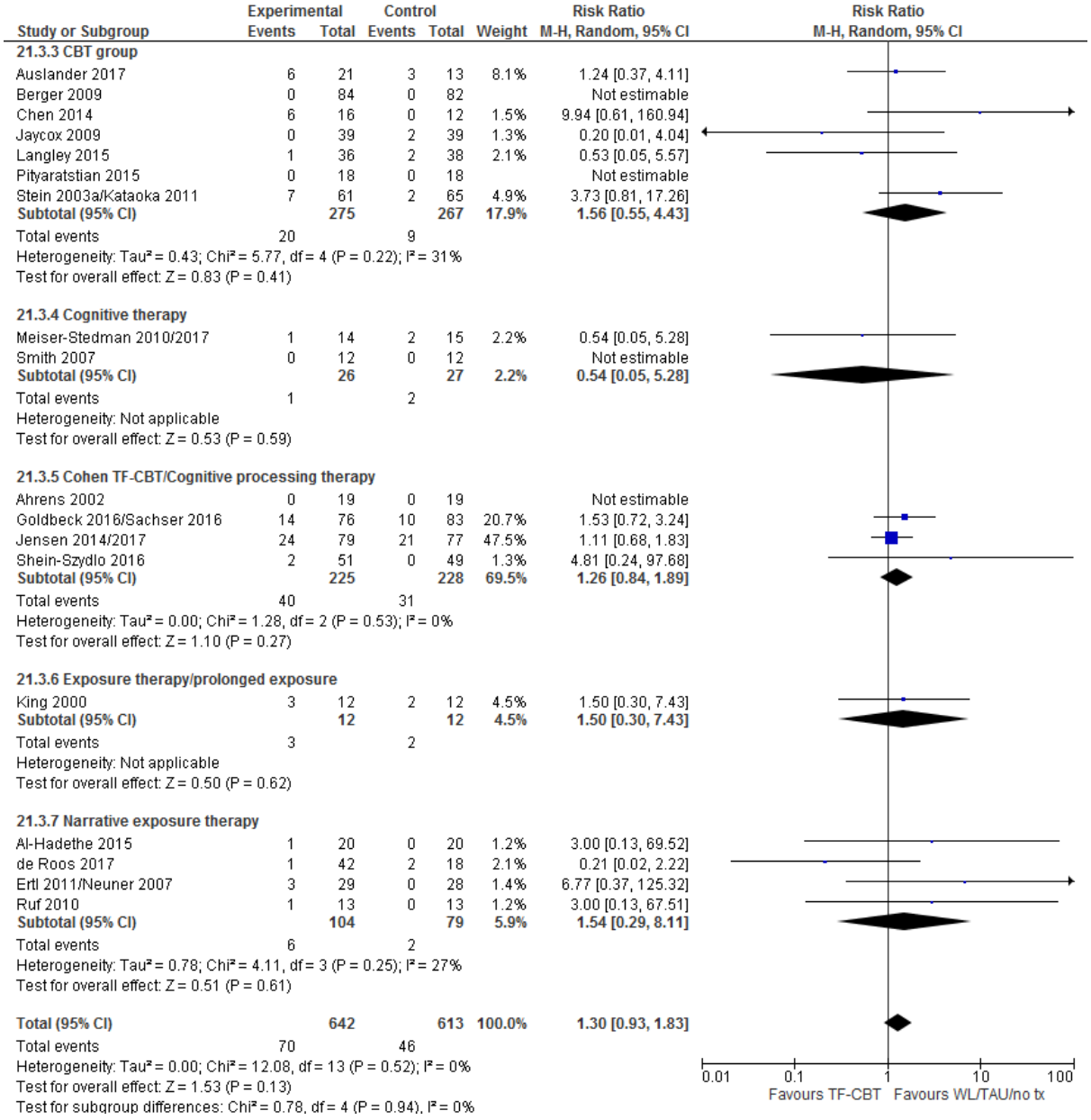


Figure 98: Sub-analysis by specific intervention: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Discontinuation (loss to follow-up)



Sub-analysis by format: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 99: Sub-analysis by format: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important

symptoms/PTSD: PTSD symptomatology self-rated at endpoint (SPTSS/CPSS/CRIES/CRTI/UCLA PTSD-RI/CPTS–RI change

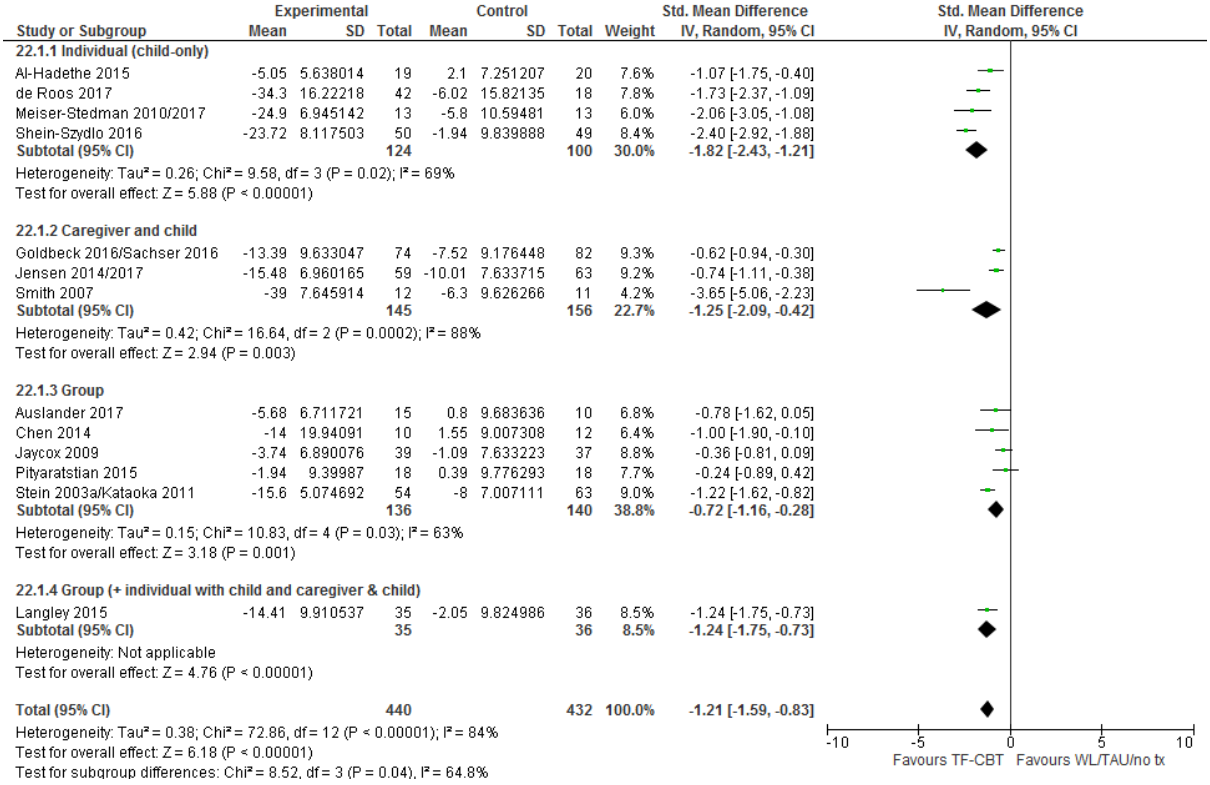


Figure 100: Sub-analysis by format: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology clinician-rated at endpoint (CAPS/K-SADS-E: PTSD/ADIS-C: PTSD/CPTSDI; change score)

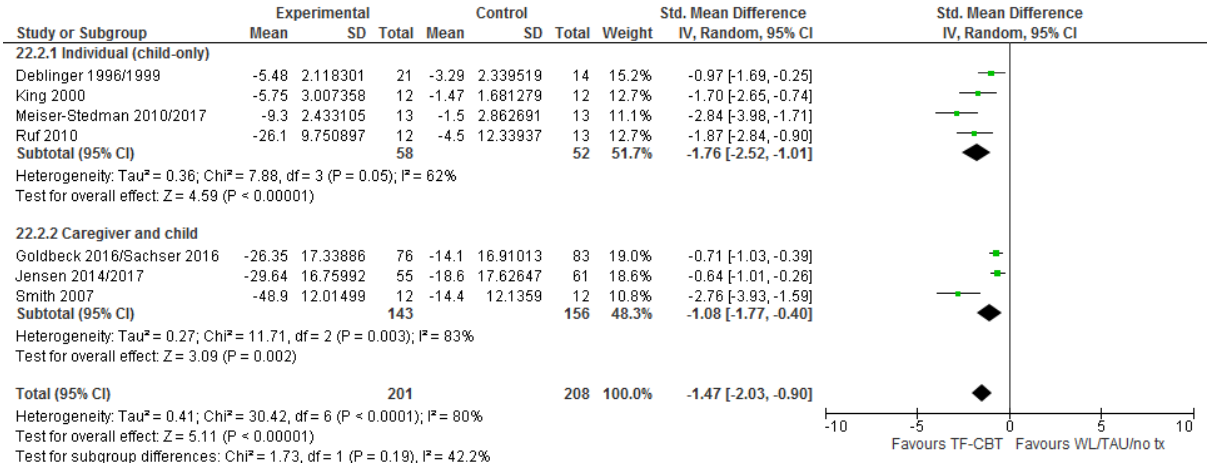
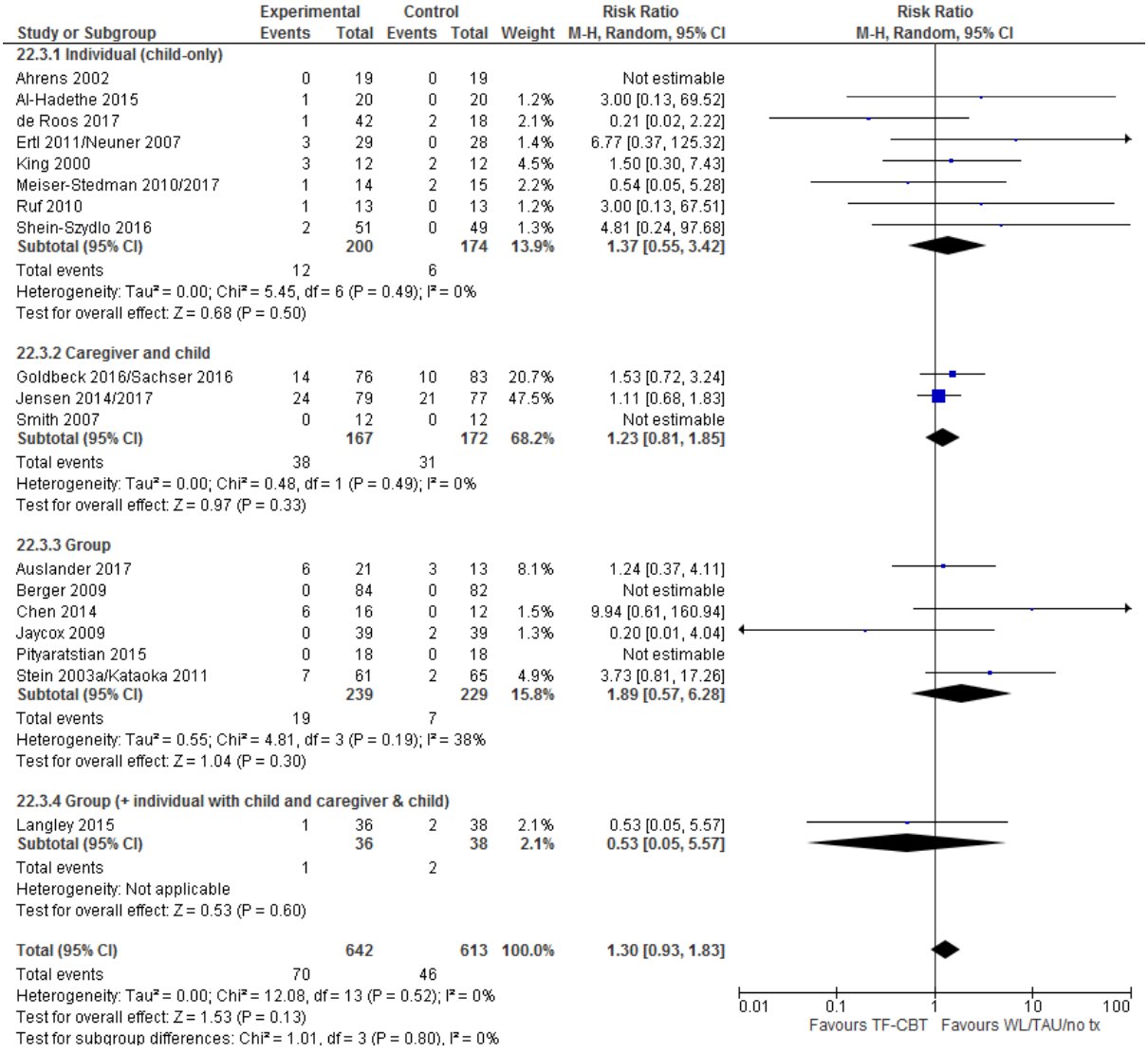


Figure 101: Sub-analysis by format: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Discontinuation (loss to follow-up)



Sub-analysis by age range: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 102: Sub-analysis by age range: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important

symptoms/PTSD: PTSD symptomatology self-rated at endpoint (SPTSS/CPSS/CRIES/CRTI/UCLA PTSD-RI/CPTS–RI change score)

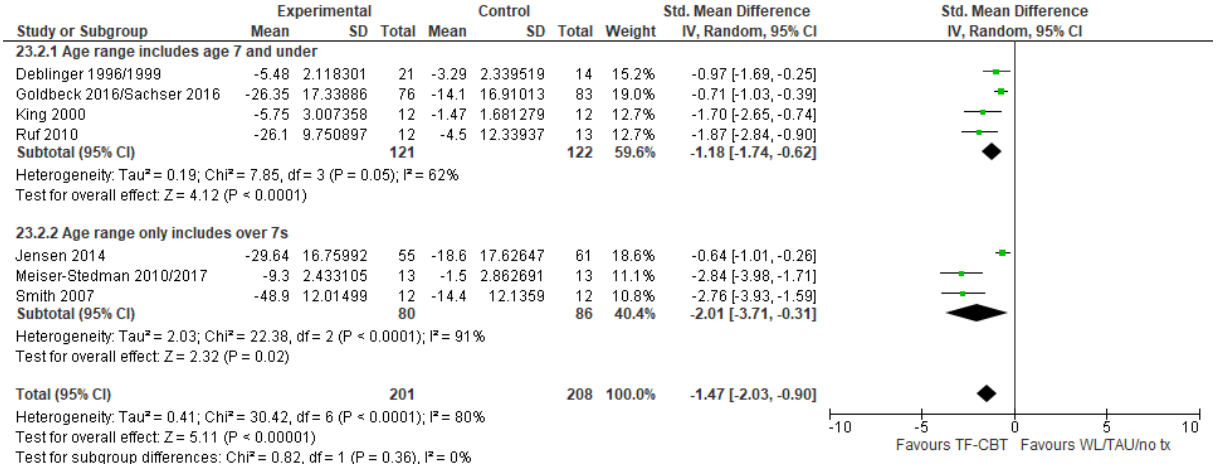


Figure 103: Sub-analysis by age range: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology clinician-rated at endpoint (CAPS/K-SADS-E: PTSD/ADIS-C:PTSD/CPTSDI; change score)

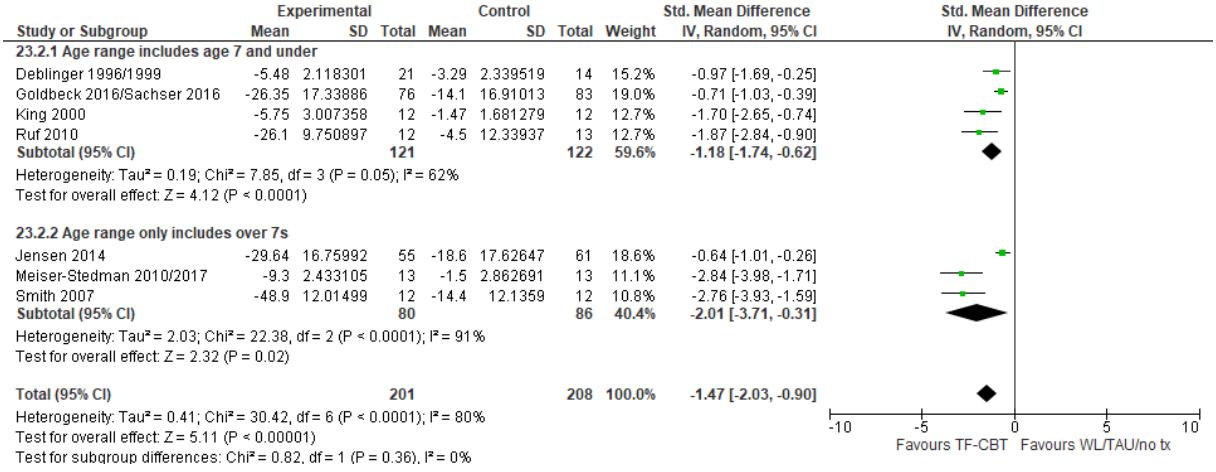
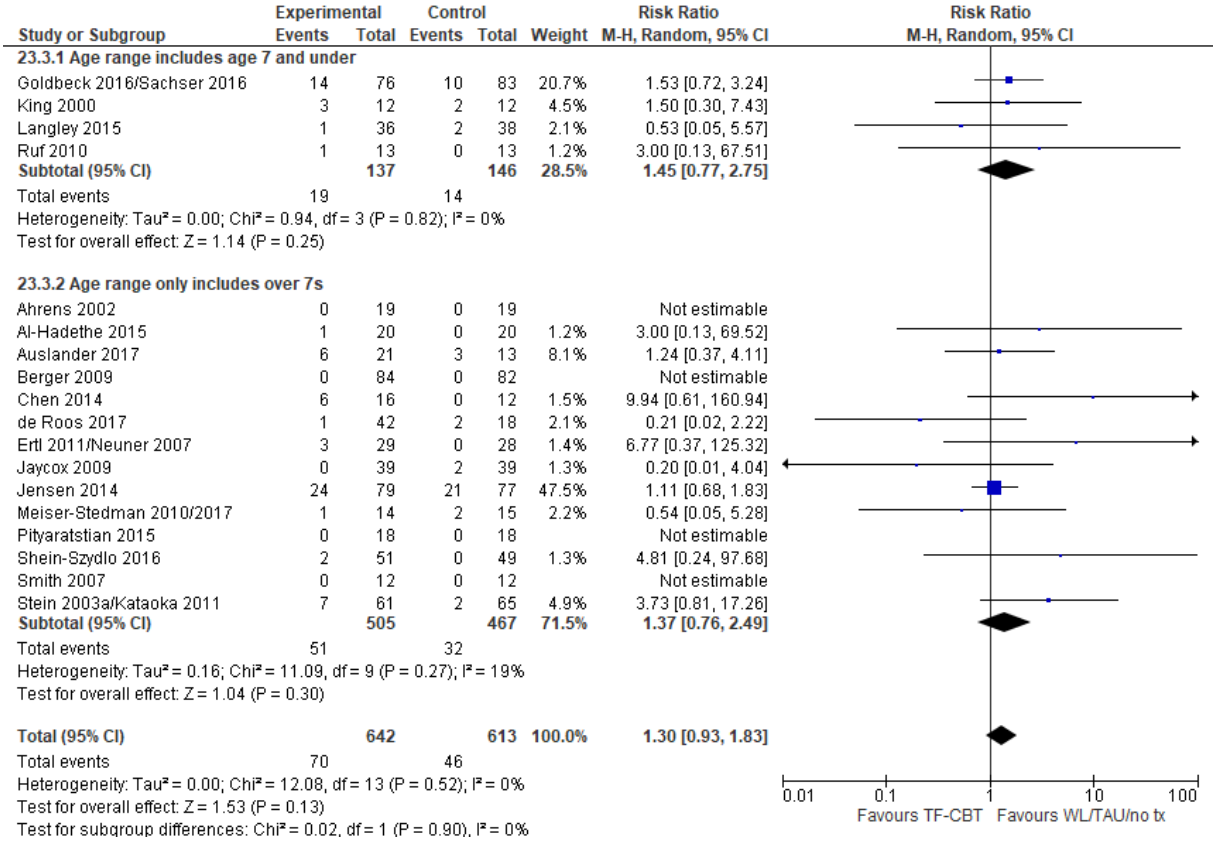


Figure 104: Sub-analysis by age range: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Discontinuation (loss to follow-up)



Sub-analysis by diagnostic status at baseline: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 105: Sub-analysis by diagnostic status at baseline: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months)

of clinically important symptoms/PTSD: PTSD symptomatology self-rated at endpoint (SPTSS/CPSS/CRIES/CRTI/UCLA PTSD-RI/CPTS–RI change score)

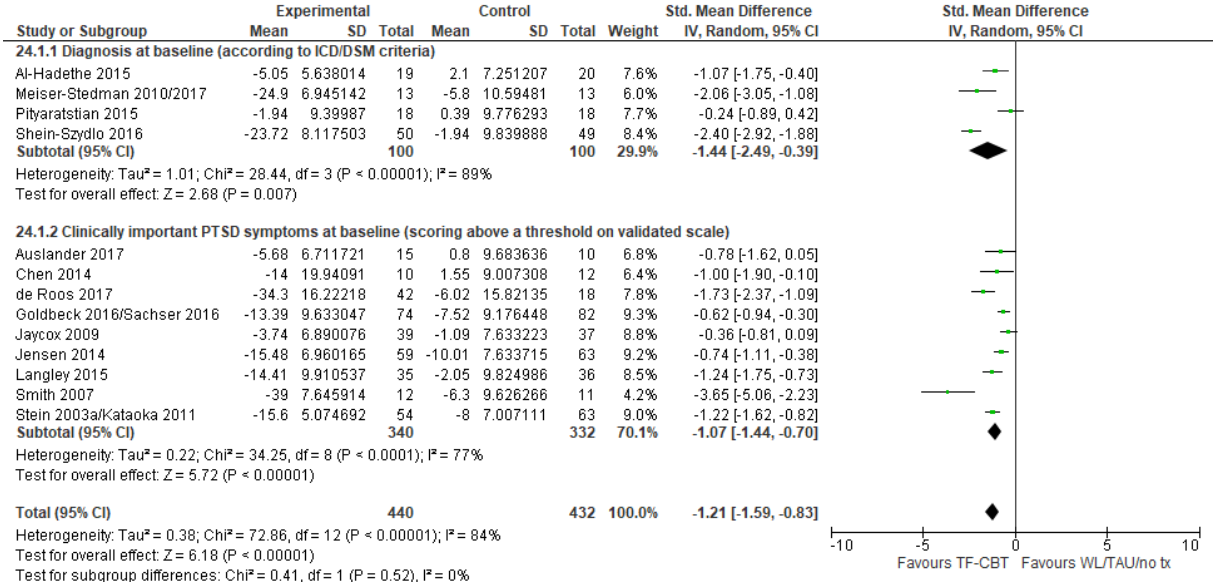


Figure 106: Sub-analysis by diagnostic status at baseline: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology clinician-rated at endpoint (CAPS/K-SADS-E: PTSD/ADIS-C: PTSD/CPTSDI; change score)

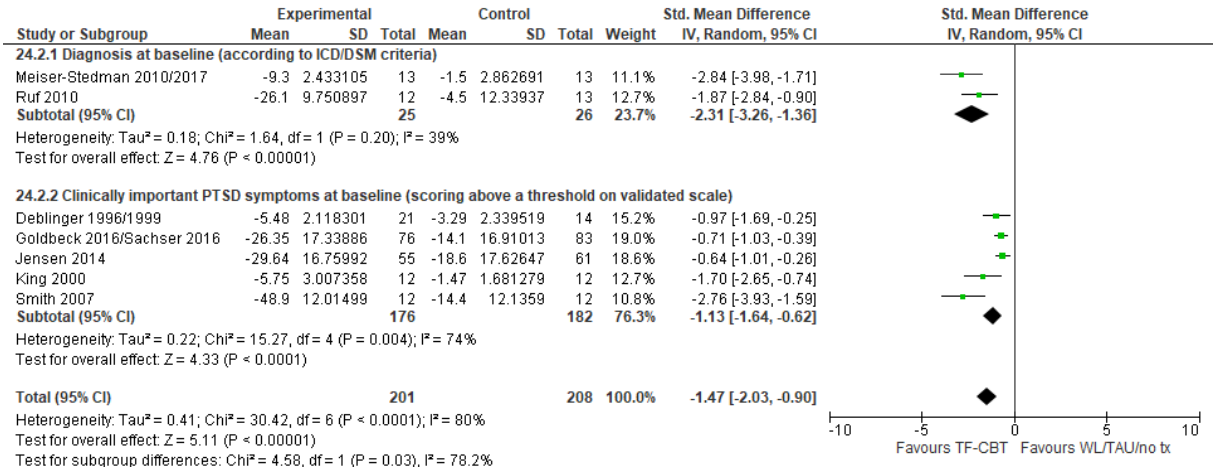
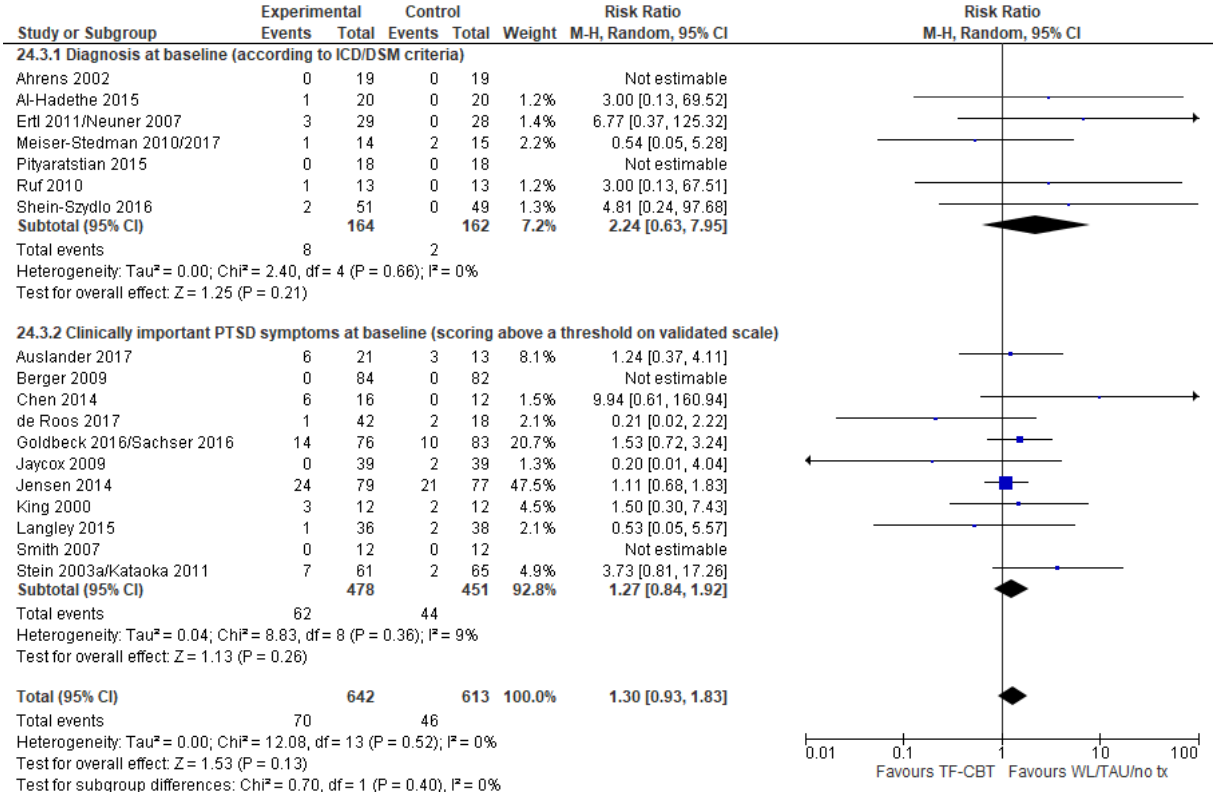


Figure 107: Sub-analysis by diagnostic status at baseline: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Discontinuation (loss to follow-up)



Sub-analysis by trauma type: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 108: Sub-analysis by trauma type: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important

symptoms/PTSD: PTSD symptomatology self-rated at endpoint (SPTSS/CPSS/CRIES/CRTI/UCLA PTSD-RI/CPTS–RI change score)

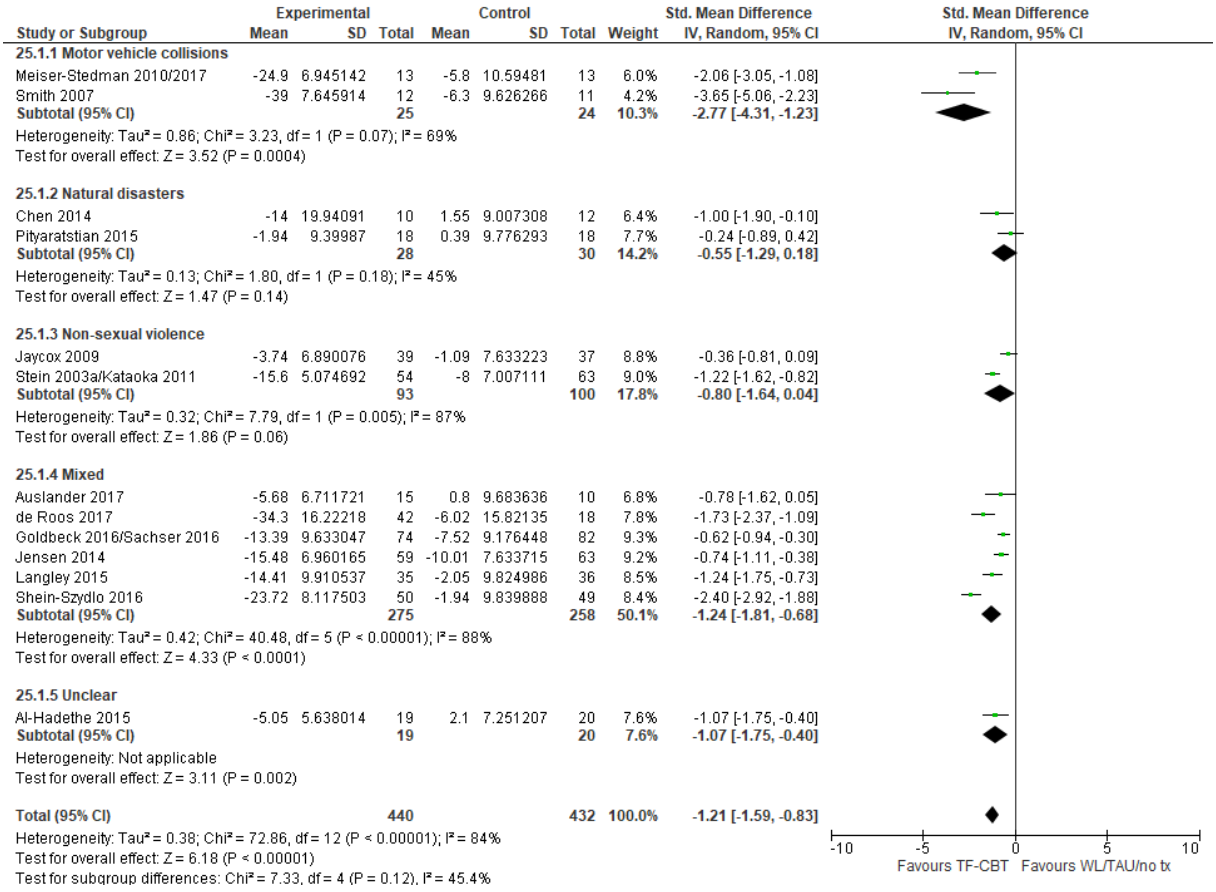


Figure 109: Sub-analysis by trauma type: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology clinician-rated at endpoint (CAPS/K-SADS-E: PTSD/ADIS-C:PTSD/CPTSDI; change score)

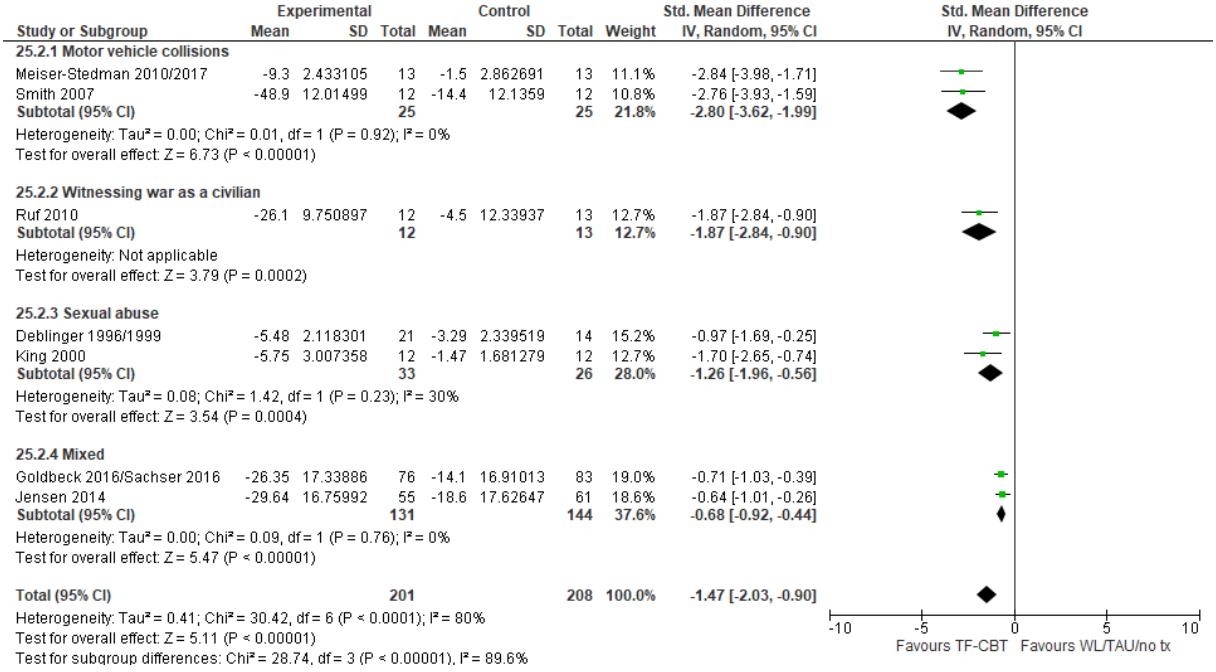
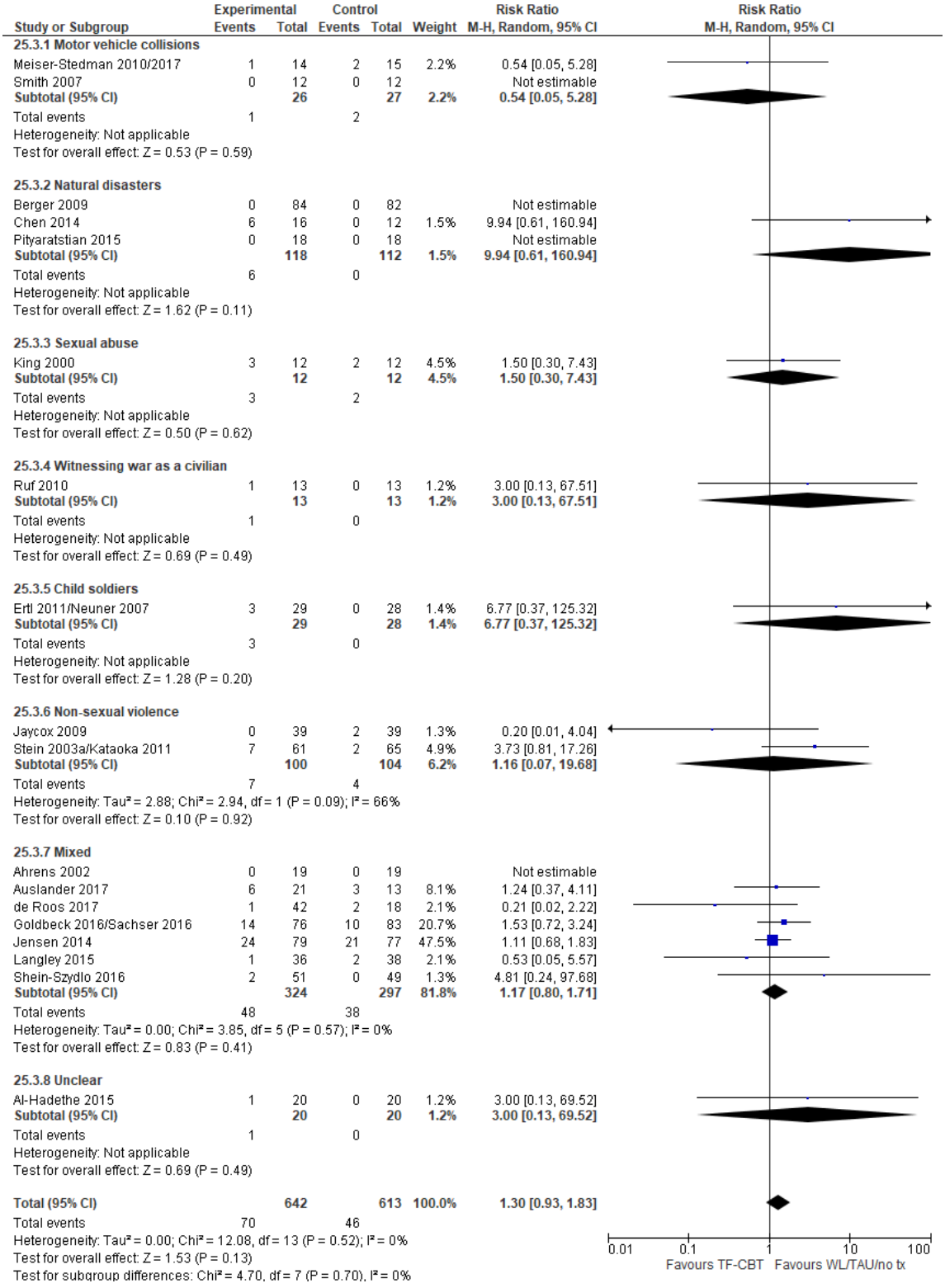


Figure 110: Sub-analysis by trauma type: Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Non-sexual violence



Sub-analysis by specific intervention: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 111: Sub-analysis by specific intervention: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology self-rated at endpoint (CRIES/TSCC-PTSD/UCLA PTSD-RI/CPSS change score)

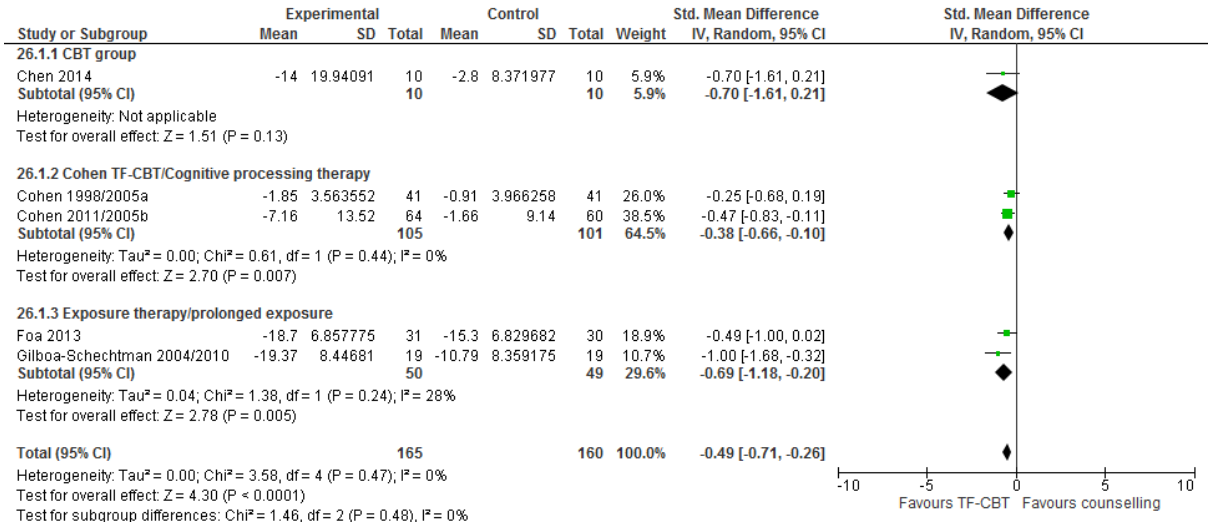


Figure 112: Sub-analysis by specific intervention: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology clinician-rated at endpoint (K-SADS-PL: PTSD/CPSS-I/CAPS; change score)

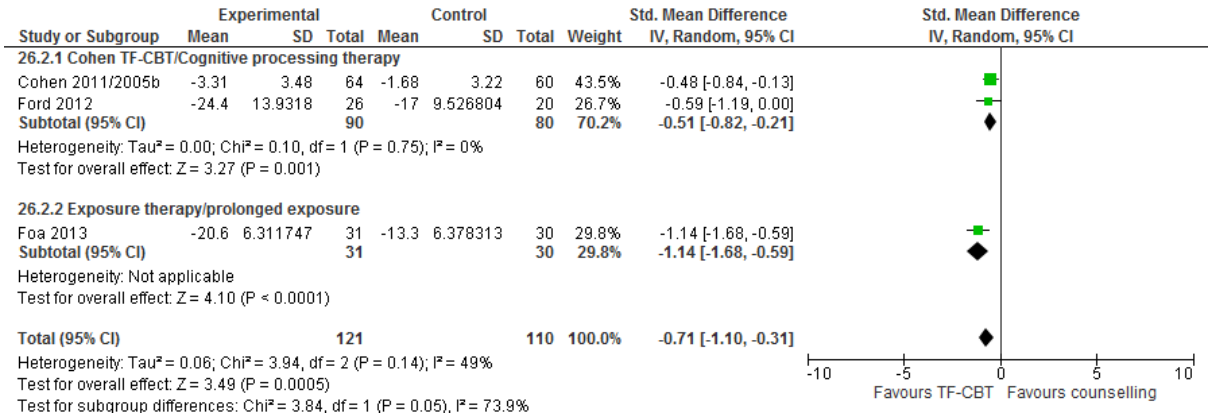
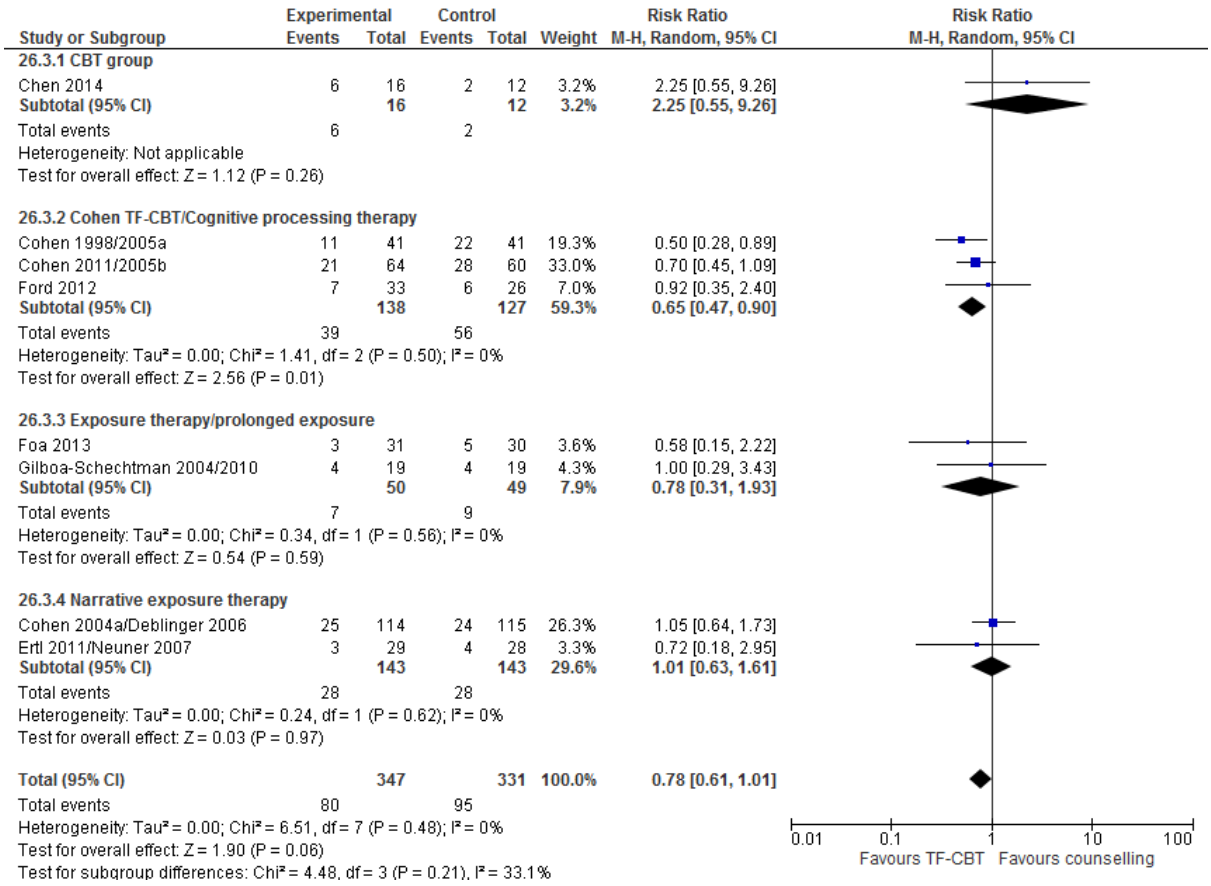


Figure 113: Sub-analysis by specific intervention: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Discontinuation (loss to follow-up)



Sub-analysis by format: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 114: Sub-analysis by format: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important

symptoms/PTSD: PTSD symptomatology self-rated at endpoint (CRIES/TSCC-PTSD/UCLA PTSD-RI/CPSS change score)

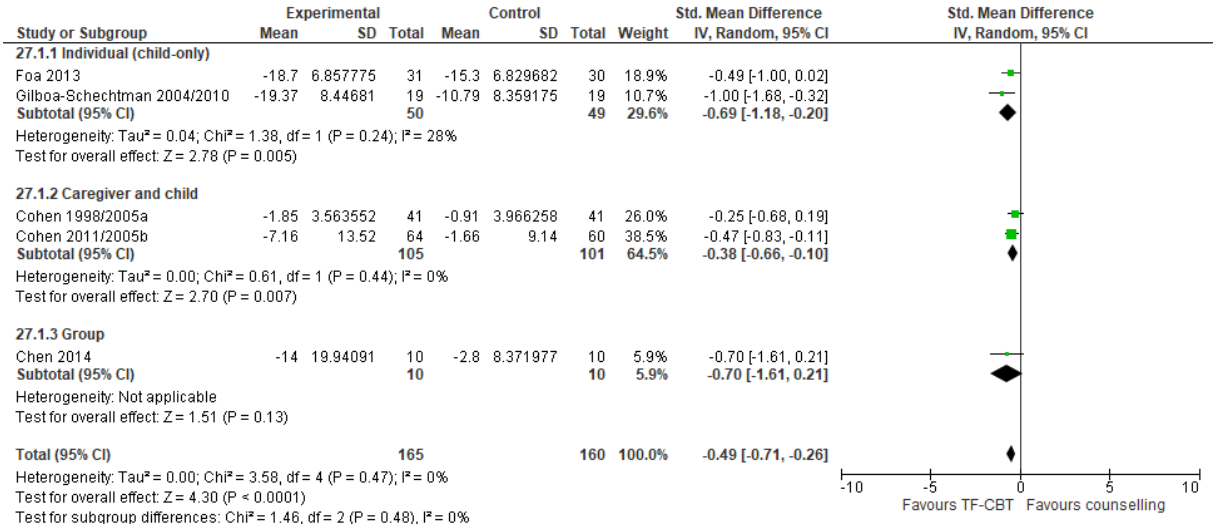


Figure 115: Sub-analysis by format: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology clinician-rated at endpoint (K-SADS-PL: PTSD/CPSS-I/CAPS; change score)

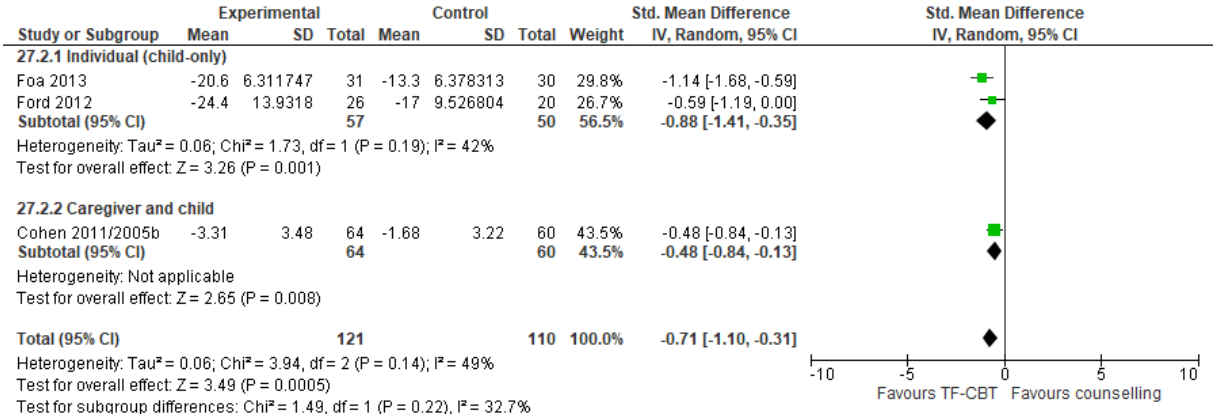
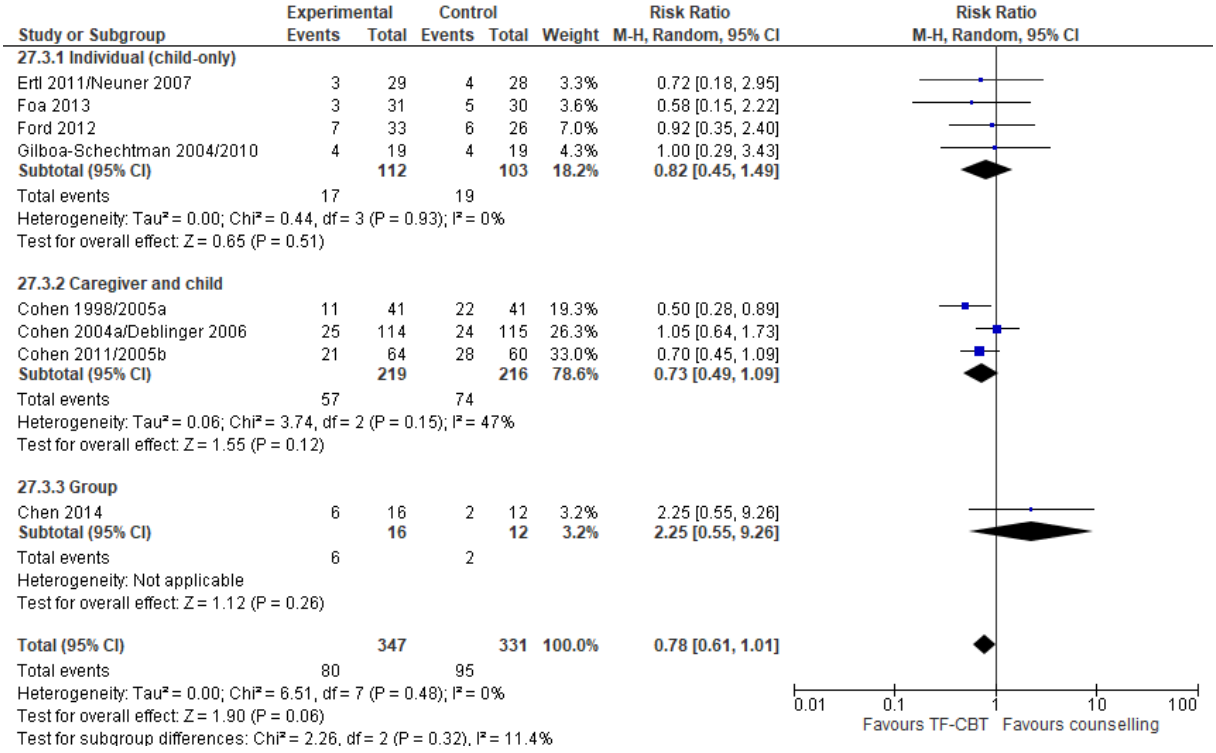


Figure 116: Sub-analysis by format: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Discontinuation (loss to follow-up)



Sub-analysis by age range: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 117: Sub-analysis by age range: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology self-rated at endpoint (CRIES/TSCC-PTSD/UCLA PTSD-RI/CPSS change score)

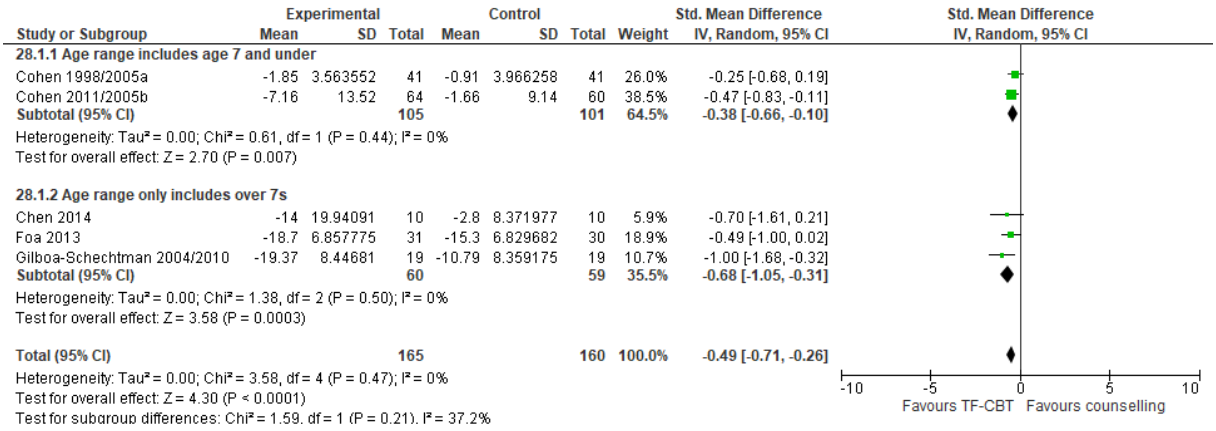


Figure 118: Sub-analysis by age range: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important

symptoms/PTSD: PTSD symptomatology clinician-rated at endpoint (K-SADS-PL: PTSD/CPSS-I/CAPS; change score)

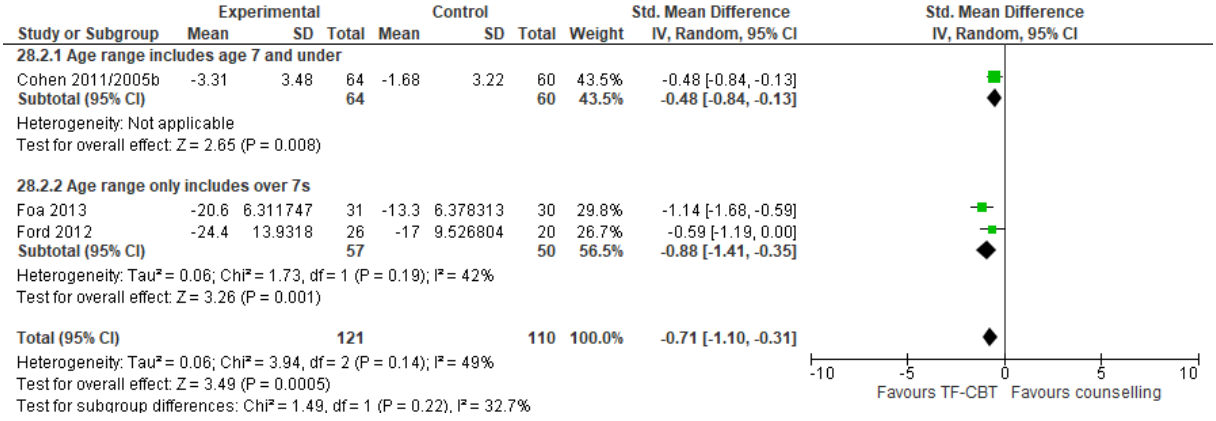
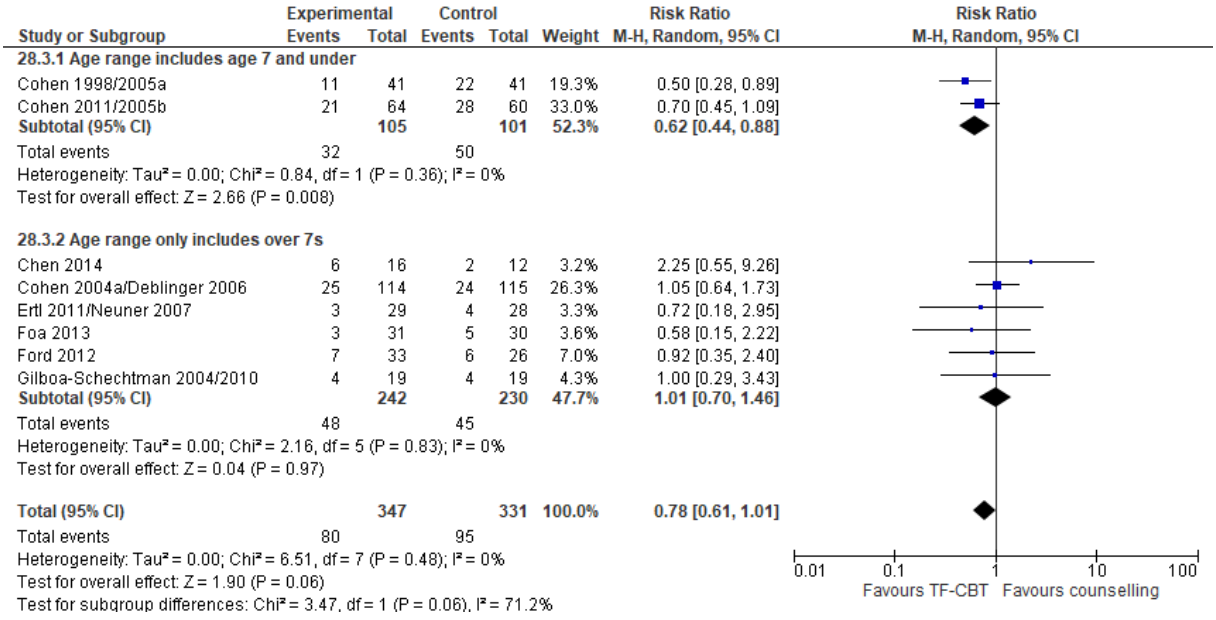


Figure 119: Sub-analysis by age range: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Discontinuation (loss to follow-up)



Sub-analysis by diagnostic status at baseline: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 120: Sub-analysis by diagnostic status at baseline: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of

clinically important symptoms/PTSD: PTSD symptomatology self-rated at endpoint (CRIES/TSCC-PTSD/UCLA PTSD-RI/CPSS change score)

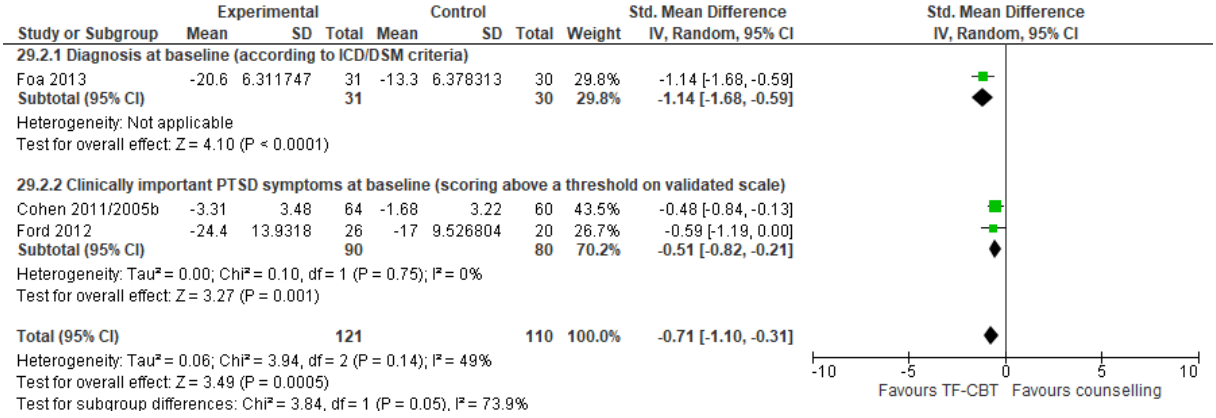


Figure 121: Sub-analysis by diagnostic status at baseline: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology clinician-rated at endpoint (K-SADS-PL: PTSD/CPSS-I/CAPS; change score)

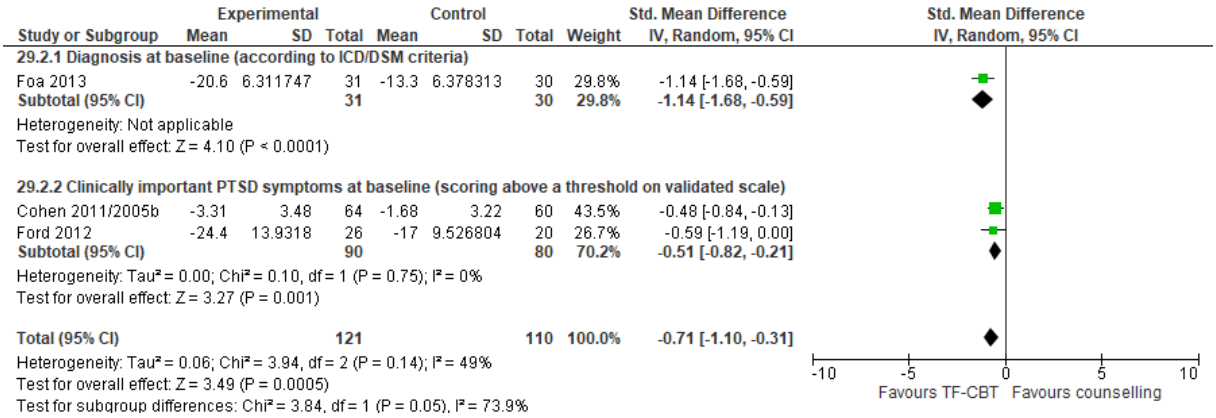
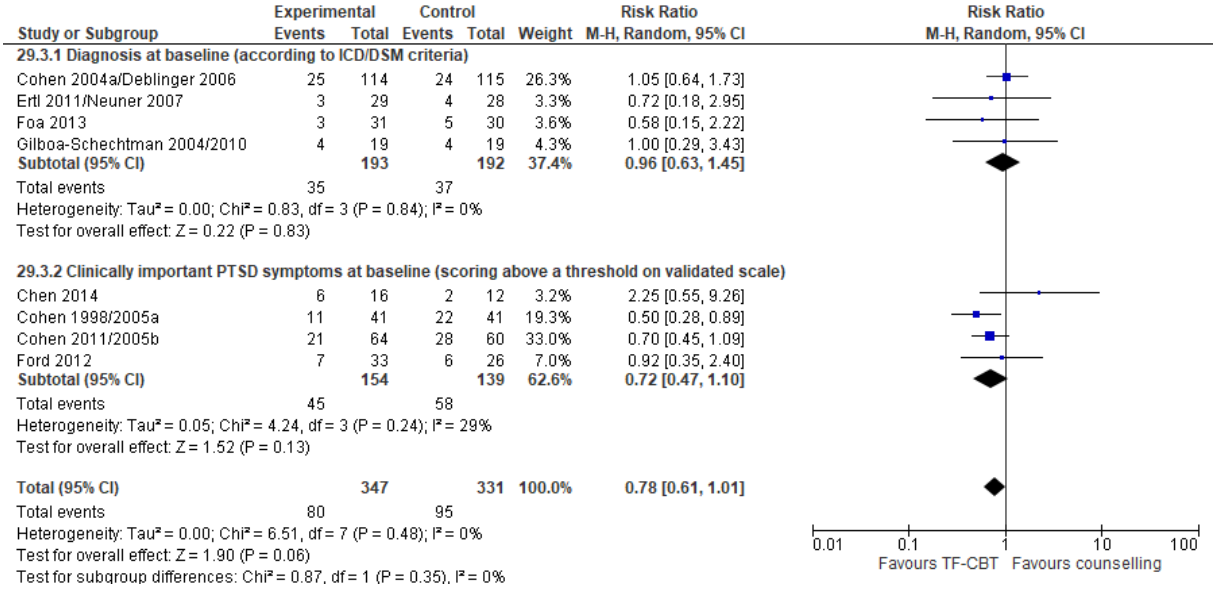


Figure 122: Sub-analysis by diagnostic status at baseline: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Discontinuation (loss to follow-up)



Sub-analysis by trauma type: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 123: PTSD symptomatology self-rated at endpoint (CRIES/TSCC-PTSD/UCLA P Sub-analysis by trauma type: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: TSD-RI/CPSS change score)

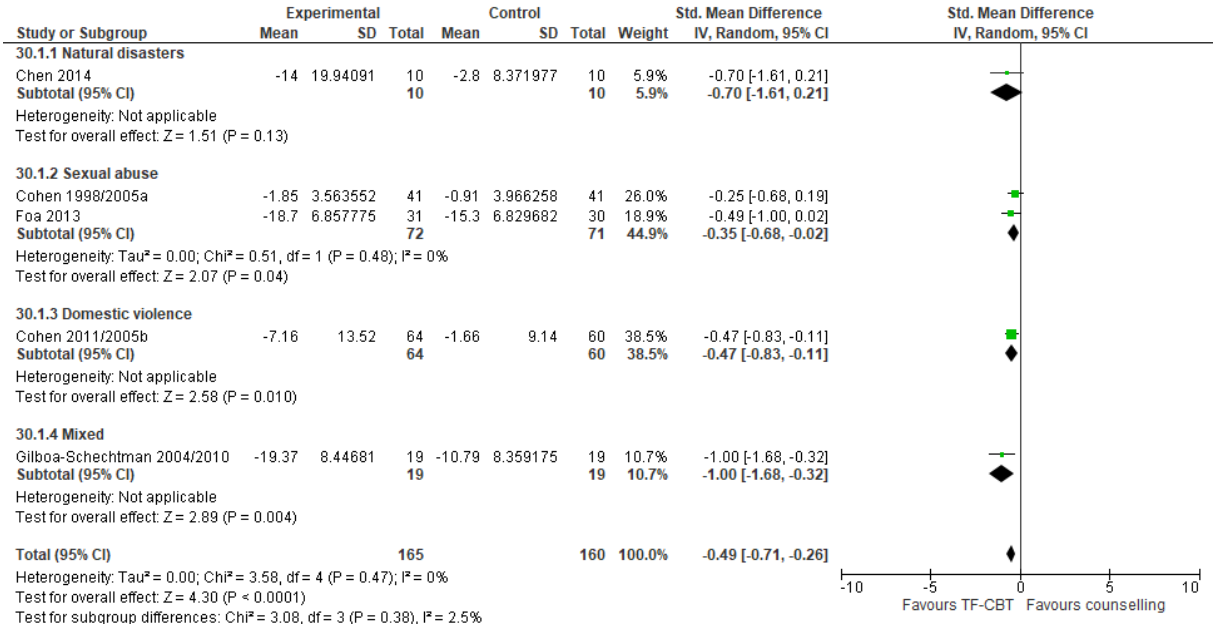


Figure 124: PTSD symptomatology self-rated at endpoint (CRIES/TSCC-PTSD/UCLA P Sub-analysis by trauma type: Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology clinician-rated at endpoint (K-SADS-PL: PTSD/CPSS-I/CAPS; change score)

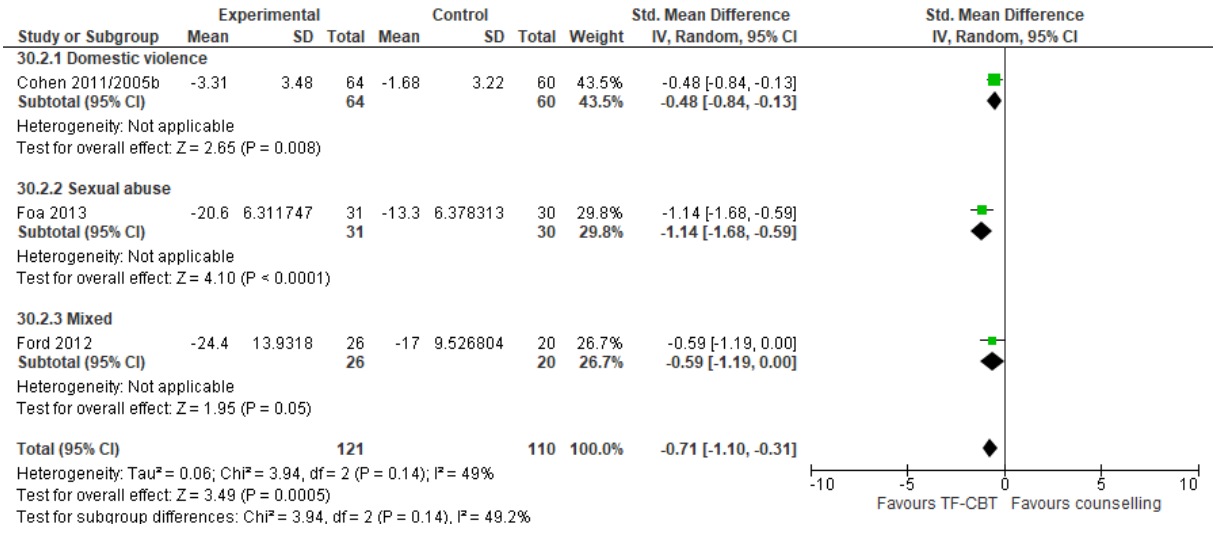
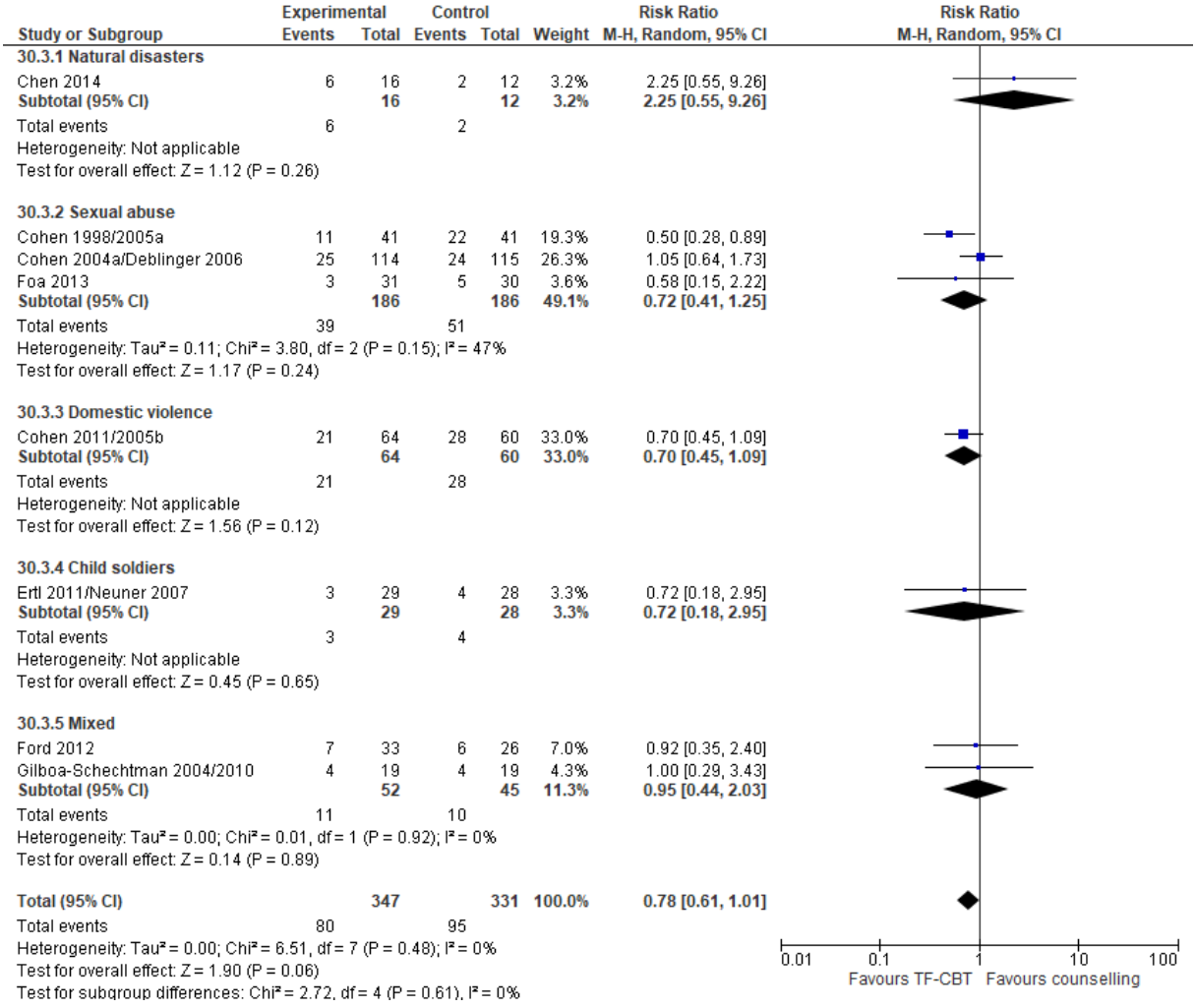


Figure 125: PTSD symptomatology self-rated at endpoint (CRIES/TSCC-PTSD/UCLA P Sub-analysis by trauma type: Trauma-focused CBT versus supportive

counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Discontinuation (loss to follow-up)



Psychological: Non-trauma-focused CBT

Non-trauma focused CBT (+ TAU) versus TAU for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 126: Non-trauma focused CBT (+ TAU) versus TAU for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Depression symptoms

(Adolescent Psychopathology Scale: Axis I - Major Depression; change score); Multiple incident index trauma

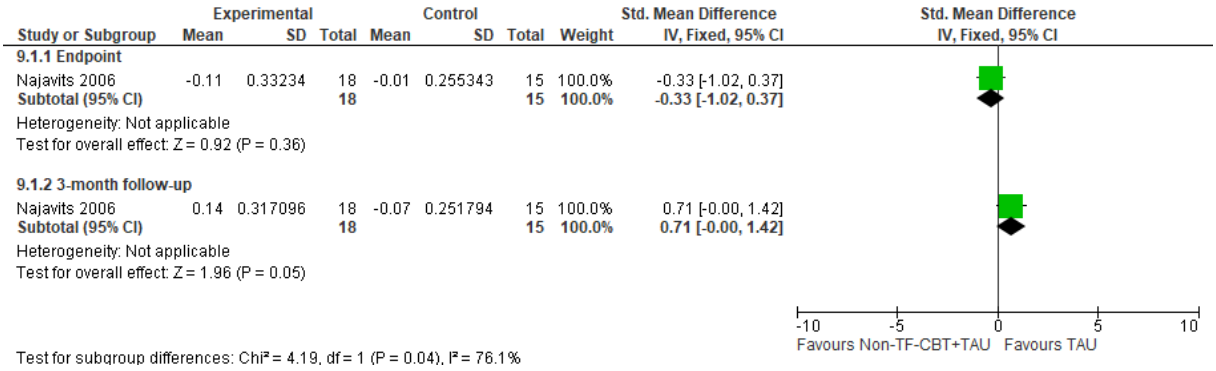


Figure 127: Non-trauma focused CBT (+ TAU) versus TAU for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Substance use disorder symptoms (Adolescent Psychopathology Scale: Axis I - Substance Use Disorder; change score); Multiple incident index trauma

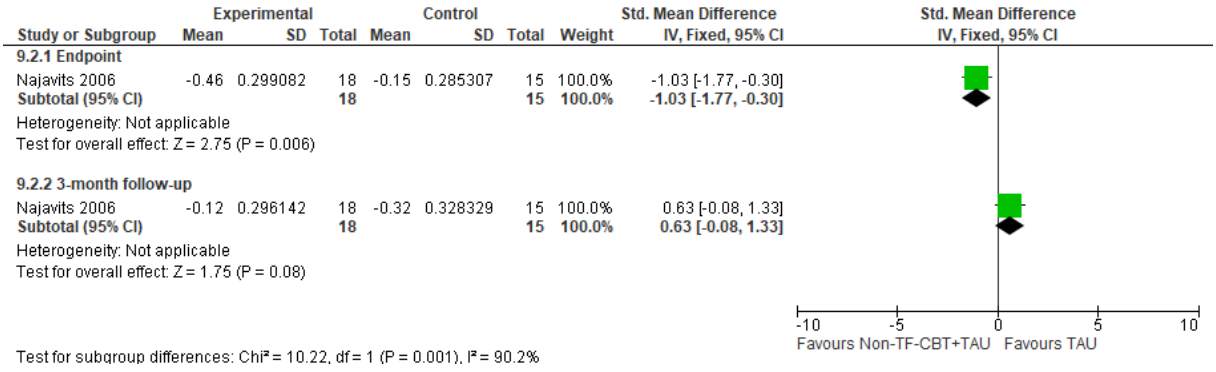
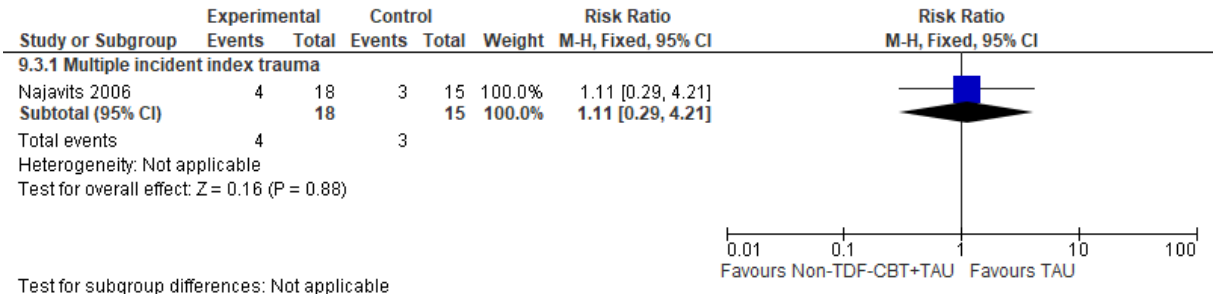


Figure 128: Non-trauma focused CBT (+ TAU) versus TAU for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Discontinuation (loss to follow-up)



Psychological: Psychodynamic therapies

Child-parent psychotherapy using play versus parent training (case management and individual treatment for parent-only) for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 129: Child-parent psychotherapy using play versus parent training (case management and individual treatment for parent-only) for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology clinician-rated (DC 0-3; change score)

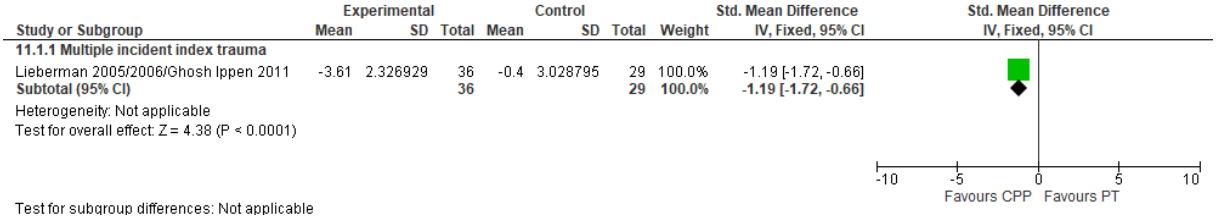


Figure 130: Child-parent psychotherapy using play versus parent training (case management and individual treatment for parent-only) for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Emotional and behavioural problems (CBCL total; change score); Multiple incident index trauma

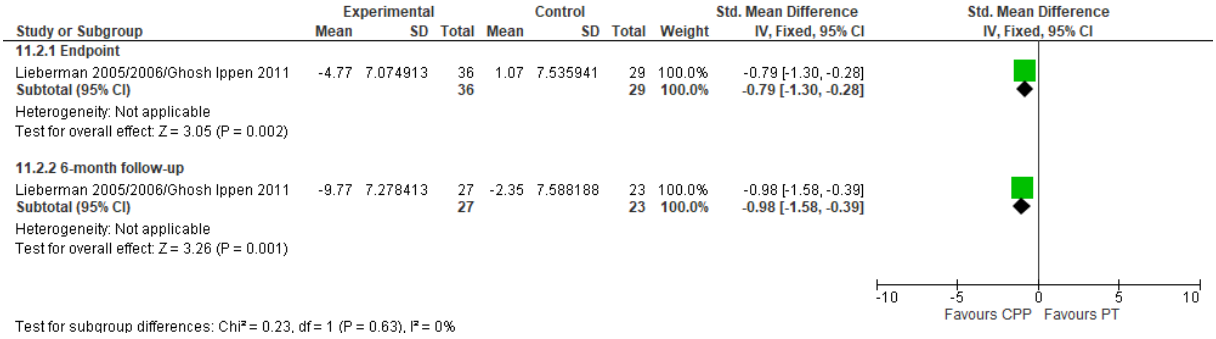
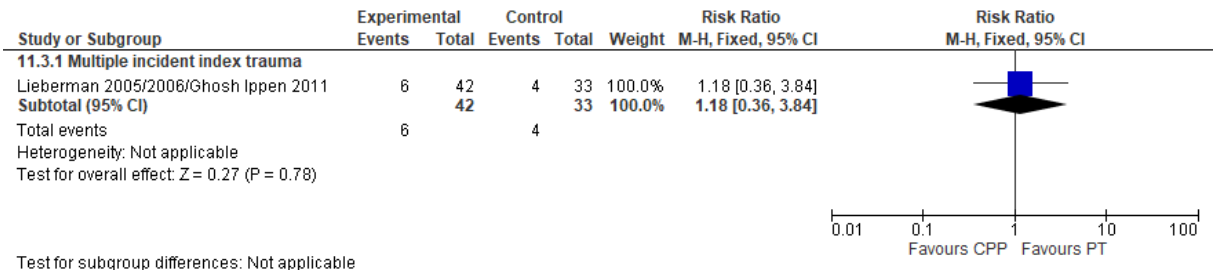


Figure 131: Child-parent psychotherapy using play versus parent training (case management and individual treatment for parent-only) for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Discontinuation (loss to follow-up)



Psychological: Eye movement desensitization and reprocessing (EMDR)

EMDR versus waitlist or TAU for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 132: EMDR versus waitlist or TAU for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology self-rated at endpoint (CRTI/CRIES change score)

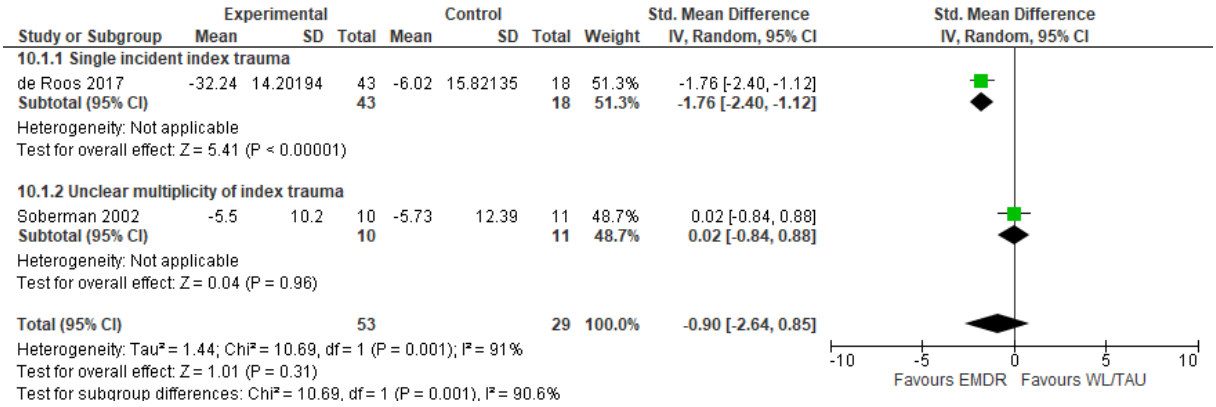


Figure 133: EMDR versus waitlist or TAU for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology self-rated at 2-month follow-up (CRIES change score)

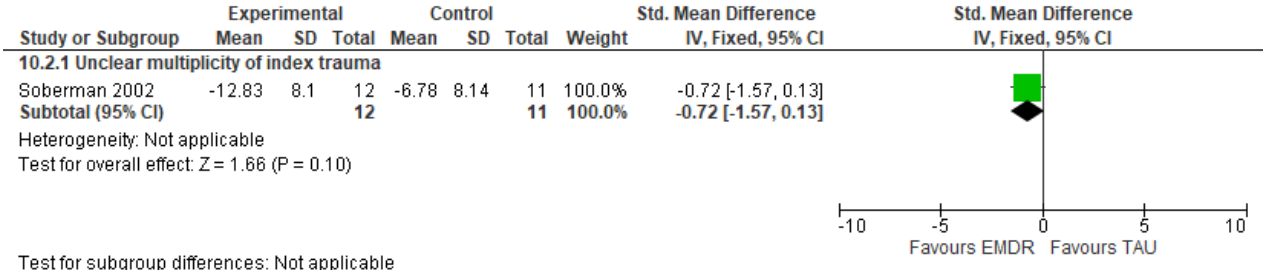


Figure 134: EMDR versus waitlist or TAU for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology clinician-rated (PTSS-C change score)

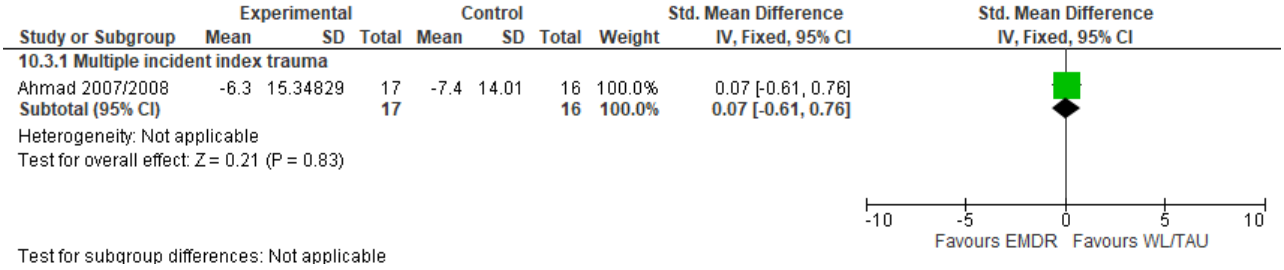


Figure 135: EMDR versus waitlist or TAU for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Emotional and behavioural problems (SDQ-A change score)

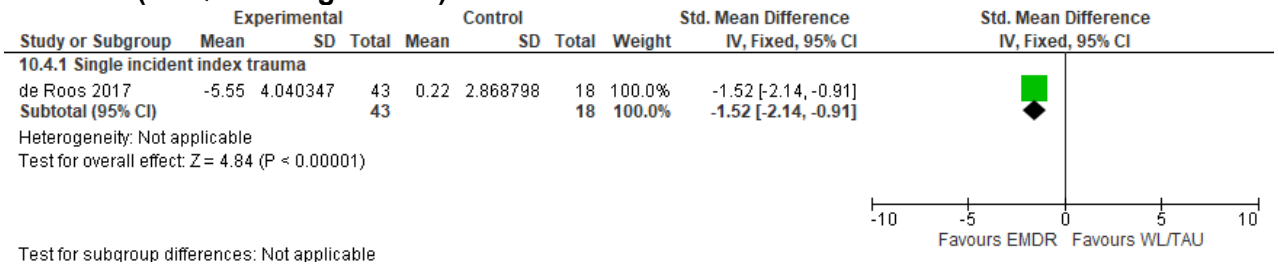


Figure 136: EMDR versus waitlist or TAU for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Quality of life (KIDSCREEN-27: Global HRQoL T-scores; change score)

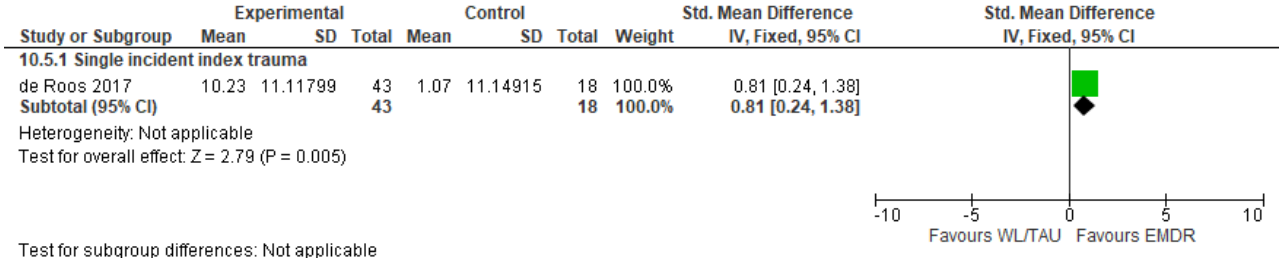
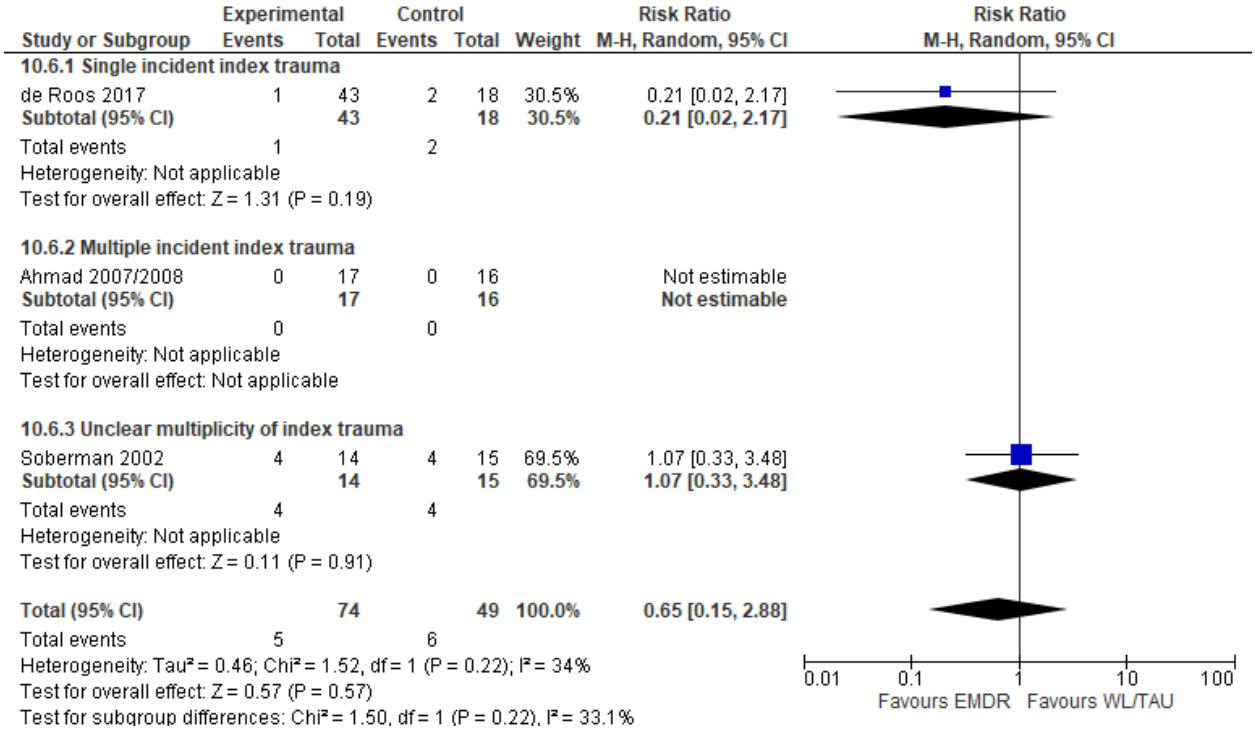


Figure 137: EMDR versus waitlist or TAU for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Discontinuation (loss to follow-up)



Psychological: Combined somatic and cognitive therapies

Combined somatic and cognitive therapies versus no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 138: Combined somatic and cognitive therapies versus no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology self-rated (SPTSS change score); Unclear multiplicity of index trauma

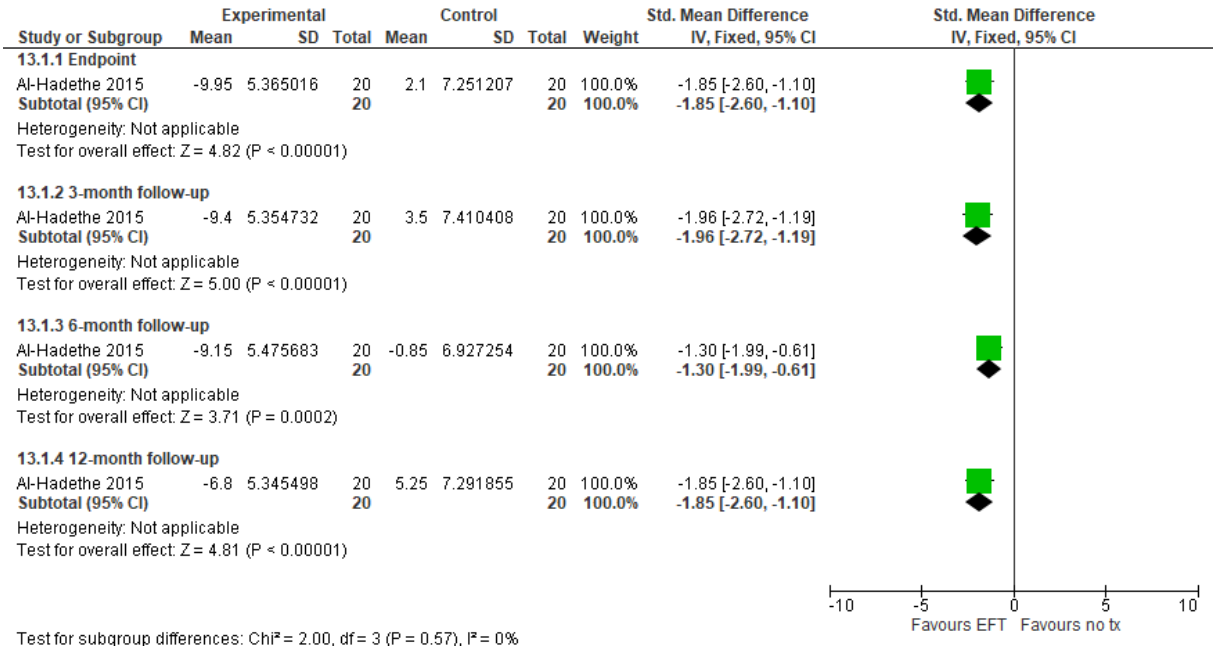


Figure 139: Combined somatic and cognitive therapies versus no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD:

Anxiety symptoms (HADS-A change score); Unclear multiplicity of index trauma

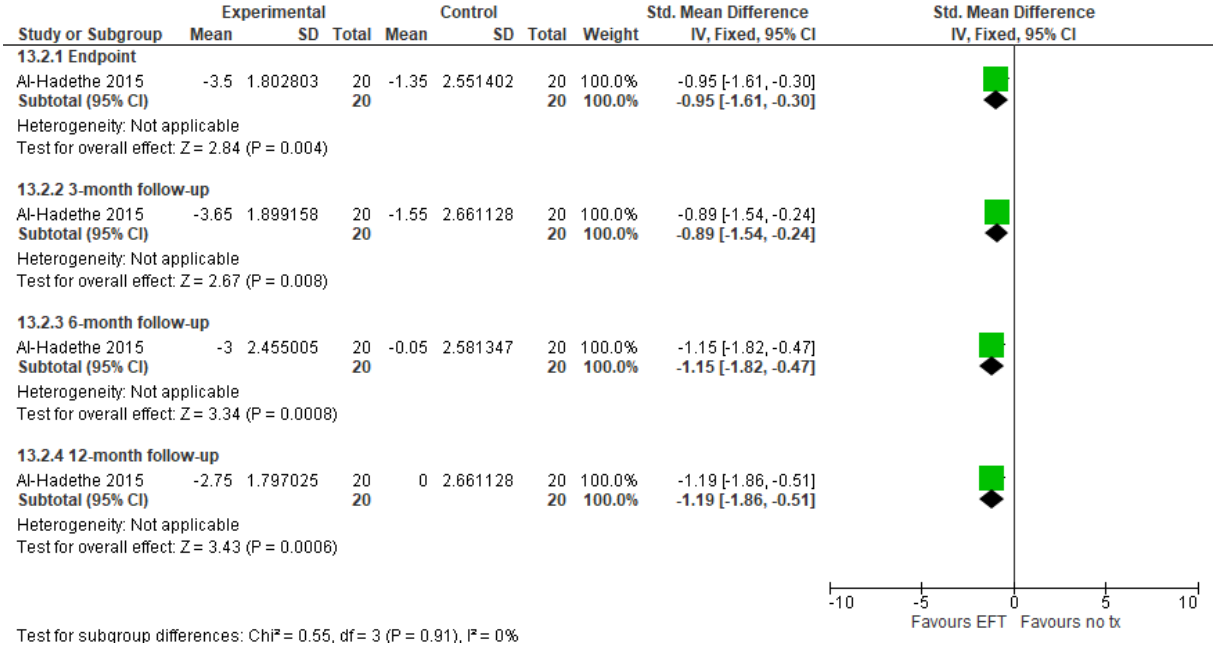
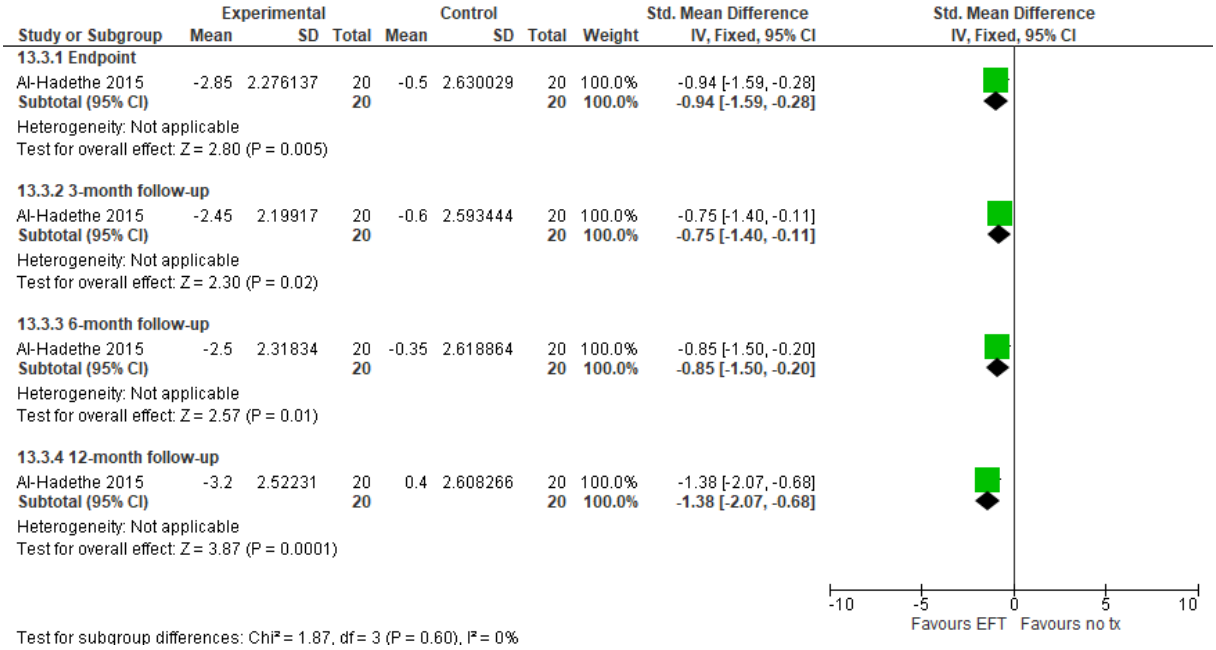


Figure 140: Combined somatic and cognitive therapies versus no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Depression symptoms (HADS-D change score); Unclear multiplicity of index trauma



Psychological: Supportive counselling

Supportive counselling versus no treatment or waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 141: Supportive counselling versus no treatment or waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology self-rated (CRIES change score); Single incident index trauma

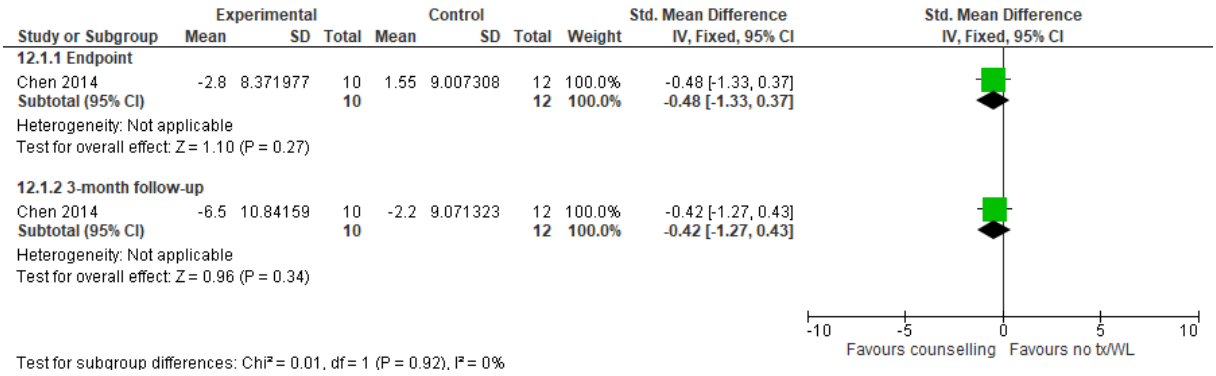


Figure 142: Supportive counselling versus no treatment or waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology clinician-rated (CAPS change score); Multiple incident index trauma

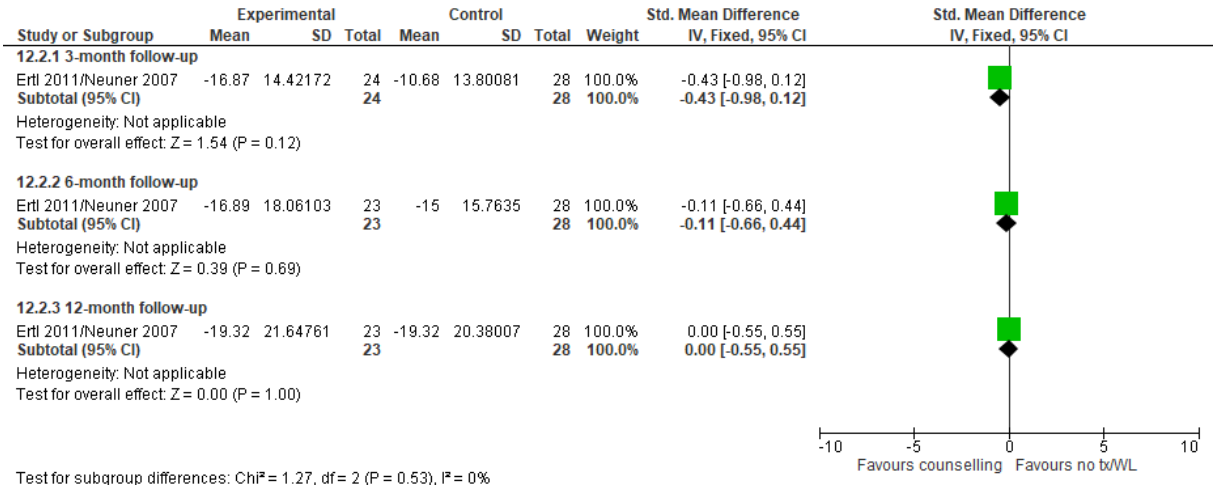


Figure 143: Supportive counselling versus no treatment or waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Remission at

12-month follow-up (number of people no longer meeting diagnostic criteria for PTSD)

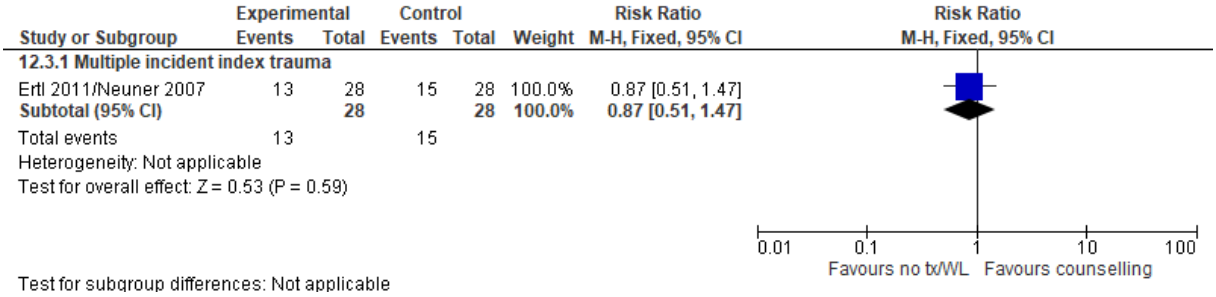


Figure 144: Supportive counselling versus no treatment or waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Depression symptoms at endpoint (CES-D change score)

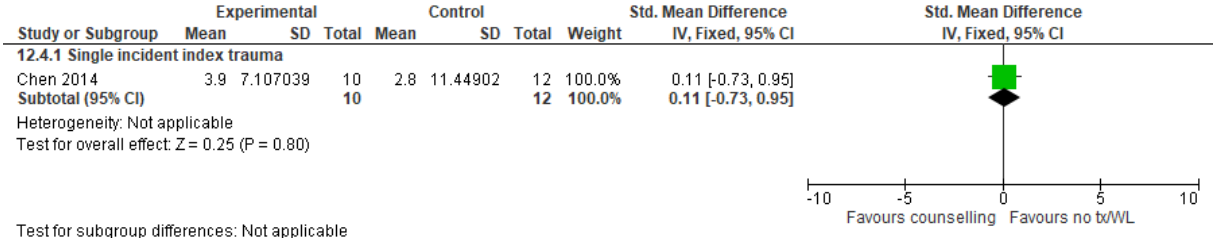


Figure 145: Supportive counselling versus no treatment or waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Depression symptoms at 3-month follow-up (CES-D/MINI:Depression change score)

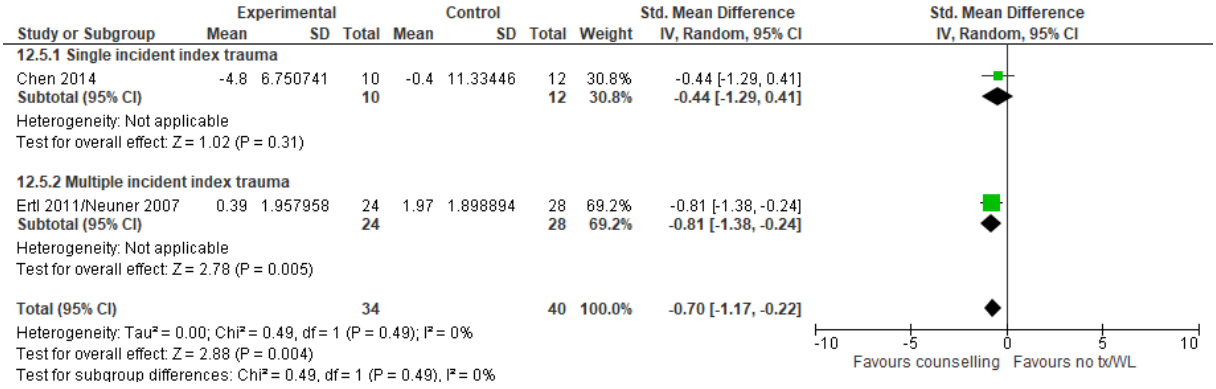


Figure 146: Supportive counselling versus no treatment or waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Depression symptoms at 6-month follow-up (MINI:Depression change score)

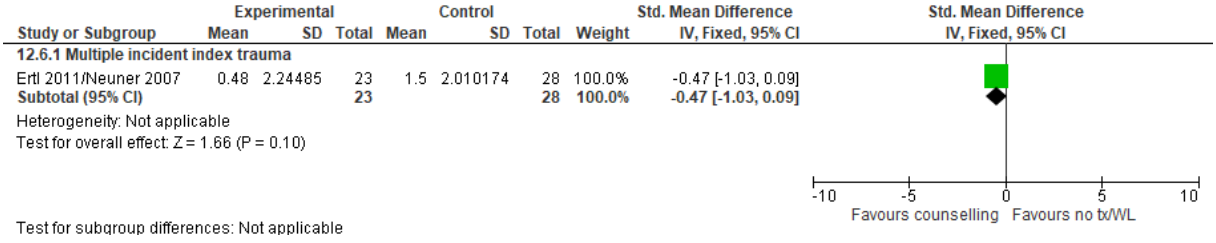


Figure 147: Supportive counselling versus no treatment or waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Depression symptoms at 12-month follow-up (MINI:Depression change score)

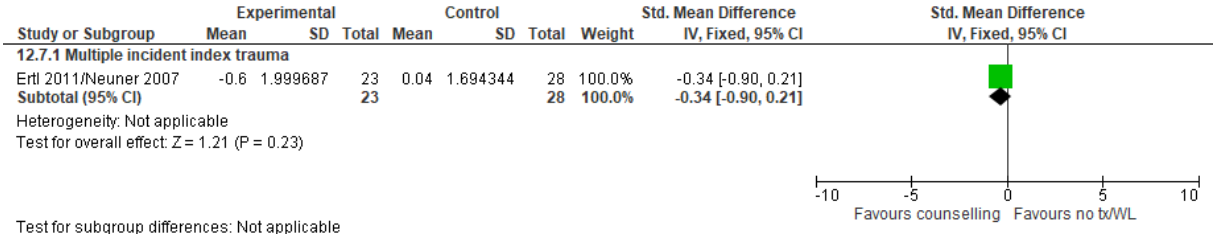


Figure 148: Supportive counselling versus no treatment or waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Functional impairment (CAPS: Functional impairment; change score); Multiple incident index trauma

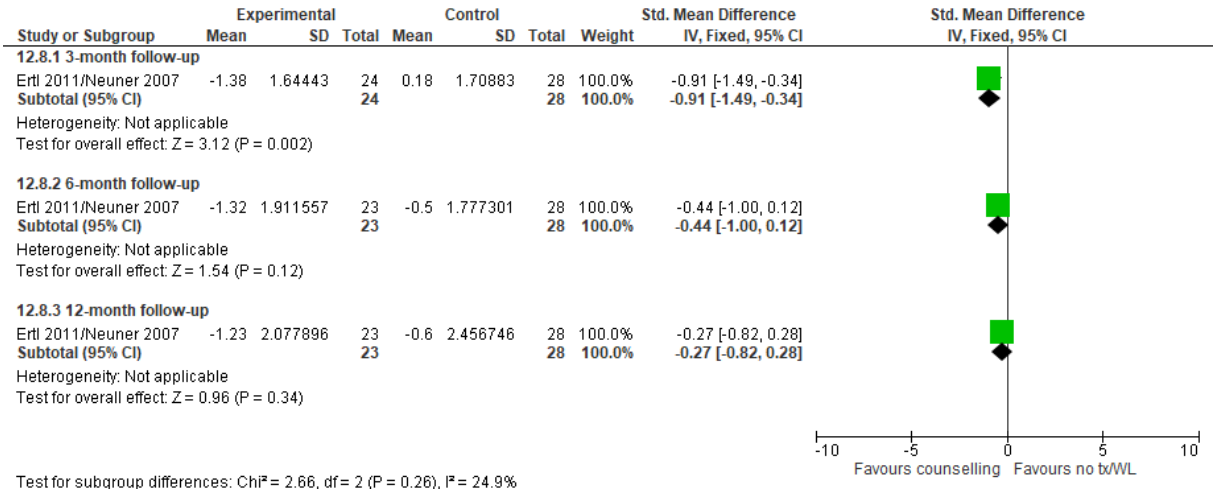
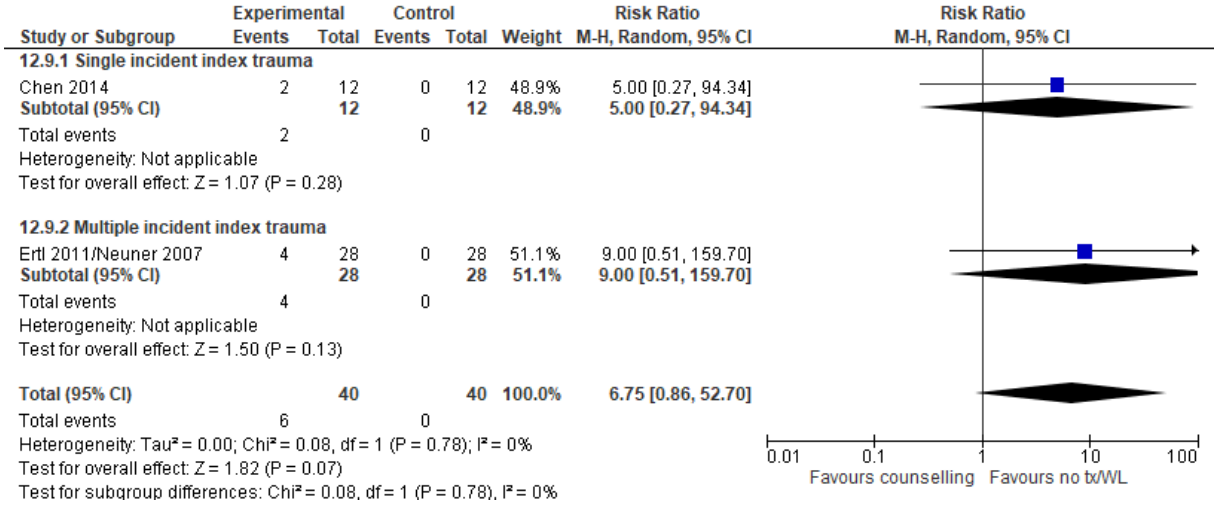


Figure 149: Supportive counselling versus no treatment or waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Discontinuation (loss to follow-up)



Psychological: Parent training/family intervention

Parent training (CBT with parent-only) versus TAU for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 150: Parent training (CBT with parent-only) versus TAU for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD

symptomatology clinician-rated (K-SADS-E: PTSD; change score); Multiple incident index trauma

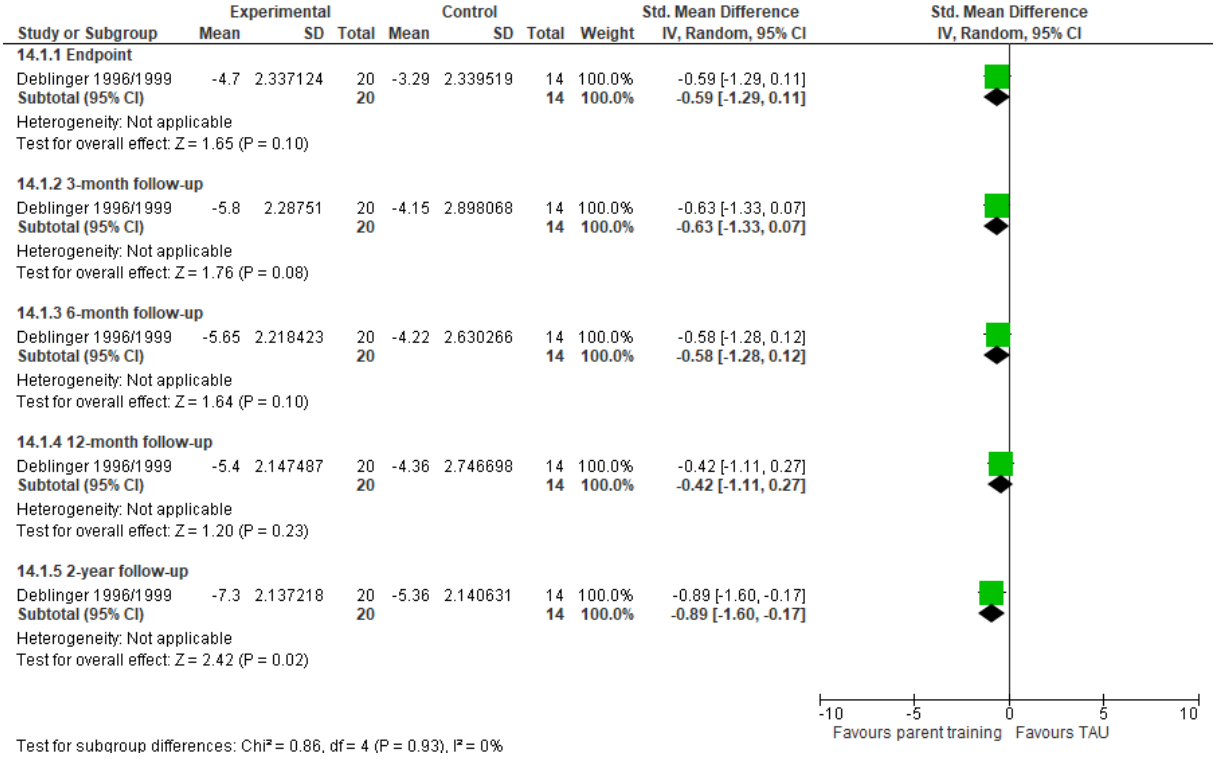


Figure 151: Parent training (CBT with parent-only) versus TAU for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Emotional

and behavioural problems-Externalizing (CBCL: Externalizing; change score); Multiple incident index trauma

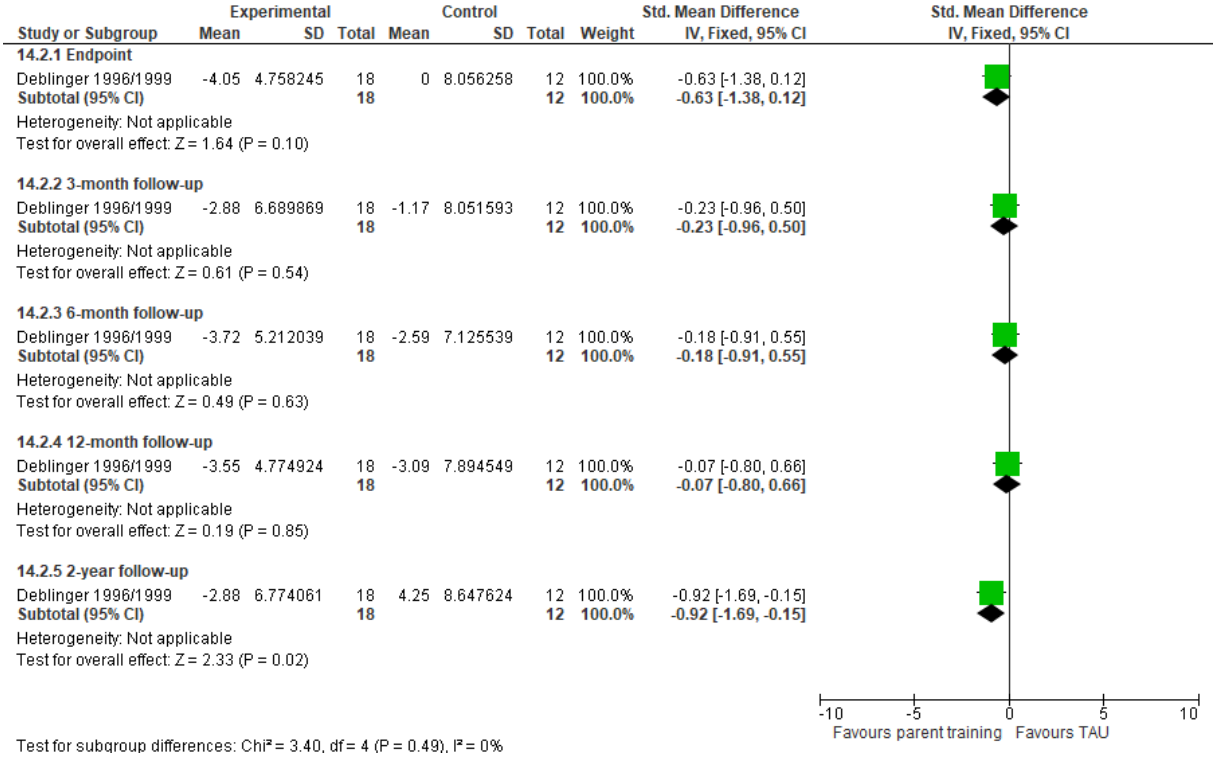
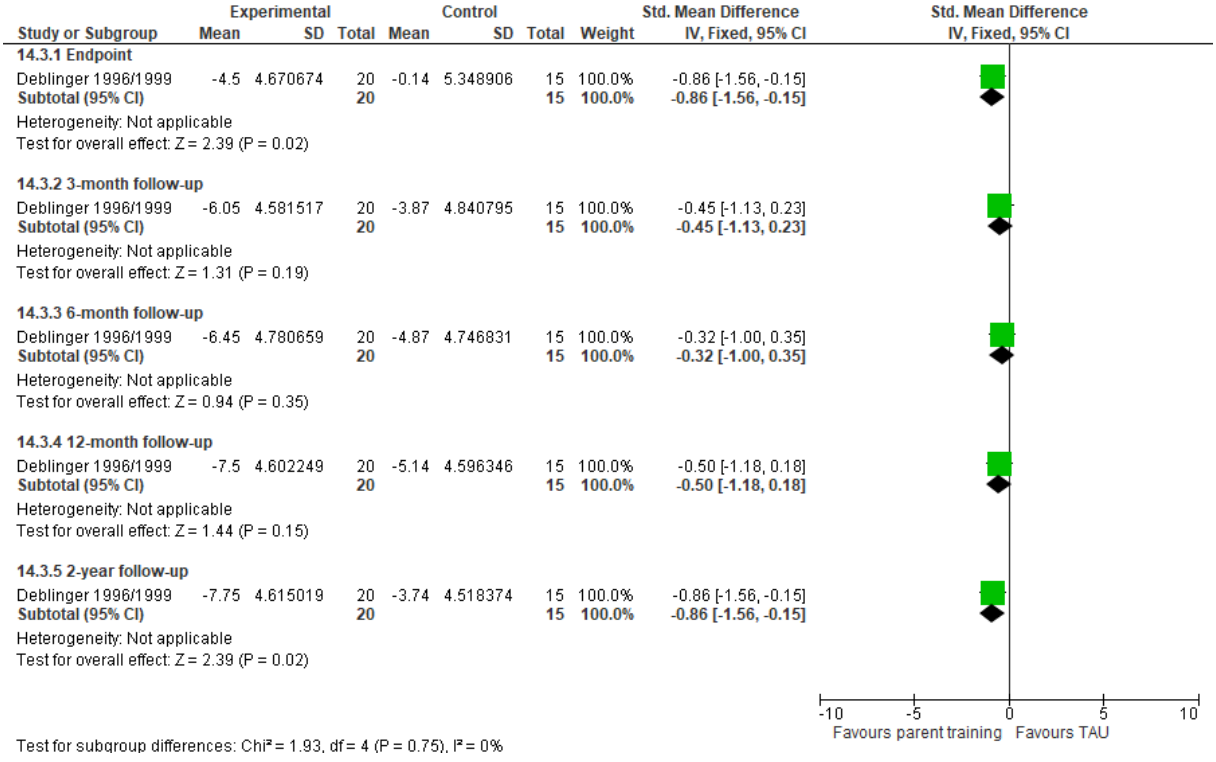


Figure 152: Parent training (CBT with parent-only) versus TAU for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Depression symptoms (CDI change score); Multiple incident index trauma



Parent training + trauma-focused CBT (for child) versus trauma-focused CBT (for child) only for delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 153: Parent training + trauma-focused CBT (for child) versus trauma-focused CBT (for child) only for delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology clinician-rated (ADIS-C: PTSD; change score); Multiple incident index trauma

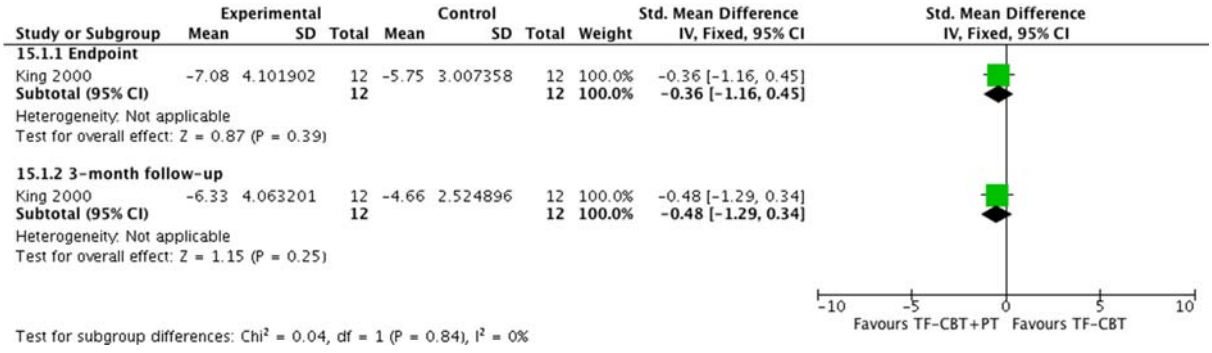


Figure 154: Parent training + trauma-focused CBT (for child) versus trauma-focused CBT (for child) only for delayed treatment (>3 months) of clinically important symptoms/PTSD: Anxiety symptoms (RCMAS; change score); Multiple incident index trauma

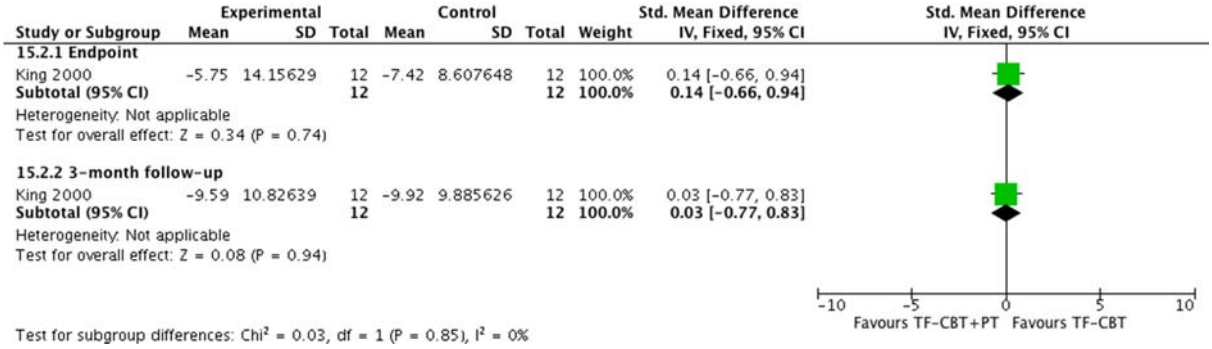


Figure 155: Parent training + trauma-focused CBT (for child) versus trauma-focused CBT (for child) only for delayed treatment (>3 months) of clinically important symptoms/PTSD: Depression symptoms (CDI; change score); Multiple incident index trauma

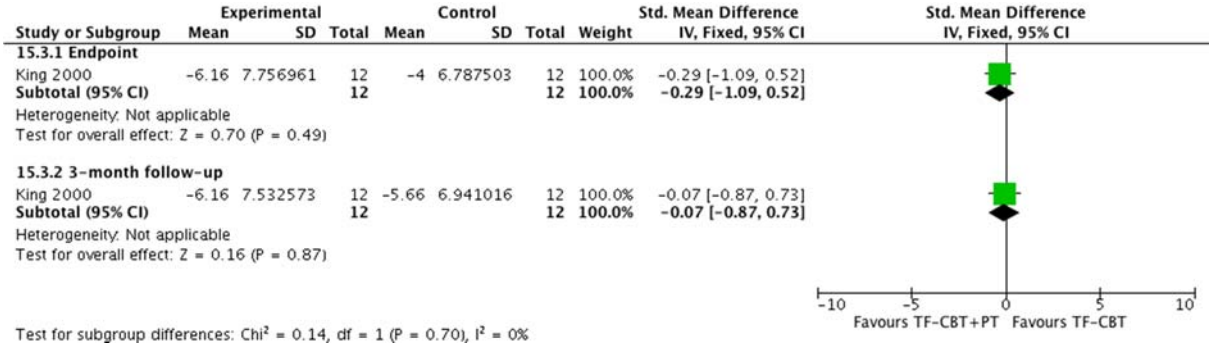


Figure 156: Parent training + trauma-focused CBT (for child) versus trauma-focused CBT (for child) only for delayed treatment (>3 months) of clinically important symptoms/PTSD: Emotional and behavioural problems-Internalizing (CBCL: Internalizing; change score); Multiple incident index trauma

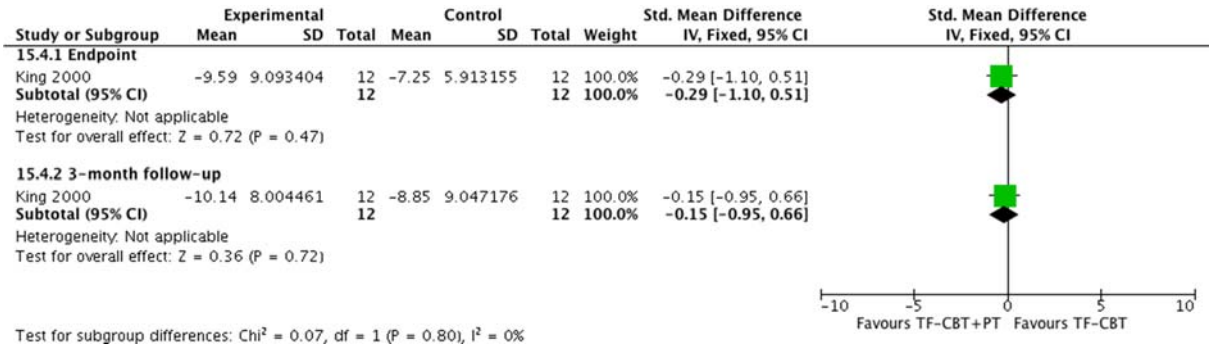


Figure 157: Parent training + trauma-focused CBT (for child) versus trauma-focused CBT (for child) only for delayed treatment (>3 months) of clinically important symptoms/PTSD: Emotional and behavioural problems-Externalizing (CBCL: Externalizing; change score); Multiple incident index trauma

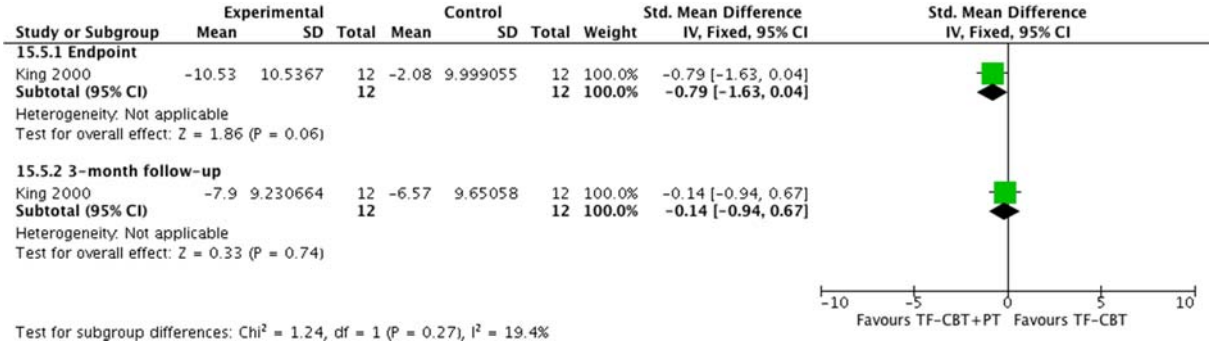


Figure 158: Parent training + trauma-focused CBT (for child) versus trauma-focused CBT (for child) only for delayed treatment (>3 months) of clinically important symptoms/PTSD: Global functioning (GAF; change score); Multiple incident index trauma

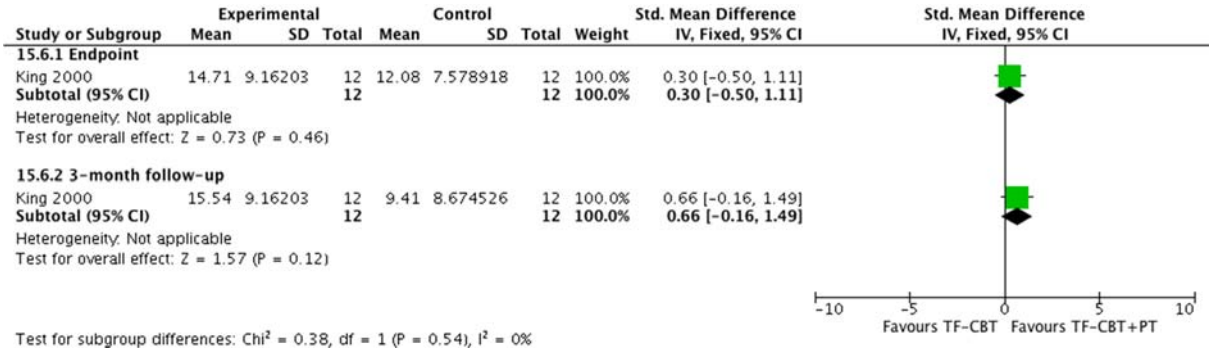
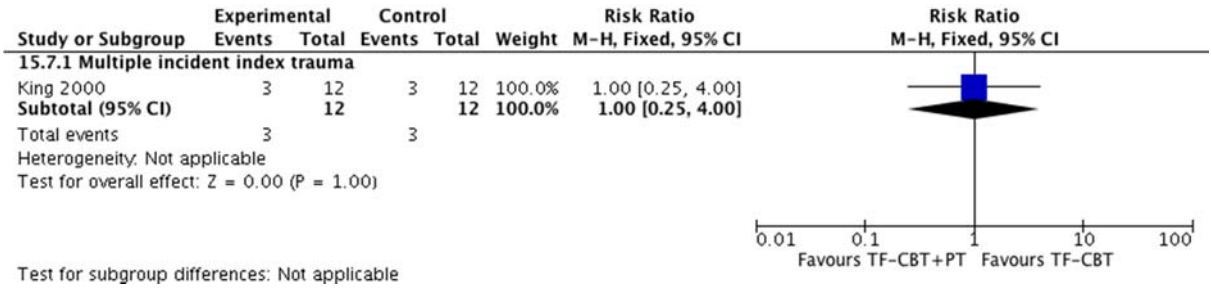


Figure 159: Parent training + trauma-focused CBT (for child) versus trauma-focused CBT (for child) only for delayed treatment (>3 months) of clinically important symptoms/PTSD: Discontinuation (loss to follow-up)



Family therapy versus waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 160: Family therapy versus waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology (UCLA PTSD-RI; change score)

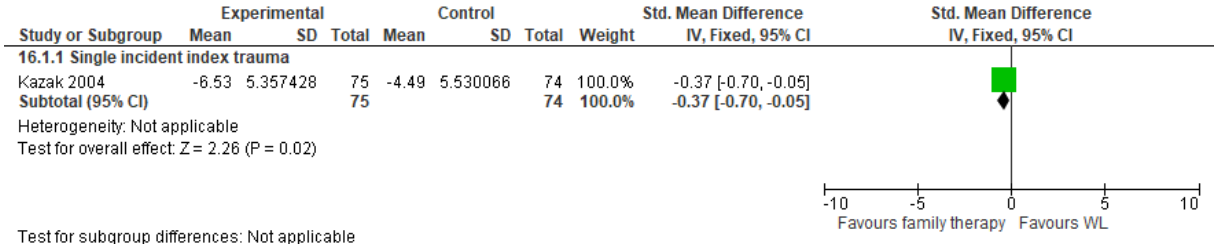


Figure 161: Family therapy versus waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Anxiety symptoms (RCMAS; T-scores change score)

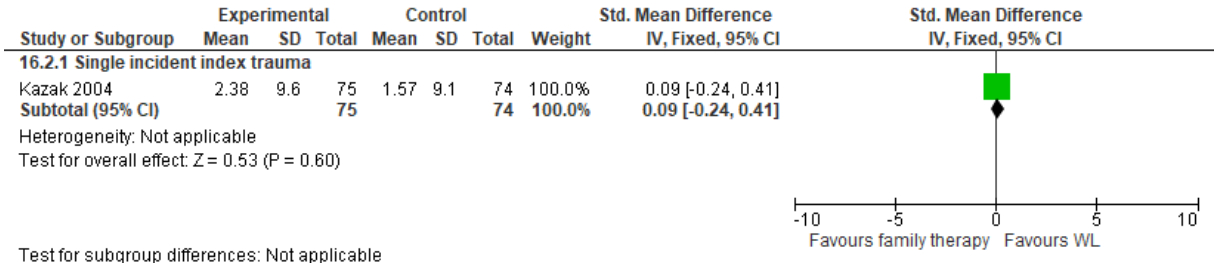
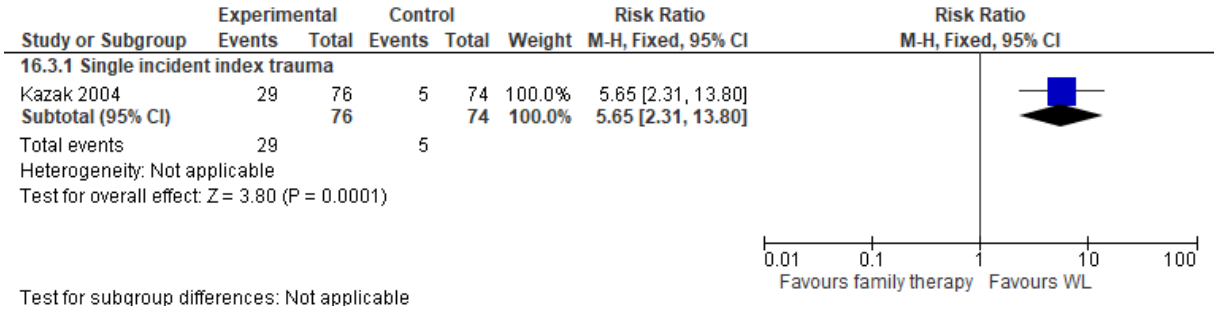


Figure 162: Family therapy versus waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Discontinuation (loss to follow-up)



Psychological: Play therapy

Play therapy versus TAU for the delayed treatment (>3 months) of clinically important symptoms/PTSD Non-directive counselling

Figure 163: Play therapy versus TAU for the delayed treatment (>3 months) of clinically important symptoms/PTSD Non-directive counselling: PTSD symptomatology self-rated (CRIES change score)

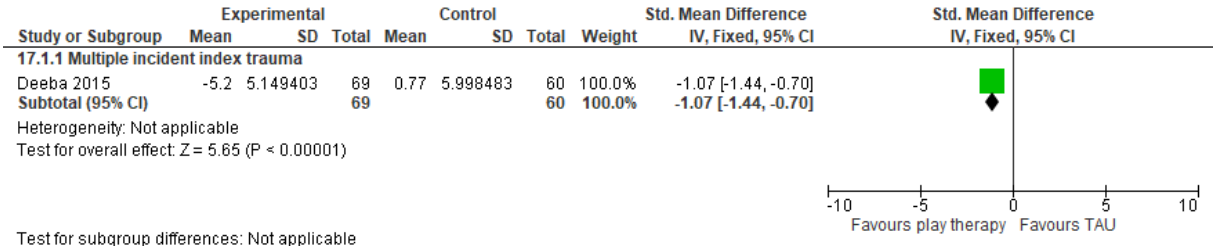


Figure 164: Play therapy versus TAU for the delayed treatment (>3 months) of clinically important symptoms/PTSD Non-directive counselling: Anxiety symptoms (SCASp; change score)

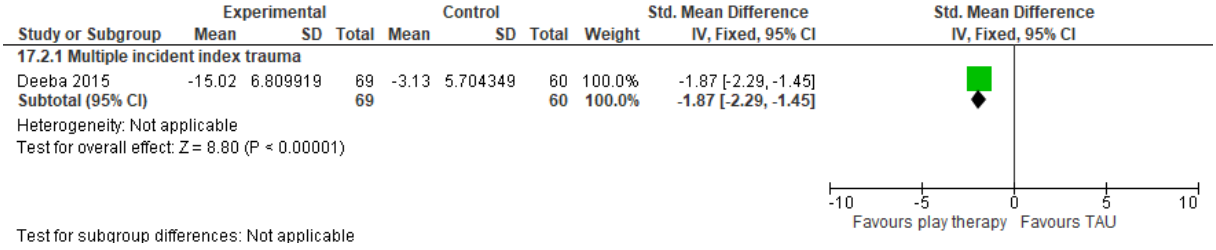


Figure 165: Play therapy versus TAU for the delayed treatment (>3 months) of clinically important symptoms/PTSD Non-directive counselling: Depression symptoms (SMFQp; change score)

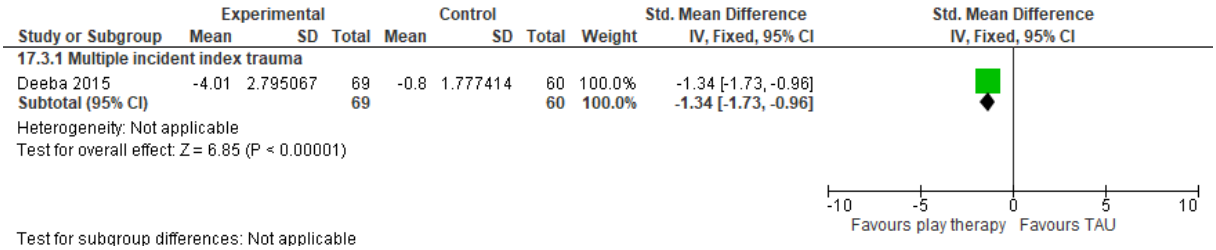
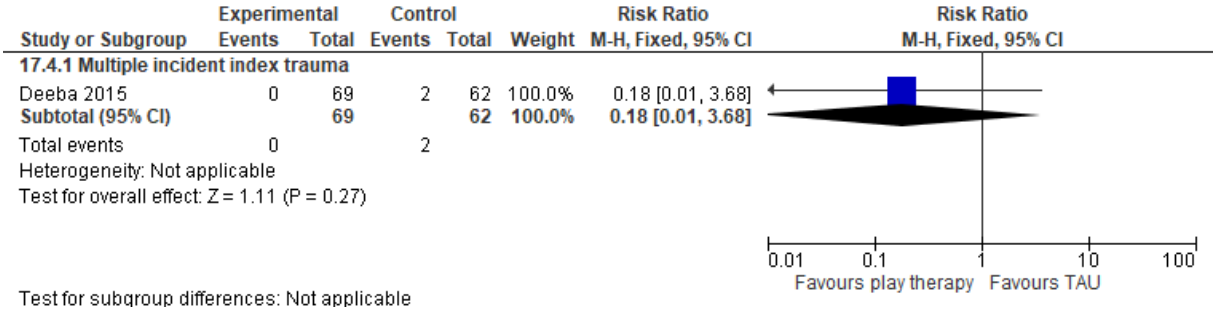


Figure 166: Play therapy versus TAU for the delayed treatment (>3 months) of clinically important symptoms/PTSD Non-directive counselling: Discontinuation (loss to follow-up)



Play therapy versus trauma-focused CBT for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 167: Play therapy versus trauma-focused CBT for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology self-rated (UCLA PTSD-RI; change score)

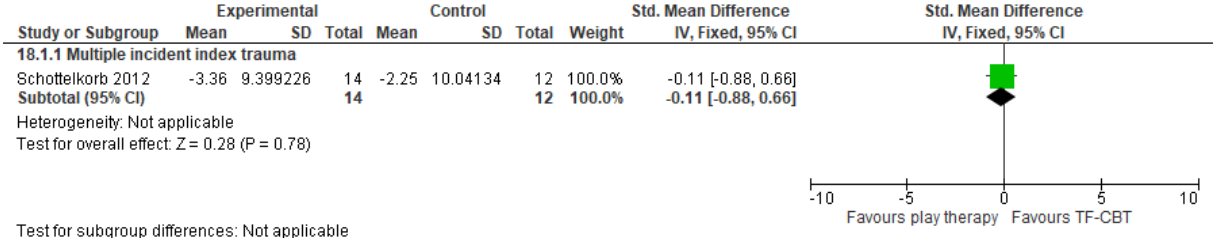
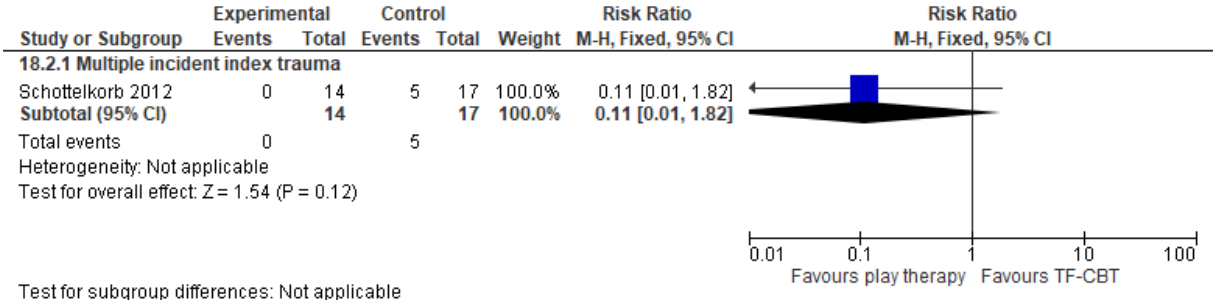


Figure 168: Play therapy versus trauma-focused CBT for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Discontinuation (loss to follow-up)

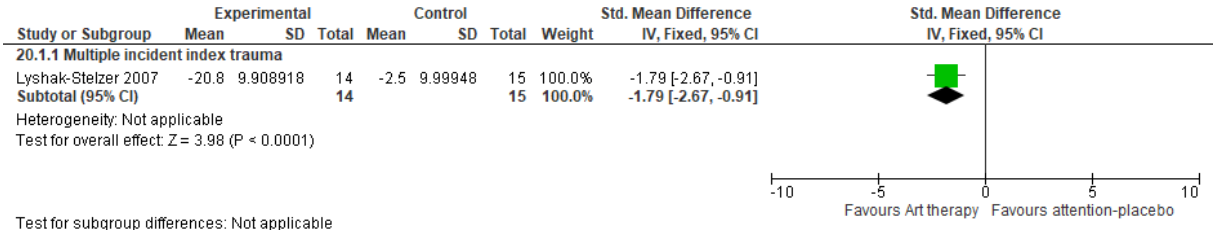


Psychosocial: Art therapy

Art therapy (+ TAU) versus attention-placebo (+ TAU) for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 169: Art therapy (+ TAU) versus attention-placebo (+ TAU) for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD

symptomatology clinician-rated (UCLA PTSD-RI adminstered via structured interview format; change score)



Psychosocial: Meditation

Meditation versus waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Figure 170: Meditation versus waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD: PTSD symptomatology self-rated (HTQ change score)

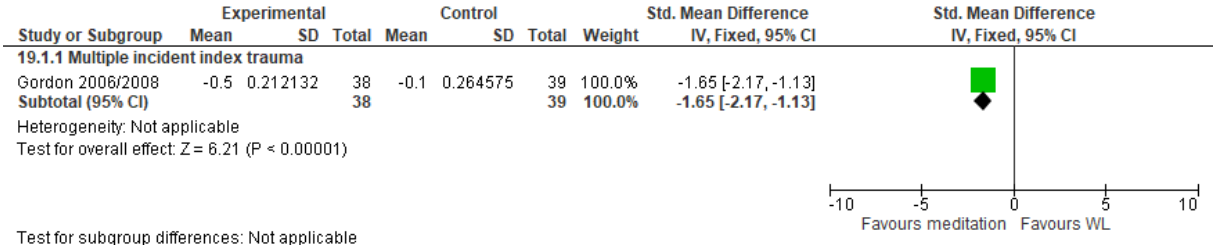
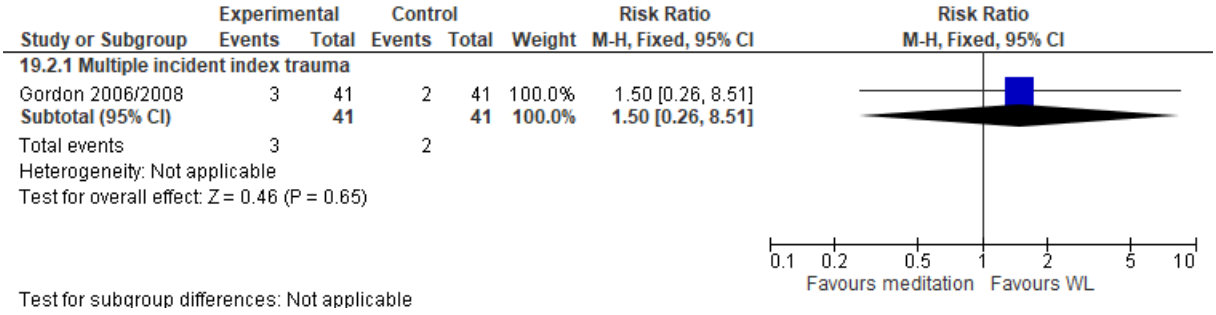


Figure 171: Meditation versus waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD: Discontinuation (loss to follow-up)



Appendix F – GRADE tables

GRADE tables for "For children and young people with clinically important post-traumatic stress symptoms, what are the relative benefits and harms of psychological, psychosocial or other non-pharmacological interventions targeted at PTSD symptoms?"

Psychological: Trauma-focused CBT

Trauma-focused CBT versus meditation for the early treatment (1-3 months) of clinically important symptoms/PTSD

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Meditation	Relative (95% CI)	Absolute	Quality	Importance
PTSD symptomatology clinician-rated at 1-month follow-up (follow-up mean 1 months; measured with: CPTS–RI change score; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[1]	none	16	15	-	SMD 0.15 lower (0.85 lower to 0.56 higher)	LOW	CRITICAL
PTSD symptomatology clinician-rated at 6-month follow-up (follow-up mean 6 months; measured with: CPTS–RI change score; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[1]	none	16	14	-	SMD 0.12 higher (0.6 lower to 0.83 higher)	LOW	CRITICAL
Diagnosis at 1-month follow-up (follow-up mean 1 months; assessed with: Number of people who met criteria for a diagnosis of PTSD)												
1	randomised trials	no seriou	no serious inconsistency	no serious indirectness	very serious[1]	none	4/16 (25%)	5/15 (33.3%)	RR 0.75	83 fewer per 1000 (from 250	LOW	CRITICAL

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Meditation	Relative (95% CI)	Absolute		
		s risk of bias							(0.25 to 2.28)	fewer to 427 more)		
Diagnosis at 6-month follow-up (follow-up mean 6 months; assessed with: Number of people who met criteria for a diagnosis of PTSD)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[1]	none	3/16 (18.8%)	4/14 (28.6%)	RR 0.66 (0.18 to 2.44)	97 fewer per 1000 (from 234 fewer to 411 more)	LOW	CRITICAL
Discontinuation (follow-up mean 1 months; assessed with: Number of participants lost to follow-up)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[2]	none	0/16 (0%)	0/15 (0%)	not pooled	not pooled	MODERATE	CRITICAL

CBT=cognitive behavioural therapy; CI=confidence interval; PTSD=post-traumatic stress disorder; RR=risk ratio; SMD=standard mean difference; CPTS-RI=Child Post-Traumatic Stress-Reaction Index;

[1] 95% CI crosses line of no effect and thresholds for both clinically important benefit and harm

[2] OIS not met (events<300)

Trauma-focused CBT versus waitlist, TAU or no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Waitlist, TAU or no treatment	Relative (95% CI)	Absolute	Quality	Importance
PTSD symptomatology self-rated at endpoint (follow-up 0.4-13 weeks; measured with: SPTSS/CPSS/CRIES/CRTI/UCLA PTSD-RI/CPTS–RI change score; Better indicated by lower values)												
13	randomised trials	serious[1]	very serious[2]	no serious indirectness	no serious imprecision	none	440	432	-	SMD 1.21 lower (1.59 to 0.83 lower)	VERY LOW	CRITICAL
PTSD symptomatology self-rated at 1-3 month follow-up (follow-up 1-3 months; measured with: IES/SPTSS/CRIES/UCLA PTSD-RI/CPTS-RI change score; Better indicated by lower values)												
5	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	150	151	-	SMD 1.28 lower (1.68 to 0.87 lower)	LOW	CRITICAL
PTSD symptomatology self-rated at 6-month follow-up (follow-up mean 6 months; measured with: SPTSS change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[4]	none	19	20	-	SMD 0.55 lower (1.19 lower to 0.09 higher)	VERY LOW	CRITICAL
PTSD symptomatology self-rated at 12-18 month follow-up (follow-up 12-18 months; measured with: CPSS/SPTSS change score; Better indicated by lower values)												
2	randomised trials	serious[1]	serious[5]	no serious indirectness	serious[3]	none	55	59	-	SMD 0.6 lower	VERY LOW	CRITICAL

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Waitlist, TAU or no treatment	Relative (95% CI)	Absolute		
										(1.16 to 0.04 lower)		
PTSD symptomatology clinician-rated at endpoint (follow-up 8-20 weeks; measured with: CAPS/K-SADS-E: PTSD/ADIS-C:PTSD/CPTSDI; change score; Better indicated by lower values)												
7	randomised trials	no serious risk of bias	very serious[2]	no serious indirectness	no serious imprecision	none	201	208	-	SMD 1.47 lower (2.03 to 0.9 lower)	LOW	CRITICAL
PTSD symptomatology clinician-rated at 3-month follow-up (follow-up mean 3 months; measured with: CAPS/K-SADS-E: PTSD/ADIS-C:PTSD change score; Better indicated by lower values)												
3	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	59	54	-	SMD 0.75 lower (1.14 to 0.37 lower)	LOW	CRITICAL
PTSD symptomatology clinician-rated at 6-month follow-up (follow-up mean 6 months; measured with: CAPS/K-SADS-E: PTSD; Better indicated by lower values)												
2	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[3]	none	47	42	-	SMD 0.69 lower (1.12 to 0.25 lower)	MODERATE	CRITICAL
PTSD symptomatology clinician-rated at 12-month follow-up (follow-up mean 12 months; measured with: CAPS/K-SADS-E: PTSD/ADIS-C:PTSD/CPTSDI; change score; Better indicated by lower values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Waitlist, TAU or no treatment	Relative (95% CI)	Absolute		
2	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[3]	none	46	42	-	SMD 0.63 lower (1.09 to 0.16 lower)	MODERATE	CRITICAL
PTSD symptomatology clinician-rated at 2-year follow-up (follow-up mean 2 years; measured with: K-SADS-E: PTSD change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[4]	none	21	14	-	SMD 0.22 lower (0.9 lower to 0.46 higher)	LOW	CRITICAL
Remission at endpoint (follow-up 8-12 weeks; assessed with: Number of people no longer meeting diagnostic criteria for PTSD)												
5	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[3]	none	94/132 (71.2%)	59/145 (40.7%)	RR 1.75 (1.33 to 2.3)	305 more per 1000 (from 134 more to 529 more)	MODERATE	CRITICAL
Remission at 1-3 month follow-up (follow-up 1-3 months; assessed with: Number of people no longer above threshold on a scale for PTSD or meeting diagnostic criteria for PTSD)												
2	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[6]	none	31/46 (67.4%)	4/44 (9.1%)	RR 7.33 (2.84 to 18.91)	575 more per 1000 (from 167 more to	MODERATE	CRITICAL

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Waitlist, TAU or no treatment	Relative (95% CI)	Absolute		
										1000 more)		
Remission at 12-18 month follow-up (follow-up 12-18 months; assessed with: Number of people no longer meeting diagnostic criteria for PTSD/scoring above clinical threshold on a validated scale)												
2	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[4]	none	42/108 (38.9%)	34/105 (32.4%)	RR 1.19 (0.85 to 1.67)	62 more per 1000 (from 49 fewer to 217 more)	MODERATE	CRITICAL
Response at endpoint (follow-up 10-13 weeks; assessed with: Number of people showing clinically significant improvement, based on reliable change indices [RCI]/rated as 'much/very much improved' on CGI)												
3	randomised trials	very serious[1]	serious[5]	no serious indirectness	serious[6]	none	58/101 (57.4%)	10/102 (9.8%)	RR 5.35 (1.64 to 17.39)	426 more per 1000 (from 63 more to 1000 more)	VERY LOW	CRITICAL
Anxiety symptoms at endpoint (follow-up 2-20 weeks; measured with: HADS-A/SCARED/RCMAS/SCAS/BAI change score; Better indicated by lower values)												
8	randomised trials	very serious[1]	serious[5]	no serious indirectness	no serious imprecision	none	268	286	-	SMD 0.81 lower (1.23 to 0.4 lower)	VERY LOW	IMPORTANT
Anxiety symptoms at 3-month follow-up (follow-up mean 3 months; measured with: HADS-A/RCMAS change score; Better indicated by lower values)												
2	randomised trials	very serious[1]	serious[5]	no serious indirectness	very serious[7]	none	31	32	-	SMD 0.34	VERY LOW	IMPORTANT

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Waitlist, TAU or no treatment	Relative (95% CI)	Absolute		
										lower (1.18 lower to 0.5 higher)		
Anxiety symptoms at 6-month follow-up (follow-up mean 6 months; measured with: HADS-A change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	19	20	-	SMD 0.87 lower (1.53 to 0.21 lower)	VERY LOW	IMPORTANT
Anxiety symptoms at 12-18 month follow-up (follow-up 12-18 months; measured with: HADS-A/SCARED change score; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	55	59	-	SMD 0.76 lower (1.22 to 0.3 lower)	LOW	IMPORTANT
Depression symptoms at endpoint (follow-up 2-20 weeks; measured with: HADS-D/CES-D/CDI/MFQ/DSRS/BDI change score; Better indicated by lower values)												
13	randomised trials	serious[1]	serious[5]	no serious indirectness	no serious imprecision	none	411	423	-	SMD 0.72 lower (1.03 to 0.41 lower)	LOW	IMPORTANT
Depression symptoms at 1-3 month follow-up (follow-up 1-3 months; measured with: BDI/HADS-D/CES-D/CDI/MINI:Depression /DSRS change score; Better indicated by lower values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Waitlist, TAU or no treatment	Relative (95% CI)	Absolute		
7	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	191	188	-	SMD 0.62 lower (0.87 to 0.36 lower)	LOW	IMPORTANT
Depression symptoms at 6-month follow-up (follow-up mean 6 months; measured with: HADS-D/CDI/MINI:Depression change score; Better indicated by lower values)												
3	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	66	63	-	SMD 0.48 lower (0.84 to 0.13 lower)	LOW	IMPORTANT
Depression symptoms at 12-18 month follow-up (follow-up 12-18 months; measured with: HADS-D/CDI/MINI:Depression/MFQ change score; Better indicated by lower values)												
4	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	101	102	-	SMD 0.5 lower (0.78 to 0.22 lower)	LOW	IMPORTANT
Depression symptoms at 2 year follow-up (follow-up mean 2 years; measured with: CDI change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[7]	none	21	15	-	SMD 0.17 lower (0.83 lower to	VERY LOW	IMPORTANT

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Waitlist, TAU or no treatment	Relative (95% CI)	Absolute		
										0.5 higher)		
Emotional and behavioural problems at endpoint (follow-up 6-13 weeks; measured with: SDQ-A/CBCL change score; Better indicated by lower values)												
5	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	245	231	-	SMD 0.58 lower (0.79 to 0.36 lower)	LOW	IMPORTANT
Emotional and beavioural problems at 18-month follow-up (follow-up mean 18 months; measured with: SDQ change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	36	39	-	MD 2.83 lower (4.79 to 0.87 lower)	LOW	IMPORTANT
Emotional and behavioural problems-Externalizing at endpoint (follow-up 12-20 weeks; measured with: CBCL Externalizing change score; Better indicated by lower values)												
3	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[4]	none	105	105	-	SMD 0.25 lower (0.67 lower to 0.16 higher)	VERY LOW	IMPORTANT
Emotional and behavioural problems-Externalizing at 3-month follow-up (follow-up mean 3 months; measured with: CBCL Externalizing change score; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	32	24	-	SMD 0.77	LOW	IMPORTANT

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Waitlist, TAU or no treatment	Relative (95% CI)	Absolute		
										lower (1.32 to 0.21 lower)		
Emotional and behavioural problems-Externalizing at 6-month follow-up (follow-up mean 6 months; measured with: CBCL Externalizing change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	20	12	-	SMD 0.82 lower (1.57 to 0.07 lower)	LOW	IMPORTANT
Emotional and behavioural problems-Externalizing at 12-month follow-up (follow-up mean 12 months; measured with: CBCL Externalizing change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[4]	none	20	12	-	SMD 0.7 lower (1.44 lower to 0.04 higher)	LOW	IMPORTANT
Emotional and behavioural problems-Externalizing at 2-year follow-up (follow-up mean 2 years; measured with: CBCL Externalizing change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	20	12	-	SMD 1.41 lower (2.22 to 0.61 lower)	LOW	IMPORTANT

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Waitlist, TAU or no treatment	Relative (95% CI)	Absolute		
Emotional and behavioural problems-Internalizing at endpoint (follow-up 12-20 weeks; measured with: CBCL Internalizing change score; Better indicated by lower values)												
2	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	85	93	-	SMD 0.61 lower (1.03 to 0.2 lower)	VERY LOW	IMPORTANT
Emotional and behavioural problems-Internalizing at 3-month follow-up (follow-up mean 3 months; measured with: CBCL Internalizing change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[4]	none	12	12	-	SMD 0.71 lower (1.54 lower to 0.12 higher)	LOW	IMPORTANT
Quality of life (follow-up 6-12 weeks; measured with: KIDSCREEN-27: Global HRQoL T-scores/ILK; change score; Better indicated by higher values)												
2	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	118	101	-	SMD 0.33 higher (0.06 to 0.6 higher)	VERY LOW	IMPORTANT
Functional impairment at endpoint (follow-up 10-13 weeks; measured with: CAPS: Functional impairment/SAS-SR-Y change score; Better indicated by lower values)												
2	randomised trials	very serious[1]	very serious[2]	no serious indirectness	serious[4]	none	47	48	-	SMD 1.56 lower	VERY LOW	IMPORTANT

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Waitlist, TAU or no treatment	Relative (95% CI)	Absolute	Quality	Importance
										(3.14 lower to 0.02 higher)		
Functional impairment at 3-month follow-up (follow-up mean 3 months; measured with: CAPS: Functional impairment; change score; Better indicated by lower values)												
2	randomised trials	serious[1]	serious[5]	no serious indirectness	serious[3]	none	110	110	-	SMD 0.96 lower (1.24 to 0.68 lower)	VERY LOW	IMPORTANT
Functional impairment at 6-month follow-up (follow-up mean 6 months; measured with: CAPS: Functional impairment; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[4]	none	26	28	-	SMD 0.45 lower (0.99 lower to 0.1 higher)	LOW	IMPORTANT
Functional impairment at 12-month follow-up (follow-up mean 12 months; measured with: CAPS: Functional impairment; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	25	28	-	SMD 1.28 lower (1.88 to	LOW	IMPORTANT

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Waitlist, TAU or no treatment	Relative (95% CI)	Absolute		
										0.69 lower)		
Global functioning at endpoint (follow-up 10-20 weeks; measured with: CGAS/fCPSS/GAF change score; Better indicated by higher values)												
4	randomised trials	very serious[1]	serious[5]	no serious indirectness	serious[3]	none	153	168	-	SMD 1.25 higher (0.65 to 1.85 higher)	VERY LOW	IMPORTANT
Global functioning at 3-month follow-up (follow-up mean 3 months; measured with: GAF; change score; Better indicated by higher values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	12	12	-	SMD 1.35 higher (0.45 to 2.25 higher)	LOW	IMPORTANT
Global functioning at 18-month follow-up (follow-up mean 18 months; measured with: CPSS change score; Better indicated by higher values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[4]	none	36	39	-	SMD 0.1 higher (0.35 lower to 0.56 higher)	LOW	IMPORTANT
Discontinuation (follow-up 0.4-20 weeks; assessed with: Number of participants lost to follow-up for any reason)												
18	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[8]	none	70/642 (10.9%)	46/613 (7.5%)	RR 1.3 (0.93 to 1.83)	23 more per 1000 (from 5	MODERATE	CRITICAL

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Waitlist, TAU or no treatment	Relative (95% CI)	Absolute		
										fewer to 62 more)		

ADIS-C=Anxiety Disorder Interview Schedule-Child version: BAI=Beck Anxiety Index; BDI=Beck Depression Inventory; CAPS=Clinician Administered PTSD Symptom; CBCL=Child Behavioural Checklist; CBT=cognitive behavioural therapy; CDI=Children's Depression Inventory; CES-D=Centre for Epidemiological Studies-Depression; CGAS= Children's Global Assessment Scale; CGI=Clinical Global Impression; CI=confidence interval; CPSS=Child PTSD Symptom Scale; CPTS-RI=Child Post-Traumatic Symptom-Reaction Index; CRIES=Children's Revised Impact of Event Scale; CRTI=Children's Response to Trauma Inventory; DSRS=Depression Self-Rating Scale; GAF=Global Assessment of Functioning; HRQoL=Health-Related Quality of Life; KIDSCREEN-27=Health-related quality of life questionnaire for children, young people and their parents ; K-SADS-E=Kiddie Schedule for Affective Disorders and Schizophrenia-Epidemiological; HADS-A/D=Hospital Anxiety and Depression Scale-Anxiety/Depression; ILK=an instrument to measure quality of life in children and adolescents; MFQ=Mood and Feeling Questionnaire; PTSD=post-traumatic stress disorder; RCMAS=Revised Children's Manifest Anxiety Scale; RR=risk ratio; SAS-SR=Social Adjustment Scale-Self Report; SCARED=Screen for Child Anxiety Related Disorders; SCAS=Spence Children's Anxiety Scale; SDQ =Strength and Difficulties Questionnaires; SMD=standard mean difference; SPTSS=Screen for Post-Traumatic Stress Symptoms; TAU=treatment as usual; UCLA PTSD-RI=UCLA PTSD-Reaction Index

[1] *Risk of bias is high or unclear across multiple domains*
[2] *Considerable heterogeneity (I2>80%)*
[3] *OIS not met (N<400)*
[4] *95% CI crosses both line of no effect and threshold for clinically important benefit*
[5] *Substantial heterogeneity (I2=>50%)*
[6] *OIS not met (events<300)*
[7] *95% CI crosses line of no effect and thresholds for both clinically important benefit and harm*
[8] *95% CI crosses both line of no effect and threshold for clinically important harm*

Trauma-focused CBT versus supportive counselling for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Supportive counselling	Relative (95% CI)	Absolute		
PTSD symptomatology self-rated at endpoint (follow-up 6-15 weeks; measured with: CRIES/TSCC-PTSD/UCLA PTSD-RI/CPSS change score; Better indicated by lower values)												
5	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	165	160	-	SMD 0.49 lower (0.71 to 0.26 lower)	LOW	CRITICAL
PTSD symptomatology self-rated at 3-month follow-up (follow-up mean 3 months; measured with: CRIES change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	10	10	-	SMD 1.58 lower (2.62 to 0.55 lower)	VERY LOW	CRITICAL
PTSD symptomatology self-rated at 6-month follow-up (follow-up mean 6 months; measured with: TSCC-PTSD/VCPSS change score; Better indicated by lower values)												
2	randomised trials	serious[1]	serious[3]	no serious indirectness	serious[2]	none	60	60	-	SMD 0.7 lower (1.29 to 0.11 lower)	VERY LOW	CRITICAL
PTSD symptomatology self-rated at 12-17 month follow-up (follow-up 12-17 months; measured with: TSCC-PTSD/CPSS change score; Better indicated by lower values)												
3	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	91	90	-	SMD 0.69 lower (0.99 to	LOW	CRITICAL

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Supportive counselling	Relative (95% CI)	Absolute	Quality	Importance
										0.39 lower)		
PTSD symptomatology clinician-rated at endpoint (follow-up 8-14 weeks; measured with: K-SADS-PL: PTSD/CPSS-I/CAPS; change score; Better indicated by lower values)												
3	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[2]	none	121	110	-	SMD 0.71 lower (1.1 to 0.31 lower)	MODERATE	CRITICAL
PTSD symptomatology clinician-rated at 3-month follow-up (follow-up mean 3 months; measured with: CAPS change score; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[4]	none	26	24	-	SMD 0.25 lower (0.81 lower to 0.31 higher)	MODERATE	CRITICAL
PTSD symptomatology clinician-rated at 6-month follow-up (follow-up mean 6 months; measured with: CAPS change score; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[4]	none	26	23	-	SMD 0.43 lower (1 lower to 0.13 higher)	MODERATE	CRITICAL
PTSD symptomatology clinician-rated at 12-month follow-up (follow-up mean 12 months; measured with: CAPS/CPSS-I change score; Better indicated by lower values)												
2	randomised trials	no serious	no serious inconsistency	no serious indirectness	serious[2]	none	56	53	-	SMD 0.89	MODERATE	CRITICAL

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Supportive counselling	Relative (95% CI)	Absolute		
		risk of bias								lower (1.28 to 0.49 lower)		
Remission at endpoint (follow-up 8-15 weeks; assessed with: Number of people no longer meeting diagnostic criteria for PTSD)												
4	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[5]	none	71/115 (61.7%)	35/93 (37.6%)	RR 1.67 (1.25 to 2.23)	252 more per 1000 (from 94 more to 463 more)	MODERATE	CRITICAL
Remission at 6-month follow-up (follow-up mean 6 months; assessed with: Number of people no longer meeting diagnostic criteria for PTSD)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[5]	none	12/19 (63.2%)	5/19 (26.3%)	RR 2.4 (1.05 to 5.49)	368 more per 1000 (from 13 more to 1000 more)	MODERATE	CRITICAL
Remission at 12-month follow-up (follow-up mean 12 months; assessed with: Number of people no longer meeting diagnostic criteria for PTSD)												
2	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[5]	none	46/60 (76.7%)	29/58 (50%)	RR 1.56 (1.17 to 2.08)	280 more per 1000 (from 85 more to 540 more)	MODERATE	CRITICAL
Response at endpoint (follow-up mean 14 weeks; assessed with: Number of people showing clinically significant improvement (based on RCI))												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Supportive counselling	Relative (95% CI)	Absolute		
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[5]	none	23/31 (74.2%)	8/30 (26.7%)	RR 2.78 (1.48 to 5.22)	475 more per 1000 (from 128 more to 1000 more)	MODERATE	CRITICAL
Response at 12-month follow-up (follow-up mean 12 months; assessed with: Number of people showing clinically significant improvement (based on RCI))												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[5]	none	22/31 (71%)	12/30 (40%)	RR 1.77 (1.08 to 2.9)	308 more per 1000 (from 32 more to 760 more)	MODERATE	CRITICAL
Dissociative symptoms at endpoint (follow-up mean 12 weeks; measured with: TSCC-Dissociation change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[4]	none	41	41	-	SMD 0.27 lower (0.71 lower to 0.16 higher)	LOW	IMPORTANT
Dissociative symptoms at 6-month follow-up (follow-up mean 6 months; measured with: TSCC-Dissociation change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	41	41	-	SMD 0.7 lower (1.15 to	LOW	IMPORTANT

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Supportive counselling	Relative (95% CI)	Absolute	Quality	Importance
										0.25 lower)		
Dissociative symptoms at 12-month follow-up (follow-up mean 12 months; measured with: TSCC-Dissociation change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	41	41	-	SMD 0.49 lower (0.93 to 0.05 lower)	LOW	IMPORTANT
Anxiety symptoms at endpoint (follow-up 8-12 weeks; measured with: STAI-State/SCARED/TSCC:Anxiety change score; Better indicated by lower values)												
4	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	222	211	-	SMD 0.29 lower (0.48 to 0.1 lower)	MODERATE	IMPORTANT
Anxiety symptoms at 6-month follow-up (follow-up mean 6 months; measured with: STAI-State change score; Better indicated by lower values)												
2	randomised trials	serious[1]	serious[3]	no serious indirectness	serious[4]	none	121	112	-	SMD 0.3 lower (0.82 lower to 0.22 higher)	VERY LOW	IMPORTANT
Anxiety symptoms at 12-month follow-up (follow-up mean 12 months; measured with: STAI-State change score; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[4]	none	123	114	-	SMD 0.17 lower (0.51 lower to	LOW	IMPORTANT

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Supportive counselling	Relative (95% CI)	Absolute		
										0.17 higher)		
Depression symptoms at endpoint (follow-up 6-15 weeks; measured with: BDI/CES-D/CDI/TSCC:Depression change score; Better indicated by lower values)												
7	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	282	270	-	SMD 0.41 lower (0.67 to 0.16 lower)	MODERATE	IMPORTANT
Depression symptoms at 3-month follow-up (follow-up mean 3 months; measured with: CES-D/MINI:Depression change score; Better indicated by lower values)												
2	randomised trials	serious[1]	very serious[6]	no serious indirectness	very serious[7]	none	36	34	-	SMD 0.46 lower (2.26 lower to 1.33 higher)	VERY LOW	IMPORTANT
Depression symptoms at 6-month follow-up (follow-up mean 6 months; measured with: BDI/CDI/MINI:Depression change score; Better indicated by lower values)												
4	randomised trials	serious[1]	serious[3]	no serious indirectness	serious[4]	none	166	154	-	SMD 0.3 lower (0.74 lower to 0.13 higher)	VERY LOW	IMPORTANT
Depression symptoms at 12-17 month follow-up (follow-up 12-17 months; measured with: BDI/CDI/MINI:Depression change score; Better indicated by lower values)												
5	randomised trials	serious[1]	serious[3]	no serious indirectness	serious[4]	none	198	186	-	SMD 0.34 lower (0.74	VERY LOW	IMPORTANT

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Supportive counselling	Relative (95% CI)	Absolute	Quality	Importance
										lower to 0.07 higher)		
Emotional and behavioural problems-Internalizing at endpoint (follow-up mean 12 weeks; measured with: CBCL Internalizing change score; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	129	132	-	SMD 0.08 lower (0.33 lower to 0.16 higher)	LOW	IMPORTANT
Emotional and behavioural problems-Internalizing at 6-month follow-up (follow-up mean 6 months; measured with: CBCL Internalizing change score; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[8]	none	116	108	-	SMD 0.17 higher (0.19 lower to 0.53 higher)	LOW	IMPORTANT
Emotional and behavioural problems-Internalizing at 12-month follow-up (follow-up mean 12 months; measured with: CBCL Internalizing change score; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	119	109	-	SMD 0.02 higher (0.24 lower to	LOW	IMPORTANT

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Supportive counselling	Relative (95% CI)	Absolute		
										0.28 higher)		
Emotional and behavioural problems-Externalizing at endpoint (follow-up mean 12 months; measured with: CBCL Externalizing change score; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	129	132	-	SMD 0.15 lower (0.4 lower to 0.09 higher)	LOW	IMPORTANT
Emotional and behavioural problems-Externalizing at 6-month follow-up (follow-up mean 6 months; measured with: CBCL Externalizing change score; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	116	108	-	SMD 0.04 higher (0.22 lower to 0.31 higher)	LOW	IMPORTANT
Emotional and behavioural problems-Externalizing at 12-month follow-up (follow-up mean 12 months; measured with: CBCL Externalizing change score; Better indicated by lower values)												
2	randomised trials	serious[1]	serious[3]	no serious indirectness	serious[8]	none	119	109	-	SMD 0.18 higher (0.27 lower to 0.62 higher)	VERY LOW	IMPORTANT

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Supportive counselling	Relative (95% CI)	Absolute		
Behaviour problems at endpoint (follow-up 8-12 weeks; measured with: CBCL total score; change score; Better indicated by lower values)												
3	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	193	192	-	SMD 0.11 lower (0.31 lower to 0.09 higher)	LOW	IMPORTANT
Behaviour problems at 6-month follow-up (follow-up mean 6 months; measured with: CBCL total score; change score; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	116	108	-	SMD 0.08 higher (0.18 lower to 0.34 higher)	LOW	IMPORTANT
Behaviour problems at 12-month follow-up (follow-up mean 12 months; measured with: CBCL total score; change score; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	119	109	-	SMD 0.04 higher (0.32 lower to 0.41 higher)	LOW	IMPORTANT
Functional impairment at 3-month follow-up (follow-up mean 3 months; measured with: CAPS: Functional impairment; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[4]	none	26	24	-	SMD 0.43 lower (1	LOW	IMPORTANT

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Supportive counselling	Relative (95% CI)	Absolute		
										lower to 0.13 higher)		
Functional impairment at 6-month follow-up (follow-up mean 6 months; measured with: CAPS: Functional impairment; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[7]	none	26	23	-	SMD 0.01 higher (0.55 lower to 0.57 higher)	VERY LOW	IMPORTANT
Functional impairment at 12-month follow-up (follow-up mean 12 months; measured with: CAPS: Functional impairment; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	25	23	-	SMD 1.12 lower (1.73 to 0.5 lower)	LOW	IMPORTANT
Global functioning at endpoint (follow-up 14-15 weeks; measured with: CGAS; change score; Better indicated by higher values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	50	49	-	SMD 1.08 higher (0.65 to 1.5 higher)	LOW	IMPORTANT
Global functioning at 6-month follow-up (follow-up mean 6 months; measured with: CGAS; change score; Better indicated by higher values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Supportive counselling	Relative (95% CI)	Absolute		
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	19	19	-	SMD 1.05 higher (0.37 to 1.73 higher)	LOW	IMPORTANT
Global functioning at 12-month follow-up (follow-up mean 12 months; measured with: CGAS; change score; Better indicated by higher values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	31	30	-	SMD 1 higher (0.47 to 1.54 higher)	LOW	IMPORTANT
Discontinuation (follow-up 3-15 weeks; assessed with: Number of participants lost to follow-up for any reason)												
8	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[4]	none	80/347 (23.1%)	95/331 (28.7%)	RR 0.78 (0.61 to 1.01)	63 fewer per 1000 (from 112 fewer to 3 more)	MODERATE	CRITICAL

BDI= Beck Depression Inventory; CAPS= Clinician Administered PTSD Symptom; CBCL= Child Behavioural Checklist; CBT=cognitive behavioural therapy; CDI= Children's Depression Inventory; CES-D= Centre for Epidemiological Studies-Depression; CGAS= Children's Global Assessment Scale; CI=confidence interval; CPSS= Child PTSD Symptom Scale; CRIES= Children's Revised Impact of Event Scale; K-SADS= Kiddie Schedule for Affective Disorders and Schizophrenia-Epidemiological; PTSD=post-traumatic stress disorder; RCI=Reliable Change Indecies; RR=risk ratio; SCARED=Screen for Child Anxiety Related Disorders; SMD=standardised mean difference; STAI=State-Trait Anxiety Inventory; TSCC =Trauma Symptom Checklist for Children; UCLA PTSD-RI=UCLA PTSD-Reaction Index

[1] *Risk of bias is high or unclear across multiple domains*

[2] *OIS not met (N<400)*

[3] *Substantial heterogeneity (I2>50%)*

[4] *95% CI crosses both line of no effect and threshold for clinically important benefit*

[5] *OIS not met (events<300)*

[6] *Considerable heterogeneity (I2>80%)*

[7] *95% CI crosses line of no effect and thresholds for both clinically important benefit and harm*
[8] *95% CI crosses both line of no effect and threshold for clinically important harm*

Trauma-focused CBT versus eye movement desensitisation and reprocessing (EMDR) for the delayed treatment (>3 months) of clinically important symptoms/PTSD - Single incident index trauma

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Eye movement desensitisation and reprocessing (EMDR)	Relative (95% CI)	Absolute	Quality	Importance
PTSD symptomatology self-rated at endpoint (follow-up mean 6 weeks; measured with: CRTI change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	42	43	-	SMD 0.13 lower (0.56 lower to 0.29 higher)	VERY LOW	CRITICAL
PTSD symptomatology self-rated at 3-month follow-up (follow-up mean 3 months; measured with: CRTI change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	42	43	-	SMD 0.35 lower (0.77 lower to 0.08 higher)	VERY LOW	CRITICAL
PTSD symptomatology self-rated at 12-month follow-up (follow-up mean 12 months; measured with: CRTI change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	42	43	-	SMD 0.24 lower (0.66	VERY LOW	CRITICAL

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Eye movement desensitisation and reprocessing (EMDR)	Relative (95% CI)	Absolute		
										lower to 0.19 higher)		
PTSD symptomatology clinician-rated (follow-up mean 8 weeks; measured with: CAPS-CA change score; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[3]	none	23	25	-	SMD 0.04 higher (0.53 lower to 0.6 higher)	LOW	CRITICAL
Emotional and behavioural problems at endpoint (follow-up mean 6 weeks; measured with: SDQ-A change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[4]	none	42	43	-	SMD 0.55 higher (0.12 to 0.99 higher)	VERY LOW	IMPORTANT
Emotional and behavioural problems at 3-month follow-up (follow-up mean 3 months; measured with: SDQ-A change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[4]	none	42	43	-	SMD 0.46 higher (0.03 to 0.89 higher)	VERY LOW	IMPORTANT
Emotional and behavioural problems at 12-month follow-up (follow-up mean 12 months; measured with: SDQ-A change score; Better indicated by lower values)												

Quality assessment							No of patients		Effect			
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Trauma-focused CBT**	**Eye movement desensitisation and reprocessing (EMDR)**	**Relative (95% CI)**	**Absolute**	**Quality**	**Importance**
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[4]	none	42	43	-	SMD 0.45 higher (0.02 to 0.89 higher)	VERY LOW	IMPORTANT
Quality of life at endpoint (follow-up mean 6 weeks; measured with: KIDSCREEN-27: Global HRQoL T-scores; change score; Better indicated by higher values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[5]	none	42	43	-	SMD 0.23 lower (0.66 lower to 0.2 higher)	VERY LOW	IMPORTANT
Quality of life at 3-month follow-up (follow-up mean 3 months; measured with: KIDSCREEN-27: Global HRQoL T-scores; change score; Better indicated by higher values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[5]	none	42	43	-	SMD 0.39 lower (0.82 lower to 0.04 higher)	VERY LOW	IMPORTANT
Quality of life at 12-month follow-up (follow-up mean 12 months; measured with: KIDSCREEN-27: Global HRQoL T-scores; change score; Better indicated by higher values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[5]	none	42	43	-	SMD 0.3 lower (0.73	VERY LOW	IMPORTANT

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Eye movement desensitisation and reprocessing (EMDR)	Relative (95% CI)	Absolute		
										lower to 0.12 higher)		
Discontinuation (follow-up 6-8 weeks; assessed with: Number of participants lost to follow-up for any reason)												
2	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[3]	none	6/65 (9.2%)	8/68 (11.8%)	RR 0.8 (0.31 to 2.05)	24 fewer per 1000 (from 81 fewer to 124 more)	LOW	CRITICAL

CAPS=Clinician Administered PTSD Symptom;; CBT=cognitive behavioural therapy; CI=confidence interval; CRTI= Children's Response to Trauma Inventory; EMDR=Eye Movement Desensitisation and Reprocessing; HRQoL=Health-Related Quality of Life; KIDSCREEN-27= Health-related quality of life questionnaire for children, young people and their parents; PTSD=post-traumatic stress disorder; RR=risk ratio; SDQ-A= Strength and Difficulties Questionnaires; SMD=standard mean difference

[1] Risk of bias is high or unclear across multiple domains

[2] 95% CI crosses both line of no effect and threshold for clinically important benefit

[3] 95% CI crosses line of no effect and thresholds for both clinically important benefit and harm

[4] OIS not met (N<400)

[5] 95% CI crosses both line of no effect and threshold for clinically important harm

Trauma-focused CBT versus combined somatic and cognitive therapies for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Combined somatic and cognitive therapies	Relative (95% CI)	Absolute	Quality	Importance
PTSD symptomatology self-rated at endpoint (follow-up mean 2 weeks; measured with: SPTSS change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	19	20	-	SMD 0.87 higher (0.21 to 1.53 higher)	VERY LOW	CRITICAL
PTSD symptomatology self-rated at 3-month follow-up (follow-up mean 3 months; measured with: SPTSS change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	19	20	-	SMD 0.8 higher (0.15 to 1.46 higher)	VERY LOW	CRITICAL
PTSD symptomatology self-rated at 6-month follow-up (follow-up mean 6 months; measured with: SPTSS change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	19	20	-	SMD 0.83 higher (0.17 to 1.48 higher)	VERY LOW	CRITICAL
PTSD symptomatology self-rated at 12-month follow-up (follow-up mean 12 months; measured with: SPTSS change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	19	20	-	SMD 0.92 higher (0.26 to 1.58 higher)	VERY LOW	CRITICAL
Anxiety symptoms at endpoint (follow-up mean 2 weeks; measured with: HADS-A change score; Better indicated by lower values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Combined somatic and cognitive therapies	Relative (95% CI)	Absolute		
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	19	20	-	SMD 1.01 higher (0.34 to 1.68 higher)	VERY LOW	IMPORTANT
Anxiety symptoms at 3-month follow-up (follow-up mean 3 months; measured with: HADS-A change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	19	20	-	SMD 0.91 higher (0.25 to 1.57 higher)	VERY LOW	IMPORTANT
Anxiety symptoms at 6-month follow-up (follow-up mean 6 months; measured with: HADS-A change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	19	20	-	SMD 0.22 higher (0.41 lower to 0.85 higher)	VERY LOW	IMPORTANT
Anxiety symptoms at 12-month follow-up (follow-up mean 12 months; measured with: HADS-A change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[4]	none	19	20	-	SMD 0.09 lower (0.71 lower to 0.54 higher)	VERY LOW	IMPORTANT
Depression symptoms at endpoint (follow-up mean 2 weeks; measured with: HADS-D change score; Better indicated by lower values)												

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Combined somatic and cognitive therapies	Relative (95% CI)	Absolute	Quality	Importance
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	19	20	-	SMD 1.3 higher (0.6 to 1.99 higher)	VERY LOW	IMPORTANT
Depression symptoms at 3-month follow-up (follow-up mean 3 months; measured with: HADS-D change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	19	20	-	SMD 0.45 higher (0.19 lower to 1.09 higher)	VERY LOW	IMPORTANT
Depression symptoms at 6-month follow-up (follow-up mean 6 months; measured with: HADS-D change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	19	20	-	SMD 0.3 higher (0.33 lower to 0.93 higher)	VERY LOW	IMPORTANT
Depression symptoms at 12-month follow-up (follow-up mean 12 months; measured with: HADS-D change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	19	20	-	SMD 0.66 higher (0.02 to 1.31 higher)	VERY LOW	IMPORTANT
Discontinuation (follow-up mean 2 weeks; assessed with: Number of participants lost to follow-up for any reason)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[4]	none	1/20 (5%)	0/20 (0%)	RR 3 (0.13 to 69.52)	-	VERY LOW	CRITICAL

CBT=cognitive behavioural therapy; CI=confidence interval; HADS-A/D= Hospital Anxiety and Depression Scale-Anxiety/Depression; PTSD=post-traumatic stress disorder; RR=risk ratio; SMD=standardised mean difference; SPTSS= Screen for Post-Traumatic Stress Symptoms
[1] Risk of bias is high or unclear across multiple domains
[2] OIS not met (N<400)
[3] 95% CI crosses both line of no effect and threshold for clinically important harm
[4] 95% CI crosses line of no effect and thresholds for both clinically important benefit and harm

Trauma-focused CBT + parent training versus waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT + parent training	Waitlist	Relative (95% CI)	Absolute	Quality	Importance
PTSD symptomatology clinician-rated at endpoint (follow-up mean 20 weeks; measured with: ADIS-C: PTSD; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	12	12	-	SMD 1.73 lower (2.69 to 0.77 lower)	LOW	CRITICAL
PTSD symptomatology clinician-rated at 3-month follow-up (follow-up mean 3 months; measured with: ADIS-C: PTSD; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	12	12	-	SMD 1.34 lower (2.24 to 0.44 lower)	LOW	CRITICAL
Anxiety symptoms at endpoint (follow-up mean 20 weeks; measured with: RCMAS; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	12	12	-	SMD 0.33 lower (1.13 lower to 0.48 higher)	LOW	IMPORTANT
Anxiety symptoms at 3-month follow-up (follow-up mean 3 months; measured with: RCMAS; change score; Better indicated by lower values)												

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT + parent training	Waitlist	Relative (95% CI)	Absolute	Quality	Importance
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	12	12	-	SMD 0.75 lower (1.58 lower to 0.09 higher)	LOW	IMPORTANT
Depression symptoms at endpoint (follow-up mean 20 weeks; measured with: CDI; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	12	12	-	SMD 0.61 lower (1.43 lower to 0.21 higher)	LOW	IMPORTANT
Depression symptoms at 3-month follow-up (follow-up mean 3 months; measured with: CDI; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	12	12	-	SMD 0.36 lower (1.17 lower to 0.45 higher)	LOW	IMPORTANT
Emotional and behavioural problems-Internalizing at endpoint (follow-up mean 20 weeks; measured with: CBCL: Internalizing; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	12	12	-	SMD 0.45 lower (1.26 lower to 0.36 higher)	LOW	IMPORTANT
Emotional and behavioural problems-Internalizing at 3-month follow-up (follow-up mean 3 months; measured with: CBCL: Internalizing; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	12	12	-	SMD 0.92 lower (1.77 to 0.07 lower)	LOW	IMPORTANT

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT + parent training	Waitlist	Relative (95% CI)	Absolute	Quality	Importance
Emotional and behavioural problems-Externalizing at endpoint (follow-up mean 20 weeks; measured with: CBCL: Externalizing; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	12	12	-	SMD 0.44 lower (1.25 lower to 0.37 higher)	LOW	IMPORTANT
Emotional and behavioural problems-Externalizing at 3-month follow-up (follow-up mean 3 months; measured with: CBCL: Externalizing; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	12	12	-	SMD 0.88 lower (1.73 to 0.04 lower)	LOW	IMPORTANT
Global functioning at endpoint (follow-up mean 20 weeks; measured with: GAF; change score; Better indicated by higher values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	12	12	-	SMD 2.02 higher (1.01 to 3.04 higher)	LOW	IMPORTANT
Global functioning at 3-month follow-up (follow-up mean 3 months; measured with: GAF; change score; Better indicated by higher values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	12	12	-	SMD 2.04 higher (1.02 to 3.06 higher)	LOW	IMPORTANT
Discontinuation (follow-up mean 20 weeks; assessed with: Number of participants lost to follow-up for any reason)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[4]	none	3/12 (25%)	2/12 (16.7%)	RR 1.5 (0.3 to 7.43)	83 more per 1000 (from 117 fewer	LOW	CRITICAL

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT + parent training	Waitlist	Relative (95% CI)	Absolute		
										to 1000 more)		

ADIS-C= Anxiety Disorder Interview Schedule-Child version; CBT=cognitive behavioural therapy; CBCL= Child Behavioural Checklist; CBT=cognitive behavioural therapy; CDI= Children's Depression Inventory; CI=confidence interval; GAF= Global Assessment of Functioning; PTSD=post-traumatic stress disorder; RCMAS= Revised Children's Manifest Anxiety Scale; RR=risk ratio; SMD=standardised mean difference
[1] Risk of bias is high or unclear across multiple domains
[2] OIS not met (N<400)
[3] 95% CI crosses both line of no effect and threshold for clinically important benefit
[4] 95% CI crosses line of no effect and thresholds for both clinically important benefit and harm

Trauma-focused CBT + parent training versus trauma-focused CBT (child only) for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT + parent training	Trauma-focused CBT (child only)	Relative (95% CI)	Absolute		
PTSD symptomatology clinician-rated at endpoint (follow-up mean 20 weeks; measured with: ADIS-C: PTSD; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	12	12	-	SMD 0.36 lower (1.16 lower to 0.45 higher)	LOW	CRITICAL
PTSD symptomatology clinician-rated at 3-month follow-up (follow-up mean 3 months; measured with: ADIS-C: PTSD; change score; Better indicated by lower values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT + parent training	Trauma-focused CBT (child only)	Relative (95% CI)	Absolute		
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	12	12	-	SMD 0.48 lower (1.29 lower to 0.34 higher)	LOW	CRITICAL
Anxiety symptoms at endpoint (follow-up mean 20 weeks; measured with: RCMAS; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	12	12	-	SMD 0.14 higher (0.66 lower to 0.94 higher)	VERY LOW	IMPORTANT
Anxiety symptoms at 3-month follow-up (follow-up mean 3 months; measured with: RCMAS; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	12	12	-	SMD 0.03 higher (0.77 lower to 0.83 higher)	VERY LOW	IMPORTANT
Depression symptoms at endpoint (follow-up mean 20 weeks; measured with: CDI; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	12	12	-	SMD 0.29 lower (1.09 lower to 0.52 higher)	VERY LOW	IMPORTANT
Depression symptoms at 3-month follow-up (follow-up mean 3 months; measured with: CDI; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	12	12	-	SMD 0.07 lower (0.87 lower to	VERY LOW	IMPORTANT

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT + parent training	Trauma-focused CBT (child only)	Relative (95% CI)	Absolute		
										0.73 higher)		
Emotional and behavioural problems-Internalizing at endpoint (follow-up mean 20 weeks; measured with: CBCL: Internalizing; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	12	12	-	SMD 0.29 lower (1.1 lower to 0.51 higher)	VERY LOW	IMPORTANT
Emotional and behavioural problems-Internalizing at 3-month follow-up (follow-up mean 3 months; measured with: CBCL: Internalizing; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	12	12	-	SMD 0.15 lower (0.95 lower to 0.66 higher)	VERY LOW	IMPORTANT
Emotional and behavioural problems-Externalizing at endpoint (follow-up mean 20 weeks; measured with: CBCL: Externalizing; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	12	12	-	SMD 0.79 lower (1.63 lower to 0.04 higher)	LOW	IMPORTANT
Emotional and behavioural problems-Externalizing at 3-month follow-up (follow-up mean 3 months; measured with: CBCL: Externalizing; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	12	12	-	SMD 0.14 lower (0.94 lower to	VERY LOW	IMPORTANT

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT + parent training	Trauma-focused CBT (child only)	Relative (95% CI)	Absolute	Quality	Importance
										0.67 higher)		
Global functioning at endpoint (follow-up mean 20 weeks; measured with: GAF; change score; Better indicated by higher values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	12	12	-	SMD 0.3 higher (0.5 lower to 1.11 higher)	VERY LOW	IMPORTANT
Global functioning at 3-month follow-up (follow-up mean 3 months; measured with: GAF; change score; Better indicated by higher values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	12	12	-	SMD 0.66 higher (0.16 lower to 1.49 higher)	LOW	IMPORTANT
Discontinuation (follow-up mean 20 weeks; assessed with: Number of participants lost to follow-up for any reason)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[3]	none	3/12 (25%)	3/12 (25%)	RR 1 (0.25 to 4)	0 fewer per 1000 (from 188 fewer to 750 more)	LOW	CRITICAL

ADIS-C= Anxiety Disorder Interview Schedule-Child version; CBCL= Child Behavioural Checklist; CBT=cognitive behavioural therapy; CDI= Children's Depression Inventory; CI=confidence interval; GAF= Global Assessment of Functioning; PTSD=post-traumatic stress disorder; RCMAS=; RR=risk ratio; SMD=standardised mean difference

[1] Risk of bias is high or unclear across multiple domains

[2] 95% CI crosses both line of no effect and threshold for clinically important benefit

[3] 95% CI crosses line of no effect and thresholds for both clinically important benefit and harm

Trauma-focused CBT versus parent training (CBT with parent-only) for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Parent training (CBT with parent-only)	Relative (95% CI)	Absolute	Quality	Importance
PTSD symptomatology clinician-rated at endpoint (follow-up mean 12 weeks; measured with: K-SADS-E: PTSD; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	21	20	-	SMD 0.34 lower (0.96 lower to 0.27 higher)	LOW	CRITICAL
PTSD symptomatology clinician-rated at 3-month follow-up (follow-up mean 3 months; measured with: K-SADS-E: PTSD; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	21	20	-	SMD 0.12 higher (0.49 lower to 0.73 higher)	LOW	CRITICAL
PTSD symptomatology clinician-rated at 6-month follow-up (follow-up mean 6 months; measured with: K-SADS-E: PTSD; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	21	20	-	SMD 0.25 lower (0.87 lower to 0.36 higher)	LOW	CRITICAL
PTSD symptomatology clinician-rated at 12-month follow-up (follow-up mean 12 months; measured with: K-SADS-E: PTSD; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[4]	none	21	20	-	SMD 0.07 higher (0.54 lower to 0.68 higher)	VERY LOW	CRITICAL

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Parent training (CBT with parent-only)	Relative (95% CI)	Absolute	Quality	Importance
PTSD symptomatology clinician-rated at 2-year follow-up (follow-up mean 2 years; measured with: K-SADS-E: PTSD; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[5]	none	21	20	-	SMD 0.64 higher (0.01 to 1.27 higher)	LOW	CRITICAL
Emotional and behavioural problems-Externalizing at endpoint (follow-up mean 12 weeks; measured with: CBCL Externalizing change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[4]	none	20	18	-	SMD 0.13 higher (0.51 lower to 0.77 higher)	VERY LOW	IMPORTANT
Emotional and behavioural problems-Externalizing at 3-month follow-up (follow-up mean 3 months; measured with: CBCL Externalizing change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	20	18	-	SMD 0.61 lower (1.27 lower to 0.04 higher)	LOW	IMPORTANT
Emotional and behavioural problems-Externalizing at 6-month follow-up (follow-up mean 6 months; measured with: CBCL Externalizing change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[5]	none	20	18	-	SMD 0.75 lower (1.41 to 0.09 lower)	LOW	IMPORTANT
Emotional and behavioural problems-Externalizing at 12-month follow-up (follow-up mean 12 months; measured with: CBCL Externalizing change score; Better indicated by lower values)												

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Parent training (CBT with parent-only)	Relative (95% CI)	Absolute	Quality	Importance
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[5]	none	20	18	-	SMD 0.79 lower (1.45 to 0.12 lower)	LOW	IMPORTANT
Emotional and behavioural problems-Externalizing at 2-year follow-up (follow-up mean 2 years; measured with: CBCL Externalizing change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	20	18	-	SMD 0.53 lower (1.18 lower to 0.12 higher)	LOW	IMPORTANT
Depression symptoms at endpoint (follow-up mean 12 weeks; measured with: CDI change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	21	20	-	SMD 0.3 higher (0.32 lower to 0.92 higher)	LOW	IMPORTANT
Depression symptoms at 3-month follow-up (follow-up mean 3 months; measured with: CDI change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	21	20	-	SMD 0.12 higher (0.49 lower to 0.73 higher)	LOW	IMPORTANT
Depression symptoms at 6-month follow-up (follow-up mean 6 months; measured with: CDI change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[4]	none	21	20	-	SMD 0.09 higher (0.53 lower to 0.7 higher)	VERY LOW	IMPORTANT
Depression symptoms at 12-month follow-up (follow-up mean 12 months; measured with: CDI change score; Better indicated by lower values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT	Parent training (CBT with parent-only)	Relative (95% CI)	Absolute		
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	21	20	-	SMD 0.31 higher (0.31 lower to 0.93 higher)	LOW	IMPORTANT
Depression symptoms at 2-year follow-up (follow-up mean 2 years; measured with: CDI change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[5]	none	21	20	-	SMD 0.73 higher (0.1 to 1.37 higher)	LOW	IMPORTANT

CBCL= Child Behavioural Checklist; CBT=cognitive behavioural therapy; CDI=Children's Depression Inventory; CI=confidence interval; K-SADS-E=Kiddie Schedule for Affective Disorders and Schizophrenia-Epidemiological; PTSD=post-traumatic stress disorder; RR=risk ratio; SMD=standard mean difference

[1] Risk of bias is high or unclear across multiple outcomes

[2] 95% CI crosses both line of no effect and threshold for clinically important benefit

[3] 95% CI crosses both line of no effect and threshold for clinically important harm

[4] 95% CI crosses line of no effect and thresholds for both clinically important benefit and harm

[5] OIS not met (N<400)

Trauma-focused CBT (+ psychoeducational group) versus psychoeducational group for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT (+ psychoeducational group)	Psychoeducational group	Relative (95% CI)	Absolute	Quality	Importance
PTSD symptomatology self-rated at endpoint (follow-up mean 20 weeks; measured with: UCLA PTSD-RI; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	66	61	-	SMD 0.46 lower (0.81 to 0.11 lower)	LOW	CRITICAL
PTSD symptomatology self-rated at 4 month follow-up (follow-up mean 4 months; measured with: UCLA PTSD-RI; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	36	29	-	SMD 0.57 lower (1.07 to 0.07 lower)	LOW	CRITICAL
Response at endpoint (follow-up mean 20 weeks; assessed with: Number of people showing clinically significant improvement, based on reliable change indices (RCI))												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	38/77 (49.4%)	20/82 (24.4%)	RR 2.02 (1.3 to 3.15)	249 more per 1000 (from 73 more to 524 more)	LOW	CRITICAL
Response at 4-month follow-up (follow-up mean 4 months; assessed with: Number of people showing clinically significant improvement, based on reliable change indices (RCI))												

Quality assessment							No of patients		Effect			
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Trauma-focused CBT (+ psychoeducational group)**	**Psychoeducational group**	**Relative (95% CI)**	**Absolute**	**Quality**	**Importance**
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	29/77 (37.7%)	14/82 (17.1%)	RR 2.21 (1.26 to 3.85)	207 more per 1000 (from 44 more to 487 more)	LOW	CRITICAL
Depression symptoms at endpoint (follow-up mean 20 weeks; measured with: DSRS change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	65	60	-	SMD 0.44 lower (0.8 to 0.09 lower)	LOW	IMPORTANT
Depression symptoms at 4 month follow-up (follow-up mean 4 months; measured with: DSRS change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	36	30	-	SMD 0.59 lower (1.08 to 0.09 lower)	LOW	IMPORTANT
Discontinuation (follow-up mean 20 weeks; assessed with: Number of participants lost to follow-up for any reason)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[4]	none	11/77 (14.3%)	21/82 (25.6%)	RR 0.56 (0.29 to 1.08)	113 fewer per 1000 (from	MODERATE	CRITICAL

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT (+ psychoeducational group)	Psychoeducational group	Relative (95% CI)	Absolute	Quality	Importance
										182 fewer to 20 more)		

CBT=cognitive behavioural therapy; CI=confidence interval; DSRS= Depression Self-Rating Scale; PTSD=post-traumatic stress disorder; RR=risk ratio; SMD=standard mean difference; UCLA PTSD-RI=UCLA PTSD-Reaction Index
[1] Risk of bias is high or unclear across multiple outcomes
[2] OIS not met (N<400)
[3] OIS not met (events<300)
[4] 95% CI crosses both line of no effect and threshold for clinically important harm

Psychological: Non-trauma-focused CBT

Non-trauma focused CBT (+ TAU) versus TAU for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Non-trauma focused CBT (+TAU)	TAU	Relative (95% CI)	Absolute	Quality	Importance
Depression symptoms at endpoint (follow-up mean 13 weeks; measured with: Adolescent Psychopathology Scale: Axis I - Major Depression; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	18	15	-	SMD 0.33 lower (1.02	LOW	IMPORTANT

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Non-trauma focused CBT (+TAU)	TAU	Relative (95% CI)	Absolute	Quality	Importance
										lower to 0.37 higher)		
Depression symptoms at 3-month follow-up (follow-up mean 3 months; measured with: Adolescent Psychopathology Scale: Axis I - Major Depression; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	18	15	-	SMD 0.71 higher (0 to 1.42 higher)	LOW	IMPORTANT
Substance use disorder symptoms at endpoint (follow-up mean 13 weeks; measured with: Adolescent Psychopathology Scale: Axis I - Substance Use Disorder; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[4]	none	18	15	-	SMD 1.03 lower (1.77 to 0.3 lower)	LOW	IMPORTANT
Substance use disorder symptoms at 3-month follow-up (follow-up mean 3 months; measured with: Adolescent Psychopathology Scale: Axis I - Substance Use Disorder; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	18	15	-	SMD 0.63 higher (0.08 lower to 1.33 higher)	LOW	IMPORTANT
Discontinuation (follow-up mean 13 weeks; assessed with: Number of participants lost to follow-up for any reason)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[5]	none	4/18 (22.2%)	3/15 (20 %)	RR 1.11 (0.29 to 4.21)	22 more per 1000 (from 142 fewer to 642 more)	LOW	CRITICAL

CBT=cognitive behavioural therapy; CI=confidence interval; PTSD=post-traumatic stress disorder; RR=risk ratio; SMD=standardised mean difference; TAU=treatment as usual

[1] *Risk of bias is high or unclear across multiple outcomes*

[2] *95% CI crosses both line of no effect and threshold for clinically important benefit*

[3] *95% CI crosses both line of no effect and threshold for clinically important harm*

[4] *OIS not met (N<400)*

[5] *95% CI crosses line of no effect and thresholds for both clinically important benefit and harm*

Psychological: Psychodynamic therapies

Child-parent psychotherapy using play versus parent training (case management and individual treatment for parent-only) for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Child-parent psychotherapy using play	Parent training (case management and individual treatment for parent-only)	Relative (95% CI)	Absolute	Quality	Importance
PTSD symptomatology clinician-rated (follow-up mean 50 weeks; measured with: DC 0-3; change score; Better indicated by lower values)												
1	randomised trials	serious [1]	no serious inconsistency	no serious indirectness	serious[2]	none	36	29	-	SMD 1.19 lower (1.72 to 0.66 lower)	LOW	CRITICAL
Emotional and behavioural problems at endpoint (follow-up mean 50 weeks; measured with: CBCL total; change score; Better indicated by lower values)												
1	randomised trials	serious [1]	no serious inconsistency	no serious indirectness	serious[2]	none	36	29	-	SMD 0.79 lower (1.3 to 0.28 lower)	LOW	IMPORTANT
Emotional and behavioural problems at 6-month follow-up (follow-up mean 6 months; measured with: CBCL total; change score; Better indicated by lower values)												
1	randomised trials	serious [1]	no serious inconsistency	no serious indirectness	serious[2]	none	27	23	-	SMD 0.98 lower (1.58 to 0.39 lower)	LOW	IMPORTANT
Discontinuation (follow-up mean 50 weeks; assessed with: Number of participants lost to follow-up for any reason)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Child-parent psychotherapy using play	Parent training (case management and individual treatment for parent-only)	Relative (95% CI)	Absolute		
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[3]	none	6/42 (14.3%)	4/33 (12.1%)	RR 1.18 (0.36 to 3.84)	22 more per 1000 (from 78 fewer to 344 more)	LOW	CRITICAL

CBCL=Children's Behavioural Checklist; CI=confidence interval; DC=Diagnostic Criteria; PTSD=post-traumatic stress disorder; RR=risk ratio; SMD=standardised mean difference;
[1] Risk of bias is high or unclear across multiple domains
[2] OIS not met (N<400)
[3] 95% CI crosses line of no effect and thresholds for both clinically important benefit and harm

Psychological: Eye movement desensitisation and reprocessing (EMDR)

EMDR versus waitlist or TAU for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Eye movement desensitisation and reprocessing (EMDR)	Waitlist or TAU	Relative (95% CI)	Absolute		
PTSD symptomatology self-rated at endpoint (follow-up 3-6 weeks; measured with: CRTI/CRIES change score; Better indicated by lower values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Eye movement desensitisation and reprocessing (EMDR)	Waitlist or TAU	Relative (95% CI)	Absolute		
2	randomised trials	very serious[1]	very serious[2]	no serious indirectness	very serious[3]	none	53	29	-	SMD 0.9 lower (2.64 lower to 0.85 higher)	VERY LOW	CRITICAL
PTSD symptomatology self-rated at 2-month follow-up (follow-up mean 2 months; measured with: CRIES change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[4]	none	12	11	-	SMD 0.72 lower (1.57 lower to 0.13 higher)	LOW	CRITICAL
PTSD symptomatology clinician-rated (follow-up mean 8 weeks; measured with: PTSS-C change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	17	16	-	SMD 0.07 higher (0.61 lower to 0.76 higher)	VERY LOW	CRITICAL
Emotional and behavioural problems (follow-up mean 6 weeks; measured with: SDQ-A change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[5]	none	43	18	-	SMD 1.52 lower (2.14 to	VERY LOW	IMPORTANT

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Eye movement desensitisation and reprocessing (EMDR)	Waitlist or TAU	Relative (95% CI)	Absolute	Quality	Importance
										0.91 lower)		
Quality of life (follow-up mean 6 weeks; measured with: KIDSCREEN-27: Global HRQoL T-scores; change score; Better indicated by higher values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[5]	none	43	18	-	SMD 0.81 higher (0.24 to 1.38 higher)	VERY LOW	IMPORTANT
Discontinuation (follow-up 3-8 weeks; assessed with: Number of participants lost to follow-up for any reason)												
3	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[3]	none	5/74 (6.8%)	6/49 (12.2%)	RR 0.65 (0.15 to 2.88)	43 fewer per 1000 (from 104 fewer to 230 more)	LOW	CRITICAL

CI=confidence interval; CRIES= Children's Revised Impact of Event Scale; CRTI= Children's Response to Trauma Inventory; HRQoL=Health Related Quality of Life; KIDSCREEN-27= Health-related quality of life questionnaire for children, young people and their parents; PTSD=post-traumatic stress disorder; PTSS=Post-Traumatic Stress Symptom; RR=risk ratio; SDQ-A= Strength and Difficulties Questionnaires; SMD=standardised mean difference; TAU=treatment as usual;

[1] Risk of bias is high or unclear across multiple domains

[2] Considerable heterogeneity (I2>80%)

[3] 95% CI crosses line of no effect and thresholds for both clinically important benefit and harm

[4] 95% CI crosses both line of no effect and threshold for clinically important benefit

[5] OIS not met (N<400)

Psychological: Combined somatic and cognitive therapies

Combined somatic and cognitive therapies versus no treatment for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Combined somatic and cognitive therapies	No treatment	Relative (95% CI)	Absolute	Quality	Importance
PTSD symptomatology self-rated at endpoint (follow-up mean 2 weeks; measured with: SPTSS change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	20	20	-	SMD 1.85 lower (2.6 to 1.1 lower)	VERY LOW	CRITICAL
PTSD symptomatology self-rated at 3-month follow-up (follow-up mean 3 months; measured with: SPTSS change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	20	20	-	SMD 1.96 lower (2.72 to 1.19 lower)	VERY LOW	CRITICAL
PTSD symptomatology self-rated at 6-month follow-up (follow-up mean 6 months; measured with: SPTSS change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	20	20	-	SMD 1.3 lower (1.99 to 0.61 lower)	VERY LOW	CRITICAL
PTSD symptomatology self-rated at 12-month follow-up (follow-up mean 12 months; measured with: SPTSS change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	20	20	-	SMD 1.85 lower (2.6 to 1.1 lower)	VERY LOW	CRITICAL

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Combined somatic and cognitive therapies	No treatment	Relative (95% CI)	Absolute		
Anxiety symptoms at endpoint (follow-up mean 2 weeks; measured with: HADS-A change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	20	20	-	SMD 0.95 lower (1.61 to 0.3 lower)	VERY LOW	IMPORTANT
Anxiety symptoms at 3-month follow-up (follow-up mean 3 months; measured with: HADS-A change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	20	20	-	SMD 0.89 lower (1.54 to 0.24 lower)	VERY LOW	IMPORTANT
Anxiety symptoms at 6-month follow-up (follow-up mean 6 months; measured with: HADS-A change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	20	20	-	SMD 1.15 lower (1.82 to 0.47 lower)	VERY LOW	IMPORTANT
Anxiety symptoms at 12-month follow-up (follow-up mean 12 months; measured with: HADS-A change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	20	20	-	SMD 1.19 lower (1.86 to 0.51 lower)	VERY LOW	IMPORTANT
Depression symptoms at endpoint (follow-up mean 2 weeks; measured with: HADS-D change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	20	20	-	SMD 0.94 lower (1.59 to	VERY LOW	IMPORTANT

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Combined somatic and cognitive therapies	No treatment	Relative (95% CI)	Absolute	Quality	Importance
										0.28 lower)		
Depression symptoms at 3-month follow-up (follow-up mean 3 months; measured with: HADS-D change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	20	20	-	SMD 0.75 lower (1.4 to 0.11 lower)	VERY LOW	IMPORTANT
Depression symptoms at 6-month follow-up (follow-up mean 6 months; measured with: HADS-D change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	20	20	-	SMD 0.85 lower (1.5 to 0.2 lower)	VERY LOW	IMPORTANT
Depression symptoms at 12-month follow-up (follow-up mean 12 months; measured with: HADS-D change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	20	20	-	SMD 1.38 lower (2.07 to 0.68 lower)	VERY LOW	IMPORTANT
Discontinuation (follow-up mean 2 weeks; assessed with: Number of participants lost to follow-up for any reason)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	0/20 (0%)	0/20 (0%)	not pooled	not pooled	LOW	CRITICAL

CI=confidence interval; HADS-A/D= Hospital Anxiety and Depression Scale-Anxiety/Depression; PTSD=post-traumatic stress disorder; RR=risk ratio; SMD=standardised mean difference; SPTSS= Screen for Post-Traumatic Stress Symptoms; TAU=treatment as usual

[1] Risk of bias is high or unclear across mutliple domains

[2] OIS not met (N<400)

[3] OIS not met (events<300)

Psychological: Supportive counselling

Supportive counselling versus no treatment or waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Supportive counselling	No treatment or waitlist	Relative (95% CI)	Absolute	Quality	Importance
PTSD symptomatology self-rated at endpoint (follow-up mean 6 weeks; measured with: CRIES change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	10	12	-	SMD 0.48 lower (1.33 lower to 0.37 higher)	LOW	CRITICAL
PTSD symptomatology self-rated at 3-month follow-up (follow-up mean 3 months; measured with: CRIES change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	10	12	-	SMD 0.42 lower (1.27 lower to 0.43 higher)	LOW	CRITICAL
PTSD symptomatology clinician-rated at 3-month follow-up (follow-up mean 3 months; measured with: CAPS change score; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[2]	none	24	28	-	SMD 0.43 lower (0.98 lower to 0.12 higher)	MODERATE	CRITICAL
PTSD symptomatology clinician-rated at 6-month follow-up (follow-up mean 6 months; measured with: CAPS change score; Better indicated by lower values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Supportive counselling	No treatment or waitlist	Relative (95% CI)	Absolute		
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[2]	none	23	28	-	SMD 0.11 lower (0.66 lower to 0.44 higher)	MODERATE	CRITICAL
PTSD symptomatology clinician-rated at 12-month follow-up (follow-up mean 12 months; measured with: CAPS change score; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[3]	none	23	28	-	SMD 0 higher (0.55 lower to 0.55 higher)	LOW	CRITICAL
Remission at 12-month follow-up (follow-up mean 12 months; assessed with: Number of people no longer meeting diagnostic criteria for PTSD)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[3]	none	13/28 (46.4%)	15/28 (53.6%)	RR 0.87 (0.51 to 1.47)	70 fewer per 1000 (from 263 fewer to 252 more)	LOW	CRITICAL
Depression symptoms at endpoint (follow-up mean 6 weeks; measured with: CES-D change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	10	12	-	SMD 0.11 higher (0.73 lower to	VERY LOW	IMPORTANT

Quality assessment							No of patients		Effect			
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Supportive counselling**	**No treatment or waitlist**	**Relative (95% CI)**	**Absolute**	**Quality**	**Importance**
										0.95 higher)		
Depression symptoms at 3-month follow-up (follow-up mean 3 months; measured with: CES-D/MINI:Depression change score; Better indicated by lower values)												
2	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[4]	none	34	40	-	SMD 0.7 lower (1.17 to 0.22 lower)	LOW	IMPORTANT
Depression symptoms at 6-month follow-up (follow-up mean 6 months; measured with: MINI:Depression change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	23	28	-	SMD 0.47 lower (1.03 lower to 0.09 higher)	LOW	IMPORTANT
Depression symptoms at 12-month follow-up (follow-up mean 12 months; measured with: MINI:Depression change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	23	28	-	SMD 0.34 lower (0.9 lower to 0.21 higher)	LOW	IMPORTANT
Functional impairment at 3-month follow-up (follow-up mean 3 months; measured with: CAPS: Functional impairment; change score; Better indicated by lower values)												
1	randomised trials	no serious	no serious inconsistency	no serious indirectness	serious[4]	none	24	28	-	SMD 0.91 lower	MODERATE	IMPORTANT

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Supportive counselling	No treatment or waitlist	Relative (95% CI)	Absolute		
		risk of bias								(1.49 to 0.34 lower)		
Functional impairment at 6-month follow-up (follow-up mean 6 months; measured with: CAPS: Functional impairment; change score; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[2]	none	23	28	-	SMD 0.44 lower (1 lower to 0.12 higher)	MODERATE	IMPORTANT
Functional impairment at 12-month follow-up (follow-up mean 12 months; measured with: CAPS: Functional impairment; change score; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[2]	none	23	28	-	SMD 0.27 lower (0.82 lower to 0.28 higher)	MODERATE	IMPORTANT
Discontinuation (follow-up 3-6 weeks; assessed with: Number of participants lost to follow-up for any reason)												
2	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[5]	none	6/40 (15%)	0/40 (0%)	RR 6.75 (0.86 to 52.7)	-	MODERATE	CRITICAL

CAPS= Clinician Administered PTSD Symptom; CES-D= Centre for Epidemiological Studies-Depression; CI=confidence interval; CRIES= Children's Revised Impact of Event Scale; PTSD=post-traumatic stress disorder; RR=risk ratio; SMD=standardised mean difference

[1] Risk of bias is high or unclear across multiple domains

[2] 95% CI crosses both line of no effect and threshold for clinically important benefit

[3] 95% CI crosses line of no effect and thresholds for both clinically important benefit and harm
[4] OIS not met (N<400)
[5] 95% CI crosses both line of no effect and threshold for clinically important harm

Psychological: Parent training/family intervention

Parent training (CBT with parent-only) versus TAU for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Parent training (CBT with parent-only)	TAU	Relative (95% CI)	Absolute	Quality	Importance
PTSD symptomatology clinician-rated at endpoint (follow-up mean 12 weeks; measured with: K-SADS-E: PTSD; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	20	14	-	SMD 0.59 lower (1.29 lower to 0.11 higher)	LOW	CRITICAL
PTSD symptomatology clinician-rated at 3-month follow-up (follow-up mean 3 months; measured with: K-SADS-E: PTSD; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	20	14	-	SMD 0.63 lower (1.33 lower to 0.07 higher)	LOW	CRITICAL
PTSD symptomatology clinician-rated at 6-month follow-up (follow-up mean 6 months; measured with: K-SADS-E: PTSD; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	20	14	-	SMD 0.58 lower (1.28 lower to 0.12 higher)	LOW	CRITICAL
PTSD symptomatology clinician-rated at 12-month follow-up (follow-up mean 12 months; measured with: K-SADS-E: PTSD; change score; Better indicated by lower values)												

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Parent training (CBT with parent-only)	TAU	Relative (95% CI)	Absolute	Quality	Importance
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	20	14	-	SMD 0.42 lower (1.11 lower to 0.27 higher)	LOW	CRITICAL
PTSD symptomatology clinician-rated at 2-year follow-up (follow-up mean 2 years; measured with: K-SADS-E: PTSD; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	20	14	-	SMD 0.89 lower (1.6 to 0.17 lower)	LOW	CRITICAL
Emotional and behavioural problems-Externalizing at endpoint (follow-up mean 12 weeks; measured with: CBCL: Externalizing; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	18	12	-	SMD 0.63 lower (1.38 lower to 0.12 higher)	LOW	IMPORTANT
Emotional and behavioural problems-Externalizing at 3-month follow-up (follow-up mean 3 months; measured with: CBCL: Externalizing; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[4]	none	18	12	-	SMD 0.23 lower (0.96 lower to 0.5 higher)	VERY LOW	IMPORTANT
Emotional and behavioural problems-Externalizing at 6-month follow-up (follow-up mean 6 months; measured with: CBCL: Externalizing; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[4]	none	18	12	-	SMD 0.18 lower (0.91 lower to 0.55 higher)	VERY LOW	IMPORTANT

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Parent training (CBT with parent-only)	TAU	Relative (95% CI)	Absolute	Quality	Importance
Emotional and behavioural problems-Externalizing at 12-month follow-up (follow-up mean 12 months; measured with: CBCL: Externalizing; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[4]	none	18	12	-	SMD 0.07 lower (0.8 lower to 0.66 higher)	VERY LOW	IMPORTANT
Emotional and behavioural problems-Externalizing at 2-year follow-up (follow-up mean 2 years; measured with: CBCL: Externalizing; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	18	12	-	SMD 0.92 lower (1.69 to 0.15 lower)	LOW	IMPORTANT
Depression symptoms at endpoint (follow-up mean 12 weeks; measured with: CDI change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	20	15	-	SMD 0.86 lower (1.56 to 0.15 lower)	LOW	IMPORTANT
Depression symptoms at 3-month follow-up (follow-up mean 3 months; measured with: CDI change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	20	15	-	SMD 0.45 lower (1.13 lower to 0.23 higher)	LOW	IMPORTANT
Depression symptoms at 6-month follow-up (follow-up mean 6 months; measured with: CDI change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	20	15	-	SMD 0.32 lower (1 lower to 0.35 higher)	LOW	IMPORTANT
Depression symptoms at 12-month follow-up (follow-up mean 12 months; measured with: CDI change score; Better indicated by lower values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Parent training (CBT with parent-only)	TAU	Relative (95% CI)	Absolute		
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	20	15	-	SMD 0.5 lower (1.18 lower to 0.18 higher)	LOW	IMPORTANT
Depression symptoms at 2-year follow-up (follow-up mean 2 years; measured with: CDI change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	20	15	-	SMD 0.86 lower (1.56 to 0.15 lower)	LOW	IMPORTANT

CBCL=Children's Behavioural Checklist; CBT=cognitive behavioural therapy; CDI=Children's Depression Inventory; CI=confidence interval; K-SADS=Kiddele Schedulae for Affective Disorder and Schizophrenia; PTSD=post-traumatic stress disorder; RR=risk ratio; SMD=standardised mean difference; TAU=treatment as usual

[1] Risk of bias is high or unclear across multiple domains

[2] 95% CI crosses both line of no effect and threshold for clinically important benefit

[3] OIS not met (N<400)

[4] 95% CI crosses line of no effect and thresholds for both clinically important benefit and harm

Parent training + trauma-focused CBT (for child) versus trauma-focused CBT (for child) only for delayed treatment (>3 months) of clinically important sympotms/PTSD

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT + parent training	Trauma-focused CBT (child only)	Relative (95% CI)	Absolute		
PTSD symptomatology clinician-rated at endpoint (follow-up mean 20 weeks; measured with: ADIS-C: PTSD; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	12	12	-	SMD 0.36 lower (1.16	LOW	CRITICAL

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT + parent training	Trauma-focused CBT (child only)	Relative (95% CI)	Absolute	Quality	Importance
										lower to 0.45 higher)		
PTSD symptomatology clinician-rated at 3-month follow-up (follow-up mean 3 months; measured with: ADIS-C: PTSD; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	12	12	-	SMD 0.48 lower (1.29 lower to 0.34 higher)	LOW	CRITICAL
Anxiety symptoms at endpoint (follow-up mean 20 weeks; measured with: RCMAS; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	12	12	-	SMD 0.14 higher (0.66 lower to 0.94 higher)	VERY LOW	IMPORTANT
Anxiety symptoms at 3-month follow-up (follow-up mean 3 months; measured with: RCMAS; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	12	12	-	SMD 0.03 higher (0.77 lower to 0.83 higher)	VERY LOW	IMPORTANT
Depression symptoms at endpoint (follow-up mean 20 weeks; measured with: CDI; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	12	12	-	SMD 0.29 lower (1.09 lower to 0.52 higher)	VERY LOW	IMPORTANT
Depression symptoms at 3-month follow-up (follow-up mean 3 months; measured with: CDI; change score; Better indicated by lower values)												

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT + parent training	Trauma-focused CBT (child only)	Relative (95% CI)	Absolute	Quality	Importance
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	12	12	-	SMD 0.07 lower (0.87 lower to 0.73 higher)	VERY LOW	IMPORTANT
Emotional and behavioural problems-Internalizing at endpoint (follow-up mean 20 weeks; measured with: CBCL: Internalizing; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	12	12	-	SMD 0.29 lower (1.1 lower to 0.51 higher)	VERY LOW	IMPORTANT
Emotional and behavioural problems-Internalizing at 3-month follow-up (follow-up mean 3 months; measured with: CBCL: Internalizing; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	12	12	-	SMD 0.15 lower (0.95 lower to 0.66 higher)	VERY LOW	IMPORTANT
Emotional and behavioural problems-Externalizing at endpoint (follow-up mean 20 weeks; measured with: CBCL: Externalizing; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	12	12	-	SMD 0.79 lower (1.63 lower to 0.04 higher)	LOW	IMPORTANT
Emotional and behavioural problems-Externalizing at 3-month follow-up (follow-up mean 3 months; measured with: CBCL: Externalizing; change score; Better indicated by lower values)												

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT + parent training	Trauma-focused CBT (child only)	Relative (95% CI)	Absolute	Quality	Importance
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	12	12	-	SMD 0.14 lower (0.94 lower to 0.67 higher)	VERY LOW	IMPORTANT
Global functioning at endpoint (follow-up mean 20 weeks; measured with: GAF; change score; Better indicated by higher values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	12	12	-	SMD 0.3 higher (0.5 lower to 1.11 higher)	VERY LOW	IMPORTANT
Global functioning at 3-month follow-up (follow-up mean 3 months; measured with: GAF; change score; Better indicated by higher values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	12	12	-	SMD 0.66 higher (0.16 lower to 1.49 higher)	LOW	IMPORTANT
Discontinuation (follow-up mean 20 weeks; assessed with: Number of participants lost to follow-up for any reason)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[3]	none	3/12 (25%)	3/12 (25%)	RR 1 (0.25 to 4)	0 fewer per 1000 (from 188 fewer to 750 more)	LOW	CRITICAL

ADIS-C= Anxiety Disorder Interview Schedule-Child version; CBCL= Child Behavioural Checklist; CBT=cognitive behavioural therapy; CDI= Children's Depression Inventory; CI=confidence interval; GAF= Global Assessment of Functioning; PTSD=post-traumatic stress disorder; RCMAS=; RR=risk ratio; SMD=standardised mean difference

[1] Risk of bias is high or unclear across multiple domains

[2] 95% CI crosses both line of no effect and threshold for clinically important benefit

[3] 95% CI crosses line of no effect and thresholds for both clinically important benefit and harm

Family therapy versus waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Family therapy	Waitlist	Relative (95% CI)	Absolute	Quality	Importance
PTSD symptomatology (follow-up mean 0.1 weeks; measured with: UCLA PTSD-RI; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	75	74	-	SMD 0.37 lower (0.7 to 0.05 lower)	LOW	CRITICAL
Anxiety symptoms (follow-up mean 0.1 weeks; measured with: RCMAS; T-scores change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	75	74	-	SMD 0.09 higher (0.24 lower to 0.41 higher)	LOW	IMPORTANT
Discontinuation (follow-up mean 0.1 weeks; assessed with: Number of participants lost to follow-up for any reason)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[3]	none	29/76 (38.2%)	5/74 (6.8%)	RR 5.65 (2.31 to 13.8)	314 more per 1000 (from 89 more to 865 more)	MODERATE	CRITICAL

CI=confidence interval; PTSD=post-traumatic stress disorder; RCMAS=Revised Children Manifest Anxiety Scale; RR=risk ratio; SMD=standardised mean difference; UCLA PTSD-RI=UCLA PTSD-Reaction Index;

[1] Risk of bias is high or unclear across multiple domains

[2] OIS not met (N<400)

[3] OIS not met (events<300)

Psychological: Play therapy

Play therapy versus TAU for the delayed treatment (>3 months) of clinically important symptoms/PTSD Non-directive counselling

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Play therapy	TAU	Relative (95% CI)	Absolute		
PTSD symptomatology self-rated (follow-up mean 3 weeks; measured with: CRIES change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	69	60	-	SMD 1.07 lower (1.44 to 0.7 lower)	VERY LOW	CRITICAL
Anxiety symptoms (follow-up mean 3 weeks; measured with: SCAS; change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	69	60	-	SMD 1.87 lower (2.29 to 1.45 lower)	VERY LOW	IMPORTANT
Depression symptoms (follow-up mean 3 weeks; measured with: SMFQ; change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	69	60	-	SMD 1.34 lower (1.73 to 0.96 lower)	VERY LOW	IMPORTANT
Discontinuation (follow-up mean 3 weeks; assessed with: Number of participants lost to follow-up for any reason)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[3]	none	0/69 (0%)	2/62 (3.2 %)	RR 0.18 (0.01 to 3.68)	26 fewer per 1000 (from 32 fewer to 86 more)	VERY LOW	CRITICAL

CI=confidence interval; CRIES; PTSD=post-traumatic stress disorder; RR=risk ratio; SCAS= Spence Children's Anxiety Scale; SMD=standardised mean difference; SMFQ=Short Mood and Feeling Questionnaires; TAU=treatment as usual

[1] Risk of bias is high or unclear across multiple domains

[2] OIS not met (N<400)

[3] 95% CI crosses line of no effect and thresholds for both clinically important benefit and harm

Play therapy versus trauma-focused CBT for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Play therapy	Trauma-focused CBT	Relative (95% CI)	Absolute	Quality	Importance
PTSD symptomatology self-rated (follow-up mean 12 weeks; measured with: UCLA PTSD-RI; change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	14	12	-	SMD 0.11 lower (0.88 lower to 0.66 higher)	VERY LOW	CRITICAL
Discontinuation (follow-up mean 12 weeks; assessed with: Number of participants lost to follow-up for any reason)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[2]	none	0/14 (0%)	5/17 (29.4%)	RR 0.11 (0.01 to 1.82)	262 fewer per 1000 (from 291 fewer to 241 more)	LOW	CRITICAL

CI=confidence interval; PTSD=post-traumatic stress disorder; RR=risk ratio; SMD=standardised mean difference; TAU=treatment as usual; UCLA PTSD-RI=UCLA PTSD-Reaction Index

[1] Risk of bias is high or unclear across multiple domains

[2] 95% CI crosses line of no effect and thresholds for both clinically important benefit and harm

Psychosocial: Art therapy

Art therapy (+ TAU) versus attention-placebo (+ TAU) for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Art therapy (+ TAU)	Attention-placebo (+ TAU)	Relative (95% CI)	Absolute	Quality	Importance
PTSD symptomatology clinician-rated (follow-up mean 16 weeks; measured with: UCLA PTSD-RI administered via structured interview format; change score; Better indicated by lower values)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[1]	reporting bias[2]	14	15	-	SMD 1.79 lower (2.67 to 0.91 lower)	LOW	CRITICAL

CI=confidence interval; PTSD=post-traumatic stress disorder; SMD=standardised mean difference; TAU=treatment as usual; UCLA PTSD-RI= UCLA PTSD-Reaction Index
[1] OIS not met (N<400)
[2] This is interim report but unable to locate full report

Psychosocial: Meditation

Meditation versus waitlist for the delayed treatment (>3 months) of clinically important symptoms/PTSD

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Meditation	Waitlist	Relative (95% CI)	Absolute	Quality	Importance
PTSD symptomatology self-rated (follow-up mean 6 weeks; measured with: HTQ change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	38	39	-	SMD 1.65 lower (2.17	LOW	CRITICAL

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Meditation	Waitlist	Relative (95% CI)	Absolute	Quality	Importance
										to 1.13 lower)		
Discontinuation (follow-up mean 6 weeks; assessed with: Number of participants lost to follow-up for any reason)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[3]	none	3/41 (7.3%)	2/41 (4.9%)	RR 1.5 (0.26 to 8.51)	24 more per 1000 (from 36 fewer to 366 more)	LOW	CRITICAL

CI=confidence interval; HTQ= Harvard Trauma Questionnaire; PTSD=post-traumatic stress disorder; RR=risk ratio; SMD=standardised mean difference
[1] Risk of bias is high or unclear across multiple domains
[2] OIS not met (N<400)
[3] 95% CI crosses line of no effect and thresholds for both clinically important benefit and harm

Appendix G – Health economic evidence study selection

Health economic evidence study selection for "For children and young people with clinically important post-traumatic stress symptoms, what are the relative benefits and harms of psychological, psychosocial or other non-pharmacological interventions targeted at PTSD symptoms?"

A global health economics search was undertaken for all areas covered in the guideline. The flow diagram of economic article selection across all reviews is provided in Appendix A of Supplement 1 – Methods Chapter'.

Appendix H – Economic evidence tables

Health economic evidence tables for "For children and young people with clinically important post-traumatic stress symptoms, what are the relative benefits and harms of psychological, psychosocial or other non-pharmacological interventions targeted at PTSD symptoms?"

Psychological interventions - references to included studies

Gospodarevskaya E and Segal L (2012) Cost-utility analysis of different treatments for post-traumatic stress disorder in sexually abused children. Child and Adolescent Psychiatry and Mental Health 2012; 6(15)

McCrone P, Weeramanthri T, Knapp MG et al. (2005) Cost-Effectiveness of Individual versus Group Psychotherapy for Sexually Abused Girls. Child and Adolescent Mental Health 10(1), 26-31

Mihalopoulos C, Magnus A, Lal A et al. (2015) Is implementation of the 2013 Australian treatment guidelines for posttraumatic stress disorder cost-effective compared to current practice? A cost-utility analysis using QALYs and DALYs. Australian and New Zealand Journal of Psychiatry 49(4), 360-376

Shearer J, Papanikolaou N, Meiser-Stedman R et al. (2018). Cost-effectiveness of cognitive therapy as an early intervention for post-traumatic stress disorder in children and adolescents: a trial based evaluation and model. Journal of Child Psychology and Psychiatry 59(7), 773-780

Study Country Study type	Intervention details	Study population Study design Data sources	Costs and outcomes: description and values	Results: Cost-effectiveness	Comments
Gospodarevskaya & Segal, 2012 Australia Cost-utility analysis	Interventions: Trauma-focused cognitive behavioural therapy, comprising 12 weekly sessions of 45 min each (TF-CBT) TF-CBT combined with selective serotonin reuptake inhibitors (SSRIs) Non-directive supportive counselling comprising 12 weekly sessions of 45 min each No treatment	10-year-old children who met all or most of the PTSD diagnostic criteria, including at least one symptom of avoidance or re-experiencing, who were eligible for TF-CBT; some of the children had comorbid depression Decision-analytic economic modelling Source of efficacy data: meta-analyses of trials and indirect comparisons Source of resource use data: published trial data Source of unit costs: national sources	Costs: therapists' time [psychologist, psychiatrist, GP, social worker], medication, parental group or psychoeducational sessions; beyond 12 months: medication + GP costs Total cost per child (12 months): TF-CBT $2051 TF-CBT + SSRI £2226 Counselling $2074 No treatment 0 Total cost per child (31 years): TF-CBT $2096 TF-CBT + SSRI $2270 Counselling $2123 No treatment 0 Outcome measure: QALY based on the Assessment of Quality of Life measure	At 12 months: Counselling dominated by TF-CBT ICERs TF-CBT + SSRI vs TF-CBT $17,520/QALY TF-CBT vs no treatment $22,790/QALY At 31 years: Counselling dominated by TF-CBT ICERs TF-CBT + SSRI vs TF-CBT $2,901/QALY TF-CBT vs no treatment $1,650/QALY Results sensitive to variation in clinical effectiveness	Perspective: mental health system Currency: Aus$ Cost year: 2011 Time horizon: 31 years Discounting: 5% Applicability: partially applicable Quality: potentially serious limitations

Study Country Study type	Intervention details	Study population Study design Data sources	Costs and outcomes: description and values	Results: Cost-effectiveness	Comments
			(AQoL-4D), Australian values used Total QALYs per child (12 months): TF-CBT 0.96 TF-CBT + SSRI 0.97 Counselling 0.93 No treatment 0.87 Total QALYs per child (31 years): TF-CBT 12.86 TF-CBT + SSRI 12.92 Counselling 12.61 No treatment 11.59		

Study Country Study type	Intervention details	Study population Study design Data sources	Costs and outcomes: description and values	Results: Cost-effectiveness	Comments
McCrone et al., 2005 UK Cost-consequence analysis	Interventions: Individual psychotherapy comprising up to 30 sessions of focused psychoanalytical psychotherapy Group psychoeducational therapy comprising up to 18 sessions with psychotherapeutic and psychoeducational components delivered to groups of 5 girls both interventions included carers' support	Sexually abused girls (6-14 years old) with symptoms of emotional or behavioural disturbance, 73% of whom had PTSD RCT (Trowel 2002) Source of efficacy and resource use data: RCT (N=75; at 1-year follow up: n=58; at 2-year follow up: n=54) Source of unit costs: national sources	Costs: intervention: therapists' time, including introductory meeting, initial assessment, therapy, carers' support, supervision of therapists and carers' workers, follow up Mean cost per child: Individual therapy £3195 Group therapy £1949; p <0.001 Outcome measures: global impairment of functioning measured using the K-GAS; Orvaschel's PTSD scale Outcomes: difference in improvements in global impairment of functioning between interventions not statistically significant; individual therapy showed greater improvements in manifestations of PTSD compared with group therapy; effect size ranging from 0.60 to 0.79	Individual therapy more costly and more effective in terms of reducing PTSD symptoms	Perspective: providers of mental health services to children and support to parents (intervention costs only) Currency: UK£ Cost year: 1999 Time horizon: 2 years Discounting: NA Applicability: partially applicable Quality: potentially serious limitations

Study Country Study type	Intervention details	Study population Study design Data sources	Costs and outcomes: description and values	Results: Cost-effectiveness	Comments
Mihalopoulos et al., 2015 Australia Cost-utility analysis	Interventions: Trauma-focused cognitive behavioural therapy (TF-CBT) (8-10 individual sessions) delivered by a psychologist Treatment as usual (TAU): non-evidence-based care comprising consultation with healthcare professionals	Prevalent cases of children and adolescents with PTSD in Australia in 2012, in receipt of non-evidence-based care Decision-analytic economic modelling Source of efficacy data: meta-analyses of TF-CBT trials Source of resource use data: published trial and epidemiological data; expert opinion Source of unit costs: national sources	Costs: intervention (psychologist, GP) Mean incremental cost (million) per eligible population (95% CI): TF-CBT vs TAU $0.87 ($0.28 to $2.2) Primary outcome measure: QALY based on the Assessment of Quality of Life measure (AQoL-4D), Australian values used [DALY also considered] Mean incremental number of QALYs per eligible population (x1,000) (95% CI): TF-CBT vs TAU 0.09 (0.00 to 0.25)	ICER of TF-CBT vs TAU: $8900/QALY Probability of TF-CBT being cost-effective 1.0 at a willingness to pay of $50,000/QALY Results most sensitive to PTSD prevalence, effectiveness, adherence and eligibility for CBT	Perspective: health sector (government & service user (intervention costs only) Currency: Aus$ Cost year: 2012 Time horizon: 5 years Discounting: NA Applicability: partially applicable Quality: potentially serious limitations

Study Country Study type	Intervention details	Study population Study design Data sources	Costs and outcomes: description and values	Results: Cost-effectiveness	Comments
Shearer et al., 2018 UK Cost-utility analysis	Interventions: Trauma-focused cognitive therapy (TF-CT) (10 weekly individual sessions) delivered by a trained clinical psychologist Waitlist	Children and adolescents aged 8-17 years, who had experienced a single traumatic event in the previous 2 to 6 months and met age-appropriate diagnosis of PTSD RCT (Meiser-Stedman 2010/2017) and decision-analytic economic modelling Source of efficacy data: RCT (n=29) Source of resource use data: RCT (n=29) Source of unit costs: national sources	Costs: intervention (psychologist), inpatient and outpatient care, emergency department, ambulance, community staff (GP, GP nurse, district nurse, paediatrician, clinical psychologist, CAMHS worker, counsellor, educational psychologist), advice service, social services, other services, medication Mean cost per child: TF-CT: £4,865; WL: £4,768 Difference: £97 Primary outcome measure: QALY based on Strengths and Difficulties Questionnaire (SDQ) ratings, mapped onto the Child Health Utility index 9D (CHU-9D), Australian values used Mean QALYs per child: TF-CT: 2.370; WL: 2.324 Difference: 0.0577	ICER of TF-CT vs WL: £2,205/QALY Probability of TF-CT being cost-effective 0.60-0.69 at a willingness to pay of £20,000-£30,000/QALY, respectively Completer case analysis: ICER £2,806/QALY; probability of TF-CT being cost-effective: 0.69-0.75 at a willingness to pay of £20,000-£30,000/QALY, respectively Including psychologist training costs: ICER £16,187/QALY; probability of TF-CT being cost-effective: 0.51-0.62 at a willingness to pay of £20,000-£30,000/QALY, respectively	Perspective: NHS/PSS Currency: UK£ Cost year: 2014 prices Time horizon: 3 years Discounting: 3.5% Applicability: partially applicable Quality: potentially serious limitations

Appendix I – Health economic evidence profiles

Health economic evidence profiles for "For children and young people with clinically important post-traumatic stress symptoms, what are the relative benefits and harms of psychological, psychosocial or other non-pharmacological interventions targeted at PTSD symptoms?"

Psychological interventions

Economic evidence profile: trauma-focused cognitive behavioural therapy (TF-CBT) versus treatment as usual (TAU) for the treatment of children and young people with PTSD

Study and country	Limitations	Applicability	Other comments	Incremental cost (£)[1]	Incremental effect	ICER (£/effect)[1]	Uncertainty[1]
Mihalopoulos 2015 Australia	Potentially serious limitations[2]	Partially applicable[3]	Population: prevalent cases of children and adolescents with PTSD in Australia in 2012, in receipt of non-evidence-based care Outcome: QALY [and DALY]	£0.39 million	90	£3954	Probability of TF-CBT being cost-effective 1.0 at a willingness to pay of £22,214/QALY Results most sensitive to PTSD prevalence, effectiveness, adherence and eligibility for CBT
Shearer 2018 UK	Potentially serious limitations[4]	Partially applicable[5]	Population: Children and adolescents aged 8-17 years, who had experienced a single traumatic event in the previous 2 to 6 months and met age-appropriate diagnosis of PTSD Outcome: QALY	£99	0.0577	£2254	Probability of TF-CT being cost-effective 0.60-0.69 at a WTP of £20,000-£30,000/QALY, respectively Completer case analysis: ICER £2,869/QALY; probability of TF-CT being cost-effective: 0.69-0.75 at a WTP of £20,000-£30,000/QALY, respectively Including psychologist training costs:

Economic evidence profile: trauma-focused cognitive behavioural therapy (TF-CBT) versus treatment as usual (TAU) for the treatment of children and young people with PTSD							
							ICER £16,549/QALY; probability of TF-CT being cost-effective: 0.51-0.62 at a WTP of £20,000-£30,000/QALY, respectively
1. Costs converted and uplifted to 2016 UK pounds using purchasing power parity (PPP) exchange rates and the UK HCHS index (Curtis & Burns, 2016). 2. Time horizon 5 years (for benefits, as costs were measured over 10 weeks); analysis based on economic modelling; effectiveness based on meta-analyses of TF-CBT trials; resource use based on trial and epidemiological data and expert opinion; national unit costs used; PSA conducted; consideration of intervention costs only 3. Australian study; health sector perspective; QALY estimates based on the Assessment of Quality of Life measure (AQoL-4D, Australian values used) 4. Time horizon 3 years; analysis based on a 11-week RCT and extrapolation of findings using economic modelling; effectiveness and resource use based on RCT (n=29); relapse over 3 years assumed to be zero; national unit costs used; PSA conducted 5. UK study, NHS/PSS perspective; QALY estimates based on Strengths and Difficulties Questionnaire (SDQ) ratings, which were then mapped onto the Child Health Utility index 9D (CHU-9D, Australian values used)							
Economic evidence profile: trauma-focused cognitive behavioural therapy (TF-CBT) alone or in combination with SSRIs versus non-direct counselling versus no treatment for the treatment of children and young people with PTSD							
Study and country	**Limitations**	**Applicability**	**Other comments**	**Incremental cost (£) vs no treatment[1]**	**Incremental effect vs no treatment**	**ICER (£/effect)[1]**	**Uncertainty[1]**
Gospodarevskaya & Segal, 2012 Australia	Potentially serious limitations[2]	Partially applicable[3]	Population: 10-year-old children who met all or most of PTSD diagnostic criteria, including at least one symptom of avoidance or re-experiencing, who were eligible for TF-CBT; some of the children had comorbid depression Outcome: QALY	TF-CBT £1042 Combo £1128 Counselling £1055	TF-CBT 1.27 Combo 1.33 Counselling 1.02	Counselling dominated by TF-CBT Combo vs TF-CBT £1442 TF-CBT vs no treatment £820	Results sensitive to variation in clinical effectiveness

Economic evidence profile: trauma-focused cognitive behavioural therapy (TF-CBT) versus treatment as usual (TAU) for the treatment of children and young people with PTSD

1. Costs converted and uplifted to 2016 UK pounds using purchasing power parity (PPP) exchange rates and the UK HCHS index (Curtis & Burns, 2016).
2. Time horizon 31 years (discounting 5% annually); analysis based on economic modelling; effectiveness based on meta-analyses of trials and indirect comparisons; resource use based on trial data; national unit costs used; PSA conducted; consideration of a narrow range of costs; relapses of PTSD after successful treatment due to the original traumatic event not considered
3. Australian study; mental health system perspective; QALY estimates based on the Assessment of Quality of Life measure (AQoL-4D, Australian values used)

Economic evidence profile: Individual short-term psychodynamic psychotherapy versus group psychoeducational therapy for the treatment of children and young people with PTSD

Study and country	Limitations	Applicability	Other comments	Incremental cost (£)[1]	Incremental effect	ICER (£/effect)[1]	Uncertainty[1]
McCrone 2005 UK	Potentially serious limitations[2]	Partially applicable[3]	Population: Sexually abused girls (6-14 years old) with symptoms of emotional or behavioural disturbance, 73% of whom had PTSD Outcomes: global impairment of functioning measured using the K-GAS; Orvaschel's PTSD scale Costs and outcomes not synthesised	£2051	effect size on PTSD symptoms ranging from 0.60 to 0.79	NA	Individual therapy significantly costlier than group therapy. Difference in improvements in global impairment of functioning between interventions not statistically significant; individual therapy showed greater improvements in manifestations of PTSD compared with group therapy

1. Costs uplifted to 2016 UK pounds using the UK HCHS index (Curtis & Burns, 2016).
2. Time horizon 2 years (up to end of intervention); analysis based on RCT (N=75; at 1-year follow up: n=58; at 2-year follow up: n=54); national unit costs used; consideration of intervention costs only; no synthesis of costs and outcomes
3. UK study; providers of mental health services perspective; no QALYs estimated

Economic evidence profile: various psychological interventions for the treatment of children and young people with PTSD

Study and country	Limitations	Applicability	Other comments	Incremental cost vs no treatment (£)[1]	Incremental QALY vs no treatment	ICER (£/effect)[1]	Uncertainty[1]
Guideline economic analysis UK	Minor limitations[2]	Directly applicable[3]	Outcome: QALY	Support counsel 790 Group CBT -315 Cogn process therapy 75 CT -766 Narrative exposure -629 Prolonged exposure 87 EMDR -216 Family therapy 20 Play therapy -286 Parent training -14	Support counsel 0.06 Group CBT 0.10 Cogn process therapy 0.15 CT 0.35 Narrative exposure 0.20 Prolonged exposure 0.18 EMDR 0.12 Family therapy 0.05 Play therapy 0.18 Parent training 0.12	CT 44,993 Narrative exposure 41,966 Prolonged exposure 40,742 Play therapy 41,109 Cogn process therapy 40,178 Parent training 39,788 EMDR 39,920 Group CBT 39,687 Support counsel 37,753 Family therapy 38,222 No treatment 37,304	Prob of cost effectiveness at WTP £20,000/QALY: cogn therapy 0.78; narrative exposure 0.08; play therapy 0.05; prolonged exposure 0.01; cogn process therapy 0.00; EMDR 0.01; parent train 0.03; group CBT 0.01; family therapy 0.01; support counsel; 0.00; no treat 0.01 Results robust to changes in risk of relapse

1. Costs uplifted to 2017 UK pounds using the UK hospital & community health services (HCHS) index (Curtis & Burns, 2017).
2. Decision-analytic hybrid model (decision-tree + Markov); time horizon 3 years; relative effects based on guideline systematic review and NMA; baseline effects & other clinical input parameters derived from published literature and the committee's expert advice; resource use based on RCT data; national unit costs used; PSA conducted; CEACs & CEAF presented
3. UK study; NHS & PSS perspective; QALY estimates based on the Assessment of Quality of Life measure (AQoL-4D, Australian values used)

Appendix J – Health economic analysis: cost effectiveness of interventions for the delayed (>3 months) treatment of PTSD in children and young people

Health economic analysis for "For children and young people with clinically important post-traumatic stress symptoms, what are the relative benefits and harms of psychological, psychosocial or other non-pharmacological interventions targeted at PTSD symptoms?"

Introduction – objective of economic modelling

The choice of treatment for children and young people with PTSD was identified by the committee and the guideline health economist as an area with potentially major resource implications. Existing economic evidence in this area is very limited and does not cover the full range of available interventions for children and young people with PTSD in the UK. On the other hand, clinical evidence was judged to be sufficient and of adequate quality to inform primary economic modelling. An economic model was therefore developed to assess the relative cost effectiveness of interventions for the treatment of PTSD in children and young people in the UK.

Economic modelling methods

Population

The study population of the economic model comprised children and young people (under 18 years of age) with PTSD, who initiate treatment for PTSD in a community setting, although they may receive care in other settings over the time horizon of the analysis. This was decided because the majority of children and young people with PTSD initiate treatment for PTSD in a community setting in UK routine practice.

No distinction was made between children and young people with single trauma and those with multiple traumas as there was no evidence that the effectiveness of interventions was affected by this factor.

Interventions assessed

The range of interventions assessed in the economic analysis was determined by the availability of relevant clinical data included in the guideline systematic review of interventions for the treatment of PTSD in children and young people. Network meta-analysis (NMA) was employed for synthesis of the available efficacy data. Details of the NMA undertaken to inform the economic analysis are provided in the 'Efficacy data and methods of evidence synthesis' section. The guideline economic analysis assessed interventions for children and young people with PTSD that were connected to the network of evidence and were thus included in the NMA. The network included only psychological interventions, and therefore the NMA and the economic analysis explored the relative clinical and cost effectiveness of psychological interventions for the treatment of PTSD in children and young people; no pharmacological or combined interventions were assessed, as these have not been compared with psychological interventions. The NMA and the economic analysis considered separately interventions that belonged to the trauma-focused cognitive behavioural therapy (TF-CBT) class, as individual interventions had different intervention costs and, potentially, different efficacy. Based on the advice of the committee, the economic

analysis included interventions that had been tested on at least 40 individuals across RCTs included in the NMA, as this was deemed as the minimum evidence that would be adequate to support a practice recommendation. The only exception was cognitive therapy, which had been tested on only 25 children; this was included in the economic analysis as the committee was interested in the relative clinical and cost effectiveness across all interventions belonging in the TF-CBT class, and adequate evidence on TF-CBT class, which could be extrapolated to cognitive therapy, was available for other interventions within the class.

Consequently, the following psychological interventions were considered in the economic analysis of interventions for the treatment of children and young people with PTSD:

- Supportive counselling
- Group CBT (TF-CBT)
- Cohen TF-CBT / Cognitive processing therapy [Cohen/CPT] (TF-CBT)
- Cognitive therapy (TF-CBT)
- Narrative exposure (TF-CBT)
- Exposure /prolonged exposure (TF-CBT)
- Eye Movement Desensitisation Reprocessing [EMDR]
- Family therapy
- Play therapy
- Parent training
- No treatment, reflected in waitlist or no treatment arms of RCTs included in the guideline systematic review and NMA.

Model structure

A hybrid decision-analytic model consisting of a decision-tree followed by a two-state Markov model was constructed using Microsoft Office Excel 2013. The model estimated the total costs and benefits associated with provision of effective treatment options in children and young people with PTSD. The structure of the model, which aimed to simulate the course of PTSD and relevant clinical practice in the UK, was also driven by the availability of clinical data.

According to the model structure, hypothetical cohorts of children and young people with PTSD were initiated on each of the treatment options assessed, including no treatment. The duration of interventions considered in the model varied between 6 and 14 weeks. For modelling purposes relating to estimation of QALYs, the duration of a full course of treatment was assumed to be 3 months (12 weeks), without this assumption affecting resource use associated with each intervention. Following a course of treatment, children and young people in each cohort either remitted (that is, they did not meet criteria for a PTSD diagnosis) or did not remit. In the next 3 months of follow-up, those who remitted (‘no PTSD’) could remain in remission or relapse to a PTSD state. Conversely, those who did not remit, could remain in the PTSD state or could remit (and move to a ‘no PTSD’ state). The two distinct periods in the decision-tree (full course of treatment and 3-month follow-up) were informed by the results of the respective NMAs (although the 3-month follow-up period was informed by the results of the NMA only in a sensitivity analysis, as discussed later). The length of the follow-up period immediately post-treatment was set at 3 months as this was the period for which most RCT follow-up data were available across interventions.

After that point, children and young people in each cohort were entered into the Markov component of the economic model, in either the ‘PTSD’ or the ‘no PTSD’ health states,

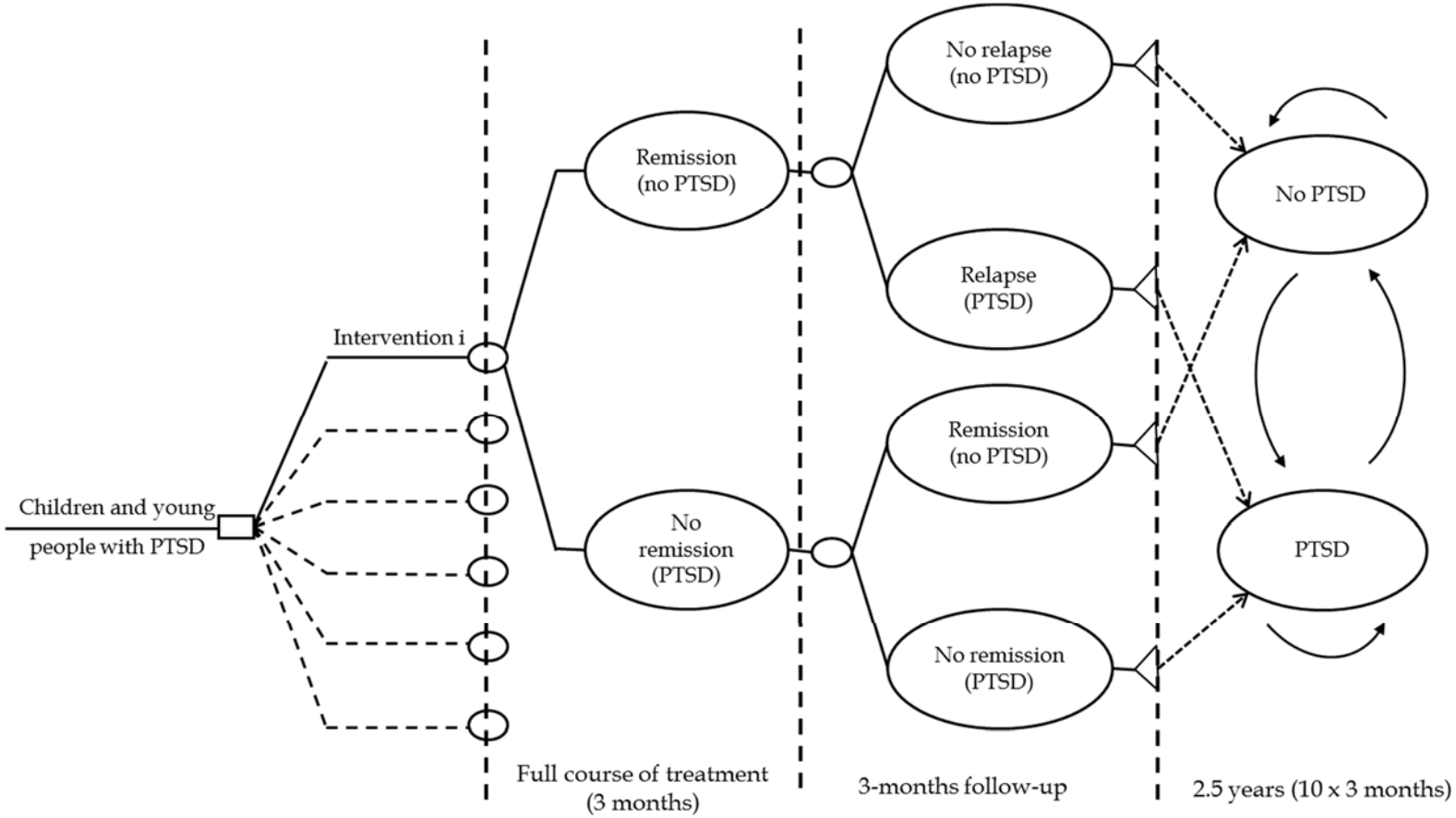
depending on their state at the end of the decision-tree. In each cycle of the Markov model, they could remain in the same health state or move between the two states of 'PTSD' and 'no PTSD'. The Markov model was run in 3-month cycles, for consistency with the duration of the two periods of the decision-tree, that is, a full course of treatment (which lasted, on average, 3 months) and another 3-month follow-up period (the length of which was determined by data availability). A half-cycle correction was applied. Due to lack of long-term comparative clinical data, transitions between the two health states in the Markov component of the model were assumed to be independent of the intervention received at the decision-tree part of the model.

The time horizon of the analysis was 3 years, consisting of the 6 months of the decision tree and another 2.5 years (10 x 3-month cycles) in the Markov component of the economic model. This time frame was considered to be long enough to capture longer-term costs and effects of treatment, without significant extrapolation over the course of PTSD.

Death was not considered in the model as there was no published evidence that mortality in children and young people with PTSD is higher than that of those in the general population. Moreover, overall mortality in children and young people is low compared with the adult population, so that the impact of a potential increase in the mortality of children and young people due to PTSD on the cost effectiveness of interventions assessed over the time horizon of the analysis was considered to be negligible.

The structure of the economic model for interventions for treatment of PTSD in children and young people is shown in Figure 172.

Figure 172. Schematic diagram of the economic model structure: interventions for the treatment of PTSD in children and young people



Costs and outcomes considered in the analysis

The economic analysis adopted the perspective of the NHS and personal social services (PSS), as recommended by NICE (NICE, 2014). Costs consisted of intervention costs (healthcare professional time) as well as other costs incurred by children and young people with PTSD who did not remit following treatment or who experienced a relapse following remission and costs incurred by those children who were in remission, including primary, community and secondary health care and personal social services. The cost year was 2017.

The measure of outcome was the Quality Adjusted Life Year (QALY), which incorporated utilities associated with the health states of PTSD and no PTSD.

Efficacy data and methods of evidence synthesis

Selection of efficacy data and methods of evidence synthesis

Efficacy data for the interventions for the treatment of PTSD in children and young people that were considered in the economic modelling were derived from the respective guideline systematic review and meta-analysis of RCTs. Two types of efficacy data were extracted from the RCTs included in the review and synthesised in the guideline meta-analyses:

- Continuous data in the form of changes in PTSD symptom scores between baseline and follow-up
- Dichotomous data, either response or remission

Although the latter are more suitable for use in economic modelling as they can be directly translated into probabilities of events that correspond directly to the model health states, the remission data reported in the RCTs included in the guideline systematic review were sparse and not available for all interventions assessed in the economic analysis: continuous PTSD symptom change score data at treatment endpoint were available for 17 interventions assessed in 29 studies; on the other hand, only 9 studies reported dichotomous remission at treatment endpoint, and such data were available only for 7 interventions. Consequently, available remission data were not adequate to inform all interventions of interest included in the economic model. In contrast, continuous PTSD symptom data constituted a wider and more comprehensive evidence base that was available for a wider range of interventions. Therefore, it was decided to synthesise continuous data and to transform the analysis outputs in a suitable way, as described later, so as to inform the economic model. Two analyses of continuous data were conducted: one utilised PTSD symptom change scores between baseline and treatment endpoint and the other utilised PTSD symptom change scores between baseline and 1-4 month follow-up. Dichotomous remission data were also synthesised and utilised in a secondary economic analysis, to explore whether their consideration would alter conclusions from the base-case analysis that utilised continuous PTSD symptom change scores.

Both continuous symptom scale score data and dichotomous remission data were synthesised using network meta-analytic techniques. Network meta-analysis (NMA) is a generalisation of standard pairwise meta-analysis for A versus B trials, to data structures that include, for example, A versus B, B versus C, and A versus C trials (Dias 2011a; Lu & Ades, 2004). A basic assumption of NMA methods is that direct and indirect evidence estimate the same parameter, that is, the relative effect between A and B measured directly from an A versus B trial, is the same with the relative effect between A and B estimated indirectly from A versus C and B versus C trials. NMA techniques strengthen inference concerning the relative effect of two treatments by including both direct and indirect

comparisons between treatments, and, at the same time, allow simultaneous inference on all treatments examined in the pairwise trial comparisons while respecting randomisation (Caldwell 2005; Lu & Ades 2004). Moreover, the NMA approach assumes that the populations included in all trials are similar and thus the treatment effects are exchangeable across all populations included in the NMA (Mavridis 2015). Simultaneous estimation of the relative effects of any number of treatments is possible provided that treatments participate in a single 'network of evidence', that is, every treatment is linked to at least one of the other treatments under assessment through direct comparisons.

NMAs were conducted within a Bayesian framework using Markov Chain Monte Carlo simulation techniques implemented in WinBUGS 1.4.3 (Lunn 2000; Spiegelhalter 2003).

For the synthesis of continuous data (changes in PTSD scale score), a generalised linear model (GLM) with a normal likelihood and identity link was used (Dias et al., 2011a and 2018). Because the RCTs included in the NMAs used different continuous scales to report change in PTSD symptoms, pooling of the differences in means across different scales was not appropriate. For this reason results were expressed in the form of the Standardised Mean Difference (SMD), where the mean difference is divided by a standardising constant, which can be the population standard deviation for each scale (if known), or its estimate, often obtained by pooling the estimated standard deviations across all arms of the study (Cooper 2009). Pooling of continuous data in the NMAs utilised the Cohen's d SMD measure (Cohen 1969).

The economic model required probabilities of effect (remission). SMD cannot be directly used to estimate these probabilities. However, it was possible to transform the results of the NMAs, expressed on the SMD scale, to a log-odds ratio of effect using the following formula (Chinn 2000):

$$LOR = -\frac{\pi}{\sqrt{3}} SMD$$

This transformation assumes that remission status is determined based on a scale with an underlying normal distribution that was dichotomised into a PTSD diagnosis vs no PTSD diagnosis ('remission') using a hypothetical cut-off point on the scale.

The log-odds ratios of remission of each intervention versus no treatment (which served as the baseline treatment) were exponentiated into odds ratios. Subsequently, the probability of remission for each intervention, which was utilised in the economic model, was estimated using the following formulae:

$$intervention\ prob = \frac{odds}{(1+odds)} \quad (1)$$

and

$$odds = \frac{baseline\ prob}{(1-baseline\ prob)} OR \quad (2)$$

where baseline prob is the probability of remission for the baseline treatment (no treatment), OR is the odds ratio of remission for each intervention versus waitlist (no treatment) as estimated following exponentiation of the log-odds ratios obtained from the NMA, and odds is the odds of each intervention to achieve remission.

The WinBUGS code used to synthesise the continuous data (changes in PTSD symptom scale scores), for both random and fixed effect models, is shown in Table 35 (adapted from Dias et al., 2018). The suitability of both fixed and random effect models was assessed and compared. For the random effects model, code for both informative and uninformative prior distribution of the between-study standard deviation is provided, as the analysis on changes in PTSD symptom scores between baseline and 1-4 month follow-up suggested that the prior distribution has had some influence on the estimate of the between trial heterogeneity; therefore, an analysis utilising an informative prior distribution of the between-study standard deviation was conducted in this dataset to inform the economic analysis. The prior distribution that informed the between-study heterogeneity at the 1-4 month follow-up was derived from a study that analysed continuous mental health outcomes from meta-analyses of non-pharmacological interventions derived from the Cochrane Database of Systematic Reviews (Rhodes et al., 2015).

Table 35. WinBUGS code used to synthesise continuous data (changes in PTSD symptom scale scores) in the NMAs that informed the guideline economic modelling of interventions for the treatment of PTSD in children and young people

Normal likelihood and identity link model

RANDOM EFFECTS MODEL

```
# Normal likelihood, identity link: SMD with arm-based means;
# output as log Odds Ratios
# Random effects model for multi-arm trials
model{                          # *** PROGRAM STARTS
for(i in 1:ns){                 #   LOOP THROUGH STUDIES
  w[i,1] <- 0   # adjustment for multi-arm trials is zero for control arm
  delta[i,1] <- 0                # treatment effect is zero for control arm
  mu[i] ~ dnorm(0,.0001)            # vague priors for all trial baselines
 }
# CONTINUOUS DATA AS ARM MEANS
for(i in 1:ns){
  # calculate pooled.sd and adjustment for SMD
  df[i] <- sum(n[i,1:na[i]]) - na[i] # denominator for pooled.var
  Pooled.var[i] <- sum(nvar[i,1:na[i]])/df[i]
  Pooled.sd[i] <- sqrt(Pooled.var[i]) # pooled sd for study i, for SMD
  H[i] <- 1                       # use Cohen's d (ie no adjustment)
  for (k in 1:na[i]){
    se[i,k] <- sd[i,k]/sqrt(n[i,k])
    var[i,k] <- pow(se[i,k],2)       # calculate variances
    prec[i,k] <- 1/var[i,k]          # set precisions
    y[i,k] ~ dnorm(phi[i,k], prec[i,k]) # normal likelihood
    phi[i,k] <- theta[i,k] * (Pooled.sd[i]/H[i]) # theta is standardised mean
    theta[i,k] <- mu[i] + delta[i,k] # model for linear predictor, delta is SMD
    dev[i,k] <- (y[i,k]-phi[i,k])*(y[i,k]-phi[i,k])*prec[i,k]
    nvar[i,k] <- (n[i,k]-1) * pow(sd[i,k],2) # for pooled.sd
   }
  # summed residual deviance contribution for this trial
  resdev[i] <- sum(dev[i,1:na[i]])
 }
```

Normal likelihood and identity link model

```
# RE MODEL USING UNINFORMATIVE PRIOR FOR THE BETWEEN-STUDY STANDARD DEVIATION
for(i in 1:ns){                  # LOOP THROUGH ALL STUDIES
  for (k in 2:na[i]){             # LOOP THROUGH ARMS
    # trial-specific RE distributions
    delta[i,k] ~ dnorm(md[i,k], taud[i,k])
    md[i,k] <- d[t[i,k]] - d[t[i,1]] + sw[i,k]
    # precision of RE distributions (with multi-arm trial correction)
    taud[i,k] <- tau *2*(k-1)/k
    # adjustment, multi-arm RCTs
    w[i,k] <- delta[i,k] - d[t[i,k]] + d[t[i,1]]
    # cumulative adjustment for multi-arm trials
    sw[i,k] <-sum(w[i,1:k-1])/(k-1)
   }
 }
#
totresdev <- sum(resdev[])          # Total Residual Deviance (all data)
# Priors distributions
d[1]<-0                    # treatment effect is zero for control arm
# vague prior for treatment effects
for (k in 2:nt){ d[k] ~ dnorm(0, .0001) }
sdev ~ dunif(0,5)                  # vague prior for between-trial SD
tau <- pow(sdev,-2)                  # between-trial precision
for (c in 1:(nt-1)){
  for (k in (c+1):nt){
    diff[c,k] <- d[k] - d[c]        # all pairwise differences (SMD)
    lor[c,k] <- diff[c,k]*(-3.1416/sqrt(3)) # convert to lor (note sign)
  }
 }

# RE MODEL USING INFORMATIVE PRIOR FOR THE BETWEEN-STUDY STANDARD DEVIATION
for(i in 1:ns){                  # LOOP THROUGH ALL STUDIES
  for (k in 2:na[i]){             # LOOP THROUGH ARMS
    # trial-specific RE distributions
    delta[i,k] ~ dnorm(md[i,k], taud[i,k])
    md[i,k] <- d[t[i,k]] - d[t[i,1]] + sw[i,k]
    # precision of RE distributions (with multi-arm trial correction)
    taud[i,k] <- invtausq *2*(k-1)/k
    # adjustment, multi-arm RCTs
    w[i,k] <- delta[i,k] - d[t[i,k]] + d[t[i,1]]
    # cumulative adjustment for multi-arm trials
    sw[i,k] <-sum(w[i,1:k-1])/(k-1)
   }
 }
#
totresdev <- sum(resdev[])          # Total Residual Deviance (all data)
# Priors distributions
d[1]<-0                    # treatment effect is zero for control arm
```

Normal likelihood and identity link model

```
# vague prior for treatment effects
for (k in 2:nt){ d[k] ~ dnorm(0, .0001) }
#informative prior for log(tau-squared)
invtausq <- 1/tausq                              #between-study precision
tausq <- exp(log.tausq)              #between-study variance
sdev <- pow(tausq,0.5)     #between-study standard deviation
prior.prec <- pow(1.93,-2)                       #precision of prior distribution
#informative prior on log-between-study variance (t(-3.85,1.93^2,5))
log.tausq ~ dt(-3.85,prior.prec,5)
for (c in 1:(nt-1)){
  for (k in (c+1):nt){
    diff[c,k] <- d[k] - d[c]         # all pairwise differences (SMD)
    lor[c,k] <- diff[c,k]*(-3.1416/sqrt(3)) # convert to lor (note sign)
                      or[c,k] <- exp(lor[c,k])
  }
 }

# rank treatments
for (k in 1:nt)  {
  rk[k]  <- rank(d[],k)
  best[k]  <- equals(rk[k],1)    # Smallest is best (i.e. rank 1)
  # prob treat k is h-th best, prob[1,k]=best[k]
  for (h in 1:nt) { prob[h,k] <- equals(rk[k],h) }
 }
}                                # *** PROGRAM ENDS
```

Initial values for each chain

- changes in PTSD symptom scale scores between baseline and treatment endpoint

```
# chain 1
list(d = c(NA,0,0,0,0,    0,0,0,0,0,   0,0,0,0,0,  0,0),
mu = c(0,0,0,0,0,   0,0,0,0,0,   0,0,0,0,0,   0,0,0,0,0,   0,0,0,0,0,   0,0,0,0),
 sdev = 1)
# chain 2
list(d = c(NA,-1,1,1,-0.5,    1,1,1,-1,-0.7,   1,-1,0.5,0.7,-1,  -1,0.5),
mu = c(0.5,1,0.7,1,-1,   -0.5,0,1,-0.5,-1,   0.7,1,-0.7,0.5,0.6,   -0.4,1,-1,0.5,-1,   1,-0.5,-1,-0.7,0.7,
0.6,-0.5,-0.6,1),
 sdev = 1)
```

- changes in PTSD symptom scale scores between baseline and 1-4-month follow-up [uninformative prior for the between-study standard deviation]

```
# chain 1
list(d = c(NA,0,0,0,0,    0,0,0,0,0,   0,0),
mu = c(0,0,0,0,0,   0,0,0,0,0),
 sdev = 1)
# chain 2
list(d = c(NA,-1,1,1,-0.5,    1,1,1,-1,-0.7,  -1,0.5),
mu = c(0.5,1,0.7,1,-1,   -0.5,0,1,-0.5,-1),
 sdev = 1)
```

- changes in PTSD symptom scale scores between baseline and 1-4-month follow-up [informative prior for the between-study standard deviation]

Normal likelihood and identity link model

```
# chain 1
list(d = c(NA,0,0,0,0,    0,0,0,0,0,   0,0),
mu = c(0,0,0,0,0,   0,0,0,0,0),
log.tausq = 1)
# chain 2
list(d = c(NA,-1,1,1,-0.5,    1,1,1,-1,-0.7,  -1,0.5),
mu = c(0.5,1,0.7,1,-1,   -0.5,0,1,-0.5,-1),
log.tausq = 0.5)
```

FIXED EFFECTS MODEL

```
# Normal likelihood, identity link: SMD with arm-based means;
# output as log Odds Ratios
# Fixed effect model
model{                          # *** PROGRAM STARTS
for(i in 1:ns){                 #   LOOP THROUGH STUDIES
  mu[i] ~ dnorm(0,.0001)            # vague priors for all trial baselines
# CONTINUOUS DATA AS ARM MEANS
  # calculate pooled.sd and adjustment for SMD
  df[i] <- sum(n[i,1:na[i]]) - na[i] # denominator for pooled.var
  Pooled.var[i] <- sum(nvar[i,1:na[i]])/df[i]
  Pooled.sd[i] <- sqrt(Pooled.var[i]) # pooled sd for study i, for SMD
#  H[i] <- 1 - 3/(4*df[i]-1)          # use Hedges' g
  H[i] <- 1                       # use Cohen's d (ie no adjustment)
  for (k in 1:na[i]){
    se[i,k] <- sd[i,k]/sqrt(n[i,k])
    var[i,k] <- pow(se[i,k],2)       # calculate variances
    prec[i,k] <- 1/var[i,k]          # set precisions
    y[i,k] ~ dnorm(phi[i,k], prec[i,k]) # normal likelihood
    phi[i,k] <- theta[i,k] * (Pooled.sd[i]/H[i]) # theta is standardised mean
    theta[i,k] <- mu[i] + d[t[i,k]] - d[t[i,1]] # model for linear predictor
    dev[i,k] <- (y[i,k]-phi[i,k])*(y[i,k]-phi[i,k])*prec[i,k]
    nvar[i,k] <- (n[i,k]-1) * pow(sd[i,k],2) # for pooled.sd
   }
  # summed residual deviance contribution for this trial
  resdev[i] <- sum(dev[i,1:na[i]])
 }
totresdev <- sum(resdev[])           # Total Residual Deviance (all data)
# Priors distributions
d[1]<-0                      # treatment effect is zero for control arm
# vague prior for treatment effects
for (k in 2:nt){ d[k] ~ dnorm(0, .0001) }

for (c in 1:(nt-1)){
  for (k in (c+1):nt){
    diff[c,k] <- d[k] - d[c]        # all pairwise differences (SMD)
    lor[c,k] <- diff[c,k]*(-3.1416/sqrt(3)) # convert to lor (note sign)
  }
 }
# rank treatments
for (k in 1:nt)  {
```

Normal likelihood and identity link model

```
  rk[k]  <- rank(d[],k)
  best[k]  <- equals(rk[k],1)    # Smallest is best (i.e. rank 1)
  # prob treat k is h-th best, prob[1,k]=best[k]
  for (h in 1:nt) { prob[h,k] <- equals(rk[k],h) }
 }
}                              # *** PROGRAM ENDS
```

Initial values for each chain

- changes in PTSD symptom scale scores between baseline and treatment endpoint

```
# chain 1
list(d = c(NA,0,0,0,0,    0,0,0,0,0,   0,0,0,0,0,  0,0),
mu = c(0,0,0,0,0,0,   0,0,0,0,0,   0,0,0,0,0,   0,0,0,0,0,   0,0,0,0,0,   0,0,0,0))
# chain 2
list(d = c(NA,-1,1,1,-0.5,    1,1,1,-1,-0.7,   1,-1,0.5,0.7,-1,  -1,0.5),
mu = c(0.5,1,0.7,1,-1,   -0.5,0,1,-0.5,-1,   0.7,1,-0.7,0.5,0.6,   -0.4,1,-1,0.5,-1,   1,-0.5,-1,-0.7,0.7,
0.6,-0.5,-0.6,1))
```

- changes in PTSD symptom scale scores between baseline and 1-4-month follow-up

```
# chain 1
list(d = c(NA,0,0,0,0,    0,0,0,0,0,   0,0),
mu = c(0,0,0,0,0,0,   0,0,0,0,0,0))
# chain 2
list(d = c(NA,-1,1,1,-0.5,    1,1,1,-1,-0.7,  -1,0.5),
mu = c(0.5,1,0.7,1,-1,   -0.5,0,1,-0.5,-1))
```

For the synthesis of dichotomous data (remission), a binomial likelihood and logit link model was used (Dias et al., 2011a). The output of this analysis was the log-odds ratios between all pairs of interventions assessed. The log-odds ratios of remission of each intervention versus no treatment (which served as the baseline treatment) were exponentiated into odds ratios and subsequently applied onto the baseline probability of remission using the formulae (1) and (2) above, in order to obtain the absolute probability of remission for each intervention, which was utilised in the economic model.

The WinBUGS code used to synthesise the dichotomous remission data, for both random and fixed effect models, is shown in Table 36 (adapted from Dias et al., 2011a). The suitability of both models was assessed and compared. The random effects model utilised uninformative prior parameters.

Table 36. WinBUGS code used to synthesise dichotomous data (remission) in the NMAs that informed the guideline economic modelling of interventions for the treatment of PTSD in children and young people

Binomial likelihood and logit link model

RANDOM EFFECTS MODEL

```
# Binomial likelihood, logit link
# Random effect model, multi-arm trials
model{                                                  # *** PROGRAM STARTS
for(i in 1:ns){                                          # LOOP THROUGH STUDIES
  w[i,1] <- 0                                           # adjustment for multi-arm trials is zero for
control arm
  delta[i,1] <- 0                                        # treatment effect is zero for control arm
  mu[i] ~ dnorm(0,.0001)                                  # vague priors for all trial baselines
```

Binomial likelihood and logit link model

```
  for (k in 1:na[i]) {                                    # LOOP THROUGH ARMS
    r[i,k] ~ dbin(p[i,k],n[i,k])                          # binomial likelihood
    logit(p[i,k]) <- mu[i] + delta[i,k]                     # model for linear predictor
     rhat[i,k] <- p[i,k] * n[i,k]                         # expected value of the numerators
     dev[i,k] <- 2 * (r[i,k] * (log(r[i,k])-log(rhat[i,k]))      #Deviance contribution
        + (n[i,k]-r[i,k]) * (log(n[i,k]-r[i,k]) - log(n[i,k]-rhat[i,k])))
  }
  resdev[i] <- sum(dev[i,1:na[i]])                  # summed residual deviance contribution for this trial
  for (k in 2:na[i]) {                                  # LOOP THROUGH ARMS
     delta[i,k] ~ dnorm(md[i,k],taud[i,k])                # trial-specific LOR distributions
     md[i,k] <- d[t[i,k]] - d[t[i,1]] + sw[i,k]           # mean of LOR distributions (with multi-arm
correction)
     taud[i,k] <- tau *2*(k-1)/k                          # precision of LOR distributions (with multi-arm
correction)
     w[i,k] <- (delta[i,k] - d[t[i,k]] + d[t[i,1]])       # adjustment for multi-arm RCTs
     sw[i,k] <- sum(w[i,1:k-1])/(k-1)                     # cumulative adjustment for multi-arm trials
   }
}
totresdev <- sum(resdev[])                               #Total Residual Deviance
d[1]<- 0                                                 # treatment effect is zero for reference
treatment
for (k in 2:nt)  { d[k] ~ dnorm(0,.0001)}                  # vague priors for treatment effects
sd ~ dunif(0,2)
tau <- pow(sd,-2)

# pairwise ORs and LORs for all possible pair-wise comparisons
for (c in 1:(nt-1)) {  for (k in (c+1):nt) {
       or[c,k] <- exp(d[k] - d[c])
       lor[c,k] <- (d[k]-d[c])
      }
}

# ranking
for (k in 1:nt) {
   rk[k] <- nt+1-rank(d[],k)                 # assumes events are “good”
   best[k] <- equals(rk[k],1)                #calculate probability that treat k is best
}
}                                                        # *** PROGRAM ENDS
```

Initial values for each chain

```
#chain 1
list(d=c(NA,0,0,0,0,0,0),   sd=1,
mu=c(0,0,0,0,0,  0,0,0,0))
#chain 2
list(d=c(NA,0.1,-1,-0.2,1,0.1,-1),  sd=0.5,
mu=c(1,-1,-2,0,0,    -2,1,0,2))
```

FIXED EFFECTS MODEL

```
# Binomial likelihood, logit link, MTC
# Fixed effect model
```

Binomial likelihood and logit link model

```
model{                                                    # *** PROGRAM STARTS
for(i in 1:ns){                                           # LOOP THROUGH STUDIES
  mu[i] ~ dnorm(0,.0001)                                  # vague priors for all trial baselines
  for (k in 1:na[i]) {                                    # LOOP THROUGH ARMS
    r[i,k] ~ dbin(p[i,k],n[i,k])                          # binomial likelihood
    logit(p[i,k]) <- mu[i] + d[t[i,k]]-d[t[i,1]]          # model for linear predictor
    rhat[i,k] <- p[i,k] * n[i,k]                          # expected value of the numerators
    dev[i,k] <- 2 * (r[i,k] * (log(r[i,k])-log(rhat[i,k]))      #Deviance contribution
        + (n[i,k]-r[i,k]) * (log(n[i,k]-r[i,k]) - log(n[i,k]-rhat[i,k])))
  }
  resdev[i] <- sum(dev[i,1:na[i]])              # summed residual deviance contribution for this trial
}
totresdev <- sum(resdev[])                      #Total Residual Deviance
d[1]<- 0                                        # treatment effect is zero for reference treatment
for (k in 2:nt)  { d[k] ~ dnorm(0,.0001) }      # vague priors for treatment effects

# pairwise ORs and LORs for all possible pair-wise comparisons
for (c in 1:(nt-1)) {  for (k in (c+1):nt) {
      or[c,k] <- exp(d[k] - d[c])
      lor[c,k] <- (d[k]-d[c])
     }
}

# ranking
for (k in 1:nt) {
   rk[k] <- nt+1-rank(d[],k)                # assumes events are "good"
   best[k] <- equals(rk[k],1)               #calculate probability that treat k is best
}
}                                                         # *** PROGRAM ENDS
```

Initial values for each chain

```
#chain 1
list(d=c(NA,0,0,0,0,0,0),
mu=c(0,0,0,0,0,  0,0,0,0))
#chain 2
list(d=c(NA,0.1,-1,-0.2,1,0.1,1),
mu=c(1,-1,-2,0,0,    -2,1,0,2))
```

Goodness of fit of each model was assessed by comparing the posterior mean of the total residual deviance (totresdev) with the number of data points in the model. Models were also compared using the deviance information criterion (DIC), a measure of model fit penalised for model complexity, where lower values are preferred (Dias et al., 2011a; Spiegelhalter et al., 2002). Details on the interventions, data and type of model used (i.e. fixed or random effects) in each NMA are reported in the respective subheadings under the 'Efficacy data and methods of evidence synthesis' section. Each WinBUGS model was run with an initial burn-in period of 100,000 iterations, followed by 300,000 further iterations, thinned by 30 so as to obtain 10,000 iterations for use in the probabilistic economic model. Two different sets of initial values were used; convergence was assessed by visually inspecting the mixing of the two chains in the history plots and the Brooks Gelman-Rubin diagram in WinBUGS.

Consistency between indirect and direct evidence was explored statistically by comparing the fit of a model assuming consistency with a model which allowed for inconsistency (also known as an unrelated mean effects model). The latter is equivalent to having separate, unrelated meta-analyses for every pair-wise contrast but assumes a common between-study heterogeneity across all comparisons. If the inconsistency model had a meaningfully smaller posterior mean residual deviance or heterogeneity then this indicated potential inconsistency in the data. Deviance plots, in which the posterior mean deviance of the individual data points in the inconsistency model were plotted against their posterior mean deviance in the consistency model, were inspected in order to identify studies which may have contributed to loops of evidence where inconsistency may be present. Further checks were conducted using a node-split approach implemented in R using the *gemtc* package in R (Dias et al., 2011b; van Valkenhoef & Kuiper, 2016).

When evidence of inconsistency was found, studies contributing to loops of evidence where there might be inconsistency were checked for data accuracy and analyses were repeated if corrections in the data extraction were made. However, if evidence of inconsistency was still present following any data corrections, no studies were excluded from the analysis, as their results could not be considered as less valid than those of other studies solely because of the inconsistency findings. Nevertheless, the presence of inconsistency in the NMA was highlighted and results were interpreted accordingly by the committee.

A critique of the NMA models by the NICE Technical Support Unit (TSU) including details of the inconsistency checks undertaken is provided in Appendix M.

Synthesis of changes in PTSD symptom scores between baseline and treatment endpoint

The NMA of changes in PTSD symptom scores between baseline and treatment endpoint in children and young people with PTSD included 29 studies and 17 interventions. Prioritisation of clinical scales for inclusion in the analysis followed the prioritisation of scales considered in the guideline systematic review and pairwise meta-analysis. Intention-to-treat (ITT) data, obtained after imputation of missing data, were prioritised over completers' data, if both were available in the same study, in accordance with the guideline systematic review protocols. For the NMA, self-reported scales were prioritised over clinician-rates scales if both were available in the same study, following advice from the committee.

Table 37 provides all studies and data considered in the NMA of changes in PTSD symptom scores between baseline and treatment endpoint in children and young people with PTSD, while Figure 173 shows the respective network of interventions. Table 38 shows the interventions with their NMA codes, the numbers of participants randomised to each intervention across all trials included in the NMA, and the number of studies that tested each intervention.

Table 37: RCTs, interventions and efficacy data considered in the NMA of changes in PTSD symptom scores between baseline and treatment endpoint in children and young people with PTSD

Study	t1	y1	sd1	n1	t2	y2	sd2	n2	t3	y3	sd3	n3
Chen 2014	1	1.55	9.01	12	3	-2.80	8.37	10	5	-14.00	19.94	10
de Roos 2017	1	-6.02	15.82	18	8	-34.3	16.22	42	10	-32.24	14.20	43
Jaycox 2009	1	-1.09	7.63	37	5	-3.74	6.89	39	NA	NA	NA	NA
Meiser-Stedman 2010 /2017	1	-5.8	10.59	13	7	-24.9	6.95	13	NA	NA	NA	NA

Study	t1	y1	sd1	n1	t2	y2	sd2	n2	t3	y3	sd3	n3
Pityaratstian 2015	1	0.39	9.78	18	5	-1.94	9.40	18	NA	NA	NA	NA
Smith 2007	1	-6.3	9.63	11	7	-39	7.65	12	NA	NA	NA	NA
Auslander 2016	2	0.8	9.68	10	5	-5.68	6.71	15	NA	NA	NA	NA
Goldbeck 2016 /Sachser 2016	1	-7.52	9.18	82	6	-13.4	9.63	74	NA	NA	NA	NA
Jensen 2014	2	-10.01	7.63	63	6	-15.48	6.96	59	NA	NA	NA	NA
Langley 2015	1	-2.05	9.82	36	5	-14.41	9.91	35	NA	NA	NA	NA
Shein-Szydlo 2016	1	-1.94	9.84	49	6	-23.72	8.12	50	NA	NA	NA	NA
Stein 2003a /Kataoka 2011	1	-8	7.01	63	5	-15.6	5.07	54	NA	NA	NA	NA
Al-Hadethe 2015	1	2.1	7.25	20	8	-5.05	5.64	19	17	-9.95	5.37	20
Deblinger 1996/1999	2	-3.29	2.34	14	9	-5.48	2.12	21	15	-4.7	2.34	20
King 2000	1	-1.47	1.68	12	9	-5.75	3.01	12	16	-7.08	4.10	12
Ruf 2010	1	-4.5	12.34	13	8	-26.1	9.75	12	NA	NA	NA	NA
Gilboa-Schechtman 2004/2010	3	-10.79	8.36	19	9	-19.37	8.45	19	NA	NA	NA	NA
Cohen 1998 /2005a	3	-0.91	3.97	41	6	-1.85	3.56	41	NA	NA	NA	NA
Cohen 2011 /2005b	3	-1.66	9.14	60	6	-7.16	13.52	64	NA	NA	NA	NA
Foa 2013	3	-15.3	6.83	30	9	-18.7	6.86	31	NA	NA	NA	NA
Ford 2012	3	-17	9.53	20	6	-24.4	13.93	26	NA	NA	NA	NA
Diehle 2015 /Lindauer 2009	6	-20.2	15.58	23	10	-20.9	20.08	25	NA	NA	NA	NA
Soberman 2002	2	-5.73	12.39	11	11	-5.5	10.20	10	NA	NA	NA	NA
Ahmad 2007 /2008	1	-7.4	14.01	16	10	-6.3	15.35	17	NA	NA	NA	NA
Lieberman 2005 / 2006 / Ghosh Ippen 2011	15	-0.4	3.03	29	12	-3.61	2.33	36	NA	NA	NA	NA
Kazak 2004	1	-4.49	5.53	74	13	-6.53	5.36	75	NA	NA	NA	NA
Deeba 2015	2	0.77	6.00	60	14	-5.2	5.15	69	NA	NA	NA	NA
Schottelkorb 2012	6	-2.25	10.04	12	14	-3.36	9.40	14	NA	NA	NA	NA
Gordon 2006 /2008	1	-0.1	0.26	39	4	-0.5	0.21	38	NA	NA	NA	NA

t1, t2, t3 indicate the coded treatment in each trial arm; codes of treatments are provided in **Table 38**
y1, y2, y3 indicate the mean change in effect in each trial arm
sd1, sd2, sd3 indicate the standard deviation of the mean change in effect in each trial arm
n1, n2, n3 indicate the number of participants in each trial arm
NA: non-applicable

Figure 173. Network of interventions included in the NMA of changes in PTSD symptom scores between baseline and treatment endpoint in children and young people with PTSD

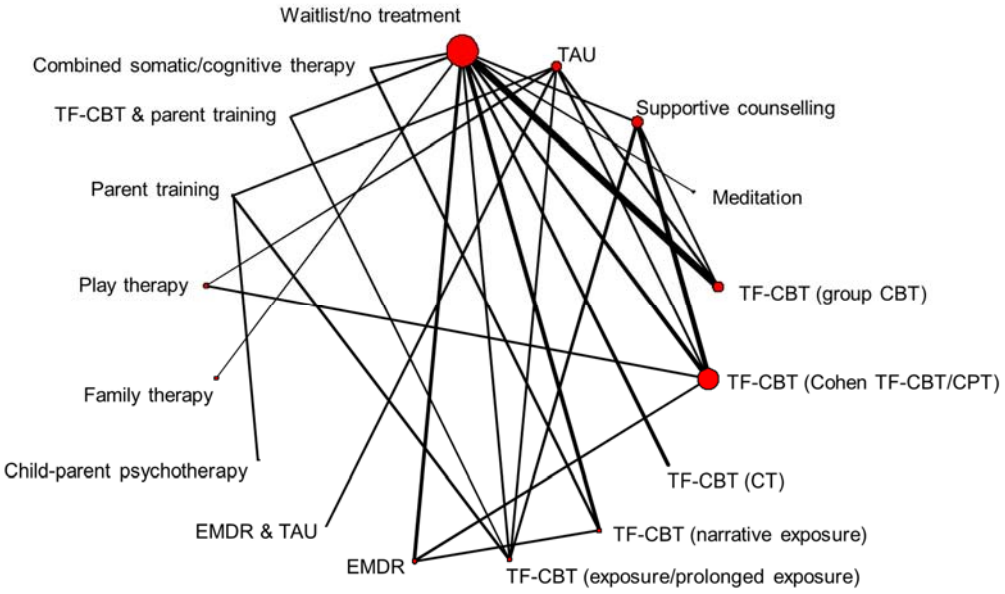


Table 38. NMA of changes in PTSD symptom scores between baseline and treatment endpoint in children and young people with PTSD: Interventions with NMA codes, numbers of participants (N) randomised to each intervention across RCTs and number of RCTs (k) that tested each intervention

Code	Intervention	N randomised (N total = 1960)	k (k total = 29; 63 arms)
1	Waitlist / no treatment	513	16
2	TAU	158	5
3	Supportive counselling	180	6
4	Meditation	38	1
5	TF-CBT group CBT	171	6
6	TF-CBT Cohen/CPT	349	8
7	TF-CBT cognitive therapy	25	2
8	TF-CBT narrative exposure	73	3
9	TF-CBT exposure/prolonged exposure	83	4
10	EMDR	85	3
11	EMDR & TAU	10	1
12	Child-parent psychotherapy	36	1
13	Family therapy	75	1
14	Play therapy	83	2
15	Parent training	49	2
16	TF-CBT & parent training	12	1

Code	Intervention	N randomised (N total = 1960)	k (k total = 29; 63 arms)
17	Combined somatic/cognitive therapy	20	1
EMDR: eye movement desensitisation reprocessing; TAU: treatment as usual; TF-CBT: trauma-focused cognitive behavioural therapy			

It is noted that:

- Waitlist and no treatment arms were included in the same node, following advice from the committee. However, it is acknowledged that the baseline effect of waitlist may be lower than that of 'no treatment' (Furukawa et al., 2014), resulting in the relative effects of active interventions having been potentially exaggerated in waitlist-controlled studies compared with their expected effects versus a 'no treatment'-control.
- Of the studies included in the guideline systematic review that reported changes in PTSD symptom scores between baseline and treatment endpoint, Lyshak-Stelzer 2007 compared art therapy + TAU vs attention placebo + TAU; Layne 2008 compared TF-CBT & psychoeducation vs psychoeducation alone. These treatments could not be connected in the network and thus were not considered in the NMA.
- The systematic review of pharmacological interventions for the treatment of PTSD in children and young people included one trial (Robb 2010) that evaluated sertraline versus pill placebo. In addition, Cohen 2007 evaluated sertraline plus TF-CBT vs placebo plus TF-CBT. Both these studies were not connected in the network and thus the respective interventions were not considered in the NMA.

Results of the network meta-analysis: changes in PTSD symptom scores between baseline and treatment endpoint in children and young people with PTSD

The random effects model demonstrated a better fit for the data (totresdev = 63.01; DIC = 275.27) than the fixed effects model (totresdev = 142.20; DIC = 340.17). The number of data points (study arms) in the model was 63, suggesting a good fit of the random effects model. The between-study heterogeneity was large compared with the size of treatment effects (sd 0.58). No evidence of inconsistency was identified in the network using either global inconsistency checks or the node-splitting method. Details of the inconsistency checks are provided in Appendix M.

The results of the random effects model are shown in Table 39. Interventions have been ordered from best to worst, according to their mean ranking across model iterations. Relative effects versus waitlist / no treatment (mean SMD and log-odds ratio and 95% credible intervals [CrI]) are reported. Posterior mean ranks of each intervention (and 95% CrI) are also provided, where a rank of 1 is best.

Table 39. Results of the NMA: changes in PTSD symptom scores between baseline and treatment endpoint in children and young people with PTSD (random effects model)

Intervention	Mean SMD (95% CrI) vs waitlist	Mean LOR (95% CrI) vs waitlist	Mean ranking (95% CrI)
TF-CBT (cognitive therapy)	-2.94 (-3.94 to -1.95)	5.33 (3.54 to 7.15)	1.58 (1 to 4)
Combined somatic/cognitive therapy	*-2.14 (-3.34 to -0.92)*	*3.88 (1.66 to 6.05)*	*3.77 (1 to 11)*
Child-parent psychotherapy	*-2.16 (-4.02 to -0.26)*	*3.92 (0.48 to 7.29)*	*4.13 (1 to 13)*

Intervention	Mean SMD (95% CrI) vs waitlist	Mean LOR (95% CrI) vs waitlist	Mean ranking (95% CrI)
TF-CBT & parent training	*-1.79 (-3.15 to -0.45)*	*3.24 (0.81 to 5.71)*	*5.40 (1 to 14)*
Meditation	*-1.67 (-2.94 to -0.41)*	*3.03 (0.75 to 5.32)*	*5.96 (1 to 14)*
TF-CBT (narrative exposure)	-1.49 (-2.25 to -0.74)	2.71 (1.34 to 4.07)	6.57 (3 to 12)
TF-CBT (exposure/ prolonged exposure)	-1.34 (-2.15 to -0.51)	2.42 (0.93 to 3.90)	7.51 (3 to 12)
Play therapy	-1.35 (-2.48 to -0.20)	2.44 (0.37 to 4.49)	7.60 (2 to 14)
TF-CBT (Cohen/CPT)	-1.17 (-1.78 to -0.54)	2.12 (0.99 to 3.23)	8.69 (5 to 13)
EMDR	-0.99 (-1.76 to -0.23)	1.80 (0.41 to 3.19)	10.14 (5 to 15)
Parent training	-0.96 (-2.32 to 0.41)	1.74 (-0.74 to 4.21)	10.28 (3 to 17)
TF-CBT (group CBT)	-0.91 (-1.48 to -0.34)	1.65 (0.61 to 2.68)	10.72 (6 to 15)
Supportive counselling	-0.59 (-1.29 to 0.12)	1.08 (-0.19 to 2.34)	12.96 (9 to 16)
Family therapy	-0.37 (-1.60 to 0.84)	0.67 (-1.52 to 2.91)	13.59 (5 to 17)
EMDR & TAU	*-0.28 (-1.96 to 1.40)*	*0.52 (-2.54 to 3.56)*	*13.65 (4 to 17)*
TAU	*-0.31 (-1.16 to 0.56)*	*0.55 (-1.01 to 2.10)*	*14.51 (10 to 17)*
Waitlist / no treatment	Reference	Reference	15.96 (14 to 17)
Standard deviation: mean 0.58 (95% CrI 0.37 to 0.89)			
Total residual deviance 62.93 (95% CrI 42.95 to 86.24)			
CrI: credible intervals; EMDR: eye movement desensitisation reprocessing; LOR: log-odds ratio; SMD: standardised mean difference; TAU: treatment as usual; TF-CBT: trauma-focused cognitive behavioural therapy Negative values for the SMD and positive values for the LOR indicate a better effect for the intervention compared with the reference treatment (waitlist / no treatment). Interventions in italics were not considered in the economic analysis due to the low number of people randomised to each of them or due to their being interventions of no interest			

Detailed results of all pair-wise comparisons between interventions are shown in Appendix N.

As reported earlier, the economic analysis included interventions that had been tested on at least 40 individuals across RCTs included in the NMA, as this was deemed as the minimum evidence that would be adequate to support a practice recommendation. The only exception was cognitive therapy, which had been tested on only 25 children; this was included in the economic analysis as the committee was interested in the relative clinical and cost effectiveness across all interventions belonging to the TF-CBT class. Therefore, meditation, child-parent psychotherapy, TF-CBT & parent training, and combined somatic/cognitive therapy were not considered in the economic analysis. Moreover, TAU and EMDR & TAU were of no interest and were thus not included in the economic analysis, as TAU was not accurately defined across the studies and varied between “access to outpatient mental health services” to “therapists being asked to provide the treatment they believed would be effective for the particular case with all participants receiving individual treatment”.

The output of the NMA used in the economic analysis was the log-odds ratio of every intervention versus waitlist / no treatment.

Synthesis of changes in PTSD symptom scores between baseline and 1-4 month follow-up

The NMA of changes in PTSD symptom scores between baseline and 1-4 month follow-up in children and young people with PTSD included 10 studies and 12 interventions. As with treatment endpoint continuous data, prioritisation of clinical scales for inclusion in the analysis followed the prioritisation of scales considered in the guideline systematic review and pairwise meta-analysis. Intention-to-treat (ITT) data, obtained after imputation of missing data, were prioritised over completers' data, if both were available in the same study, in accordance with the guideline systematic review protocols. For the NMA, self-reported scales were prioritised over clinician-rates scales if both were available in the same study, following advice from the committee.

Table 40 provides all studies and data considered in the NMA of changes in PTSD symptom scores between baseline and 1-4 month follow-up in children and young people with PTSD, whereas Figure 174 shows the respective network of interventions. Table 41 shows the interventions with their NMA codes, the numbers of participants randomised to each intervention across all trials included in the NMA, and the number of studies that tested each intervention.

Table 40: RCTs, interventions and efficacy data considered in the NMA of changes in PTSD symptom scores between baseline and 1-4 month follow-up in children and young people with PTSD

Study	t1	y1	sd1	n1	t2	y2	sd2	n2	t3	y3	sd3	n3
Ahrens 2002	1	0.08	5.76	19	5	-12.11	8.05	19	NA	NA	NA	NA
Berger 2009	1	-1.52	5.20	82	3	-8.73	5.82	84	NA	NA	NA	NA
Chen 2014	1	-2.2	9.07	12	3	-6.5	10.84	10	4	-22.8	8.75	10
Pityaratstian 2015	1	0.78	10.15	18	4	-5.67	8.50	18	NA	NA	NA	NA
Al-Hadethe 2015	1	3.5	7.41	20	6	-4	7.72	19	12	-9.4	5.35	20
Deblinger 1996/1999	2	-4.15	2.90	14	7	-5.53	2.09	21	10	-5.8	2.29	20
Ertl 2011 / Neuner 2007	1	-10.68	13.80	28	3	-16.87	14.42	24	6	-20.3	12.73	26
King 2000	1	-1.91	1.95	12	7	-4.66	2.52	12	11	-6.33	4.06	12
de Roos 2017	6	-36.63	15.83	42	8	-31.31	14.61	43	NA	NA	NA	NA
Soberman 2002	2	-6.78	8.14	11	9	-12.83	8.1	12	NA	NA	NA	NA

t1, t2, t3 indicate the coded treatment in each trial arm; codes of treatments are provided in Table 41
y1, y2, y3 indicate the mean change in effect in each trial arm
sd1, sd2, sd3 indicate the standard deviation of the mean change in effect in each trial arm
n1, n2, n3 indicate the number of participants in each trial arm
NA: non-applicable

Figure 174. Network of interventions included in the NMA of changes in PTSD symptom scores between baseline and 1-4 month follow-up in children and young people with PTSD

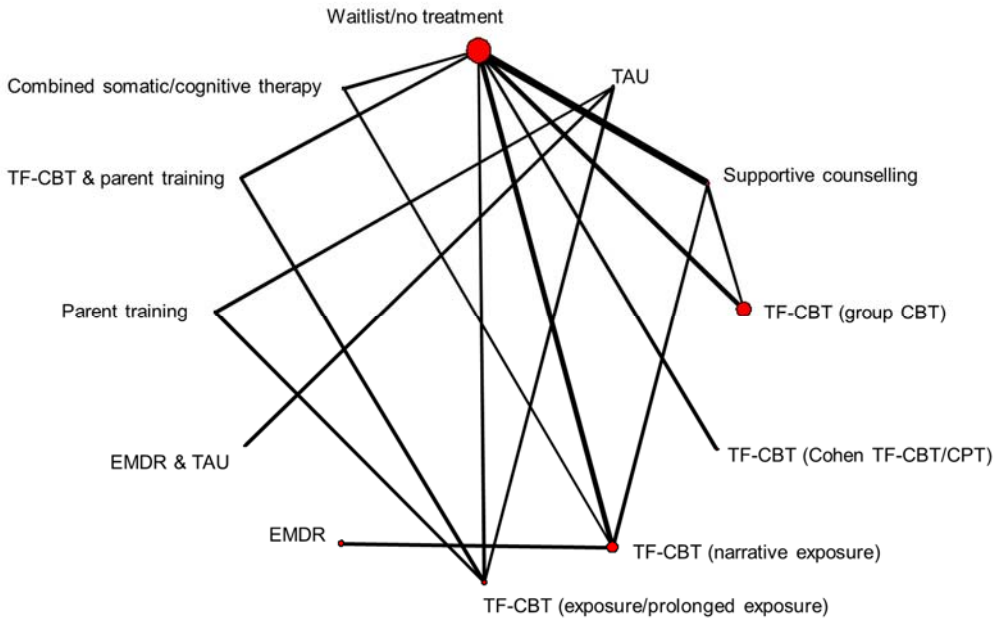


Table 41. NMA of changes in PTSD symptom scores between baseline and 1-4 month follow-up in children and young people with PTSD: Interventions with NMA codes, numbers of participants (N) randomised to each intervention across RCTs and number of RCTs (k) that tested each intervention

Code	Intervention	N randomised (N total = 608)	k (k total = 10; 25 arms)
1	Waitlist / no treatment	191	7
2	TAU	25	2
3	Supportive counselling	34	2
4	TF-CBT (group CBT)	112	3
5	TF-CBT (Cohen/CPT)	19	1
6	TF-CBT (narrative exposure)	87	3
7	TF-CBT (exposure/prolonged exposure)	33	2
8	EMDR	43	1
9	EMDR & TAU	12	1
10	Parent training	20	1
11	TF-CBT & parent training	12	1
12	Combined somatic/cognitive therapy	20	1

EMDR: eye movement desensitisation reprocessing; TAU: treatment as usual; TF-CBT: trauma-focused cognitive behavioural therapy

Results of the network meta-analysis: changes in PTSD symptom scores between baseline and 1-4 month follow-up in children and young people with PTSD

The random effects model demonstrated a better fit for the data (totresdev = 25.22; DIC = 115.57) than the fixed effects model (totresdev = 41.51; DIC = 128.18). The number of data points (study arms) in the model was 25, suggesting satisfactory fit of the random effects model. Because the distribution of the posterior between-study standard deviation suggested that the uninformative prior distribution (Uniform(0,5)) has had some influence on the estimate of heterogeneity and resulted in high heterogeneity (0.97) (Appendix M), an analysis with an informative prior distribution (Rhodes et al., 2015) was conducted to assess whether this would have an impact on the final results. This analysis (using informative priors) was used to populate the economic model.

The between-study heterogeneity, after use of informative priors, was moderate to large compared with the size of treatment effects (sd 0.51). Inconsistency checks did not indicate evidence of inconsistency.

The results of the random effects model are shown in Table 42. Interventions have been ordered from best to worst, according to their mean ranking across model iterations. Relative effects versus waitlist / no treatment (mean SMD and log-odds ratio and 95% CrI) are reported. Posterior mean ranks of each intervention (and 95% CrI) are also provided, where a rank of 1 is best.

Table 42. Results of the NMA: changes in PTSD symptom scores between baseline and 1-4 month follow-up in children and young people with PTSD (random effects model)

Intervention	Mean SMD (95% CrI) vs waitlist	Mean LOR (95% CrI) vs waitlist	Mean ranking (95% CrI)
Combined somatic/cognitive therapy	*-1.80 (-3.01 to -0.58)*	*3.26 (1.05 to 5.46)*	*3.02 (1 to 9)*
TF-CBT (Cohen/CPT)	-1.74 (-3.09 to -0.42)	3.16 (0.76 to 5.60)	3.37 (1 to 10)
TF-CBT (group CBT)	-1.51 (-2.48 to -0.61)	2.75 (1.11 to 4.51)	4.09 (1 to 9)
TF-CBT & parent training	*-1.49 (-2.90 to -0.07)*	*2.70 (0.13 to 5.27)*	*4.33 (1 to 10)*
EMDR & TAU	*-1.10 (-3.51 to 1.23)*	*1.99 (-2.23 to 6.37)*	*6.06 (1 to 12)*
Parent training	-1.04 (-2.91 to 0.80)	1.89 (-1.44 to 5.28)	6.30 (1 to 11)
TF-CBT (narrative exposure)	-0.94 (-1.84 to -0.04)	1.71 (0.07 to 3.33)	6.85 (3 to 11)
TF-CBT (exposure /prolonged exposure)	-0.92 (-2.25 to 0.37)	1.68 (-0.67 to 4.08)	6.97 (3 to 11)
Supportive counselling	-0.74 (-1.41 to 0.06)	1.34 (-0.10 to 2.56)	7.94 (4 to 11)
EMDR	-0.59 (-2.12 to 0.97)	1.08 (-1.75 to 3.85)	8.48 (2 to 12)
TAU	*-0.35 (-2.26 to 1.60)*	*0.63 (-2.83 to 4.11)*	*9.52 (3 to 12)*
Waitlist / no treatment	Reference	Reference	11.08 (8 to 12)
Standard deviation: mean 0.51 (95% CrI 0.12 to 1.20)			
Total residual deviance 26.85 (95% CrI 13.99 to 43.95)			
CPT: cognitive processing therapy; CrI: credible intervals; EMDR: eye movement desensitisation reprocessing; LOR: log-odds ratio; SMD: standardised mean difference; TAU: treatment as usual; TF-CBT: trauma-focused cognitive behavioural therapy Negative values for the SMD and positive values for the LOR indicate a better effect for the intervention compared with the reference treatment (waitlist / no treatment).			

Intervention	Mean SMD (95% CrI) vs waitlist	Mean LOR (95% CrI) vs waitlist	Mean ranking (95% CrI)
Interventions in italics were not considered in the economic analysis			

Detailed results of all pair-wise comparisons between interventions are provided in Appendix N.

The committee noted the uncertainty characterising this analysis, due to the small number of studies and participants and the moderate between-study heterogeneity after use of informative priors. Therefore, the 1-4 month follow-up data (log-odds ratios of every intervention versus waitlist / no treatment) were used only in a sensitivity analysis, to obtain probabilities of remission for all active interventions during 3-6 months from treatment initiation. Follow-up data were not available for TF-CBT (cognitive therapy), play therapy and family therapy. The follow-up effect of TF-CBT (cognitive therapy) was borrowed from TF-CBT (Cohen/CPT); the follow-up effect of play and family therapy was assumed to equal that of no treatment.

In the base-case analysis the model assumed that at 3-6 months the probability of remission of each active intervention was equal to the baseline probability of remission for no treatment.

Synthesis of dichotomous remission data at treatment endpoint

The NMA of dichotomous remission data at treatment endpoint in children and young people with PTSD included 9 studies and 7 interventions. In all studies remission was defined as loss of PTSD diagnosis according to ICD, DSM or similar criteria. Table 43 provides all studies and data considered in the NMA of dichotomous remission data at treatment endpoint in children and young people with PTSD, whereas Figure 175 shows the respective network of interventions. Table 44 shows the interventions with their NMA codes, the numbers of participants randomised to each intervention across all trials included in the NMA, and the number of studies that tested each intervention.

Table 43: RCTs, interventions and efficacy data considered in the NMA of dichotomous remission data at treatment endpoint in children and young people with PTSD

Study	t1	r1	n1	t2	r2	n2
Meiser-Stedman 2010/2017	1	3	15	4	10	14
Smith 2007	1	5	12	4	11	12
Goldbeck 2016/Sachser 2016	1	24	63	5	34	57
Jensen 2014	2	23	42	5	28	36
Ruf 2010	1	4	13	6	11	13
Gilboa-Schechtman 2004/2010	3	7	19	7	13	19
Cohen 2011/2005b	3	8	18	5	24	32
Foa 2013	3	13	30	7	24	31
Ford 2012	3	7	26	5	10	33

t1, t2, t3 indicate the coded treatment in each trial arm; codes of treatments are provided in **Table 44**
r1, r2, r3 indicate the number of events in each trial arm
n1, n2, n3 indicate the number of participants in each trial arm

Figure 175. Network of interventions included in the NMA of dichotomous remission data at treatment endpoint in children and young people with PTSD

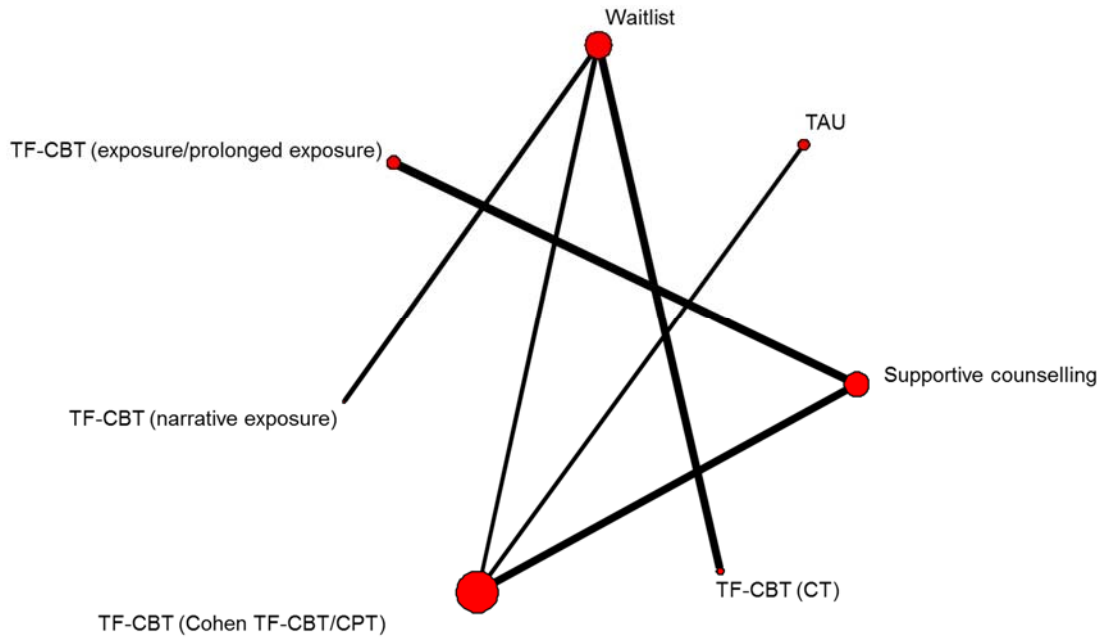


Table 44. NMA of dichotomous remission data at treatment endpoint in treatment and young people with PTSD: Interventions with NMA codes, and numbers of participants (N) randomised to each intervention across RCTs and number of RCTs (k) that tested each intervention

Code	Intervention	N randomised (N total = 485)	k (k total = 9; 18 arms)
1	Waitlist	103	4
2	TAU	42	1
3	Supportive counselling	93	4
4	TF-CBT (cognitive therapy)	26	2
5	TF-CBT (Cohen/CPT)	158	4
6	TF-CBT (narrative exposure)	13	1
7	TF-CBT (exposure/prolonged exposure)	50	2

CPT: cognitive processing therapy; TAU: treatment as usual; TF-CBT: trauma-focused cognitive behavioural therapy

Results of the network meta-analysis: remission at treatment endpoint in children and young people with PTSD

The fixed effects model demonstrated a good fit for the data (totresdev = 17.37; DIC = 93.71) that was comparable to the fit of the random effects model (totresdev = 17.38; DIC = 95.03). The number of data points (study arms) in the model was 18. Thus, the fixed effects model was the preferred model. Since there were no closed loops of direct evidence within the network, inconsistency checks were not possible to perform for this outcome.

The results of the fixed effects model are shown in Table 45. Interventions have been ordered from best to worst, according to their mean ranking across model iterations. Relative

effects versus waitlist / no treatment (mean log-odds ratio and 95% CrI) are reported. Posterior mean ranks of each intervention (and 95% CrI) are also provided, where a rank of 1 is best.

Table 45. Results of the NMA: dichotomous remission at treatment endpoint in children and young people with PTSD (fixed effects model)

Intervention	Mean LOR (95% CrI) vs waitlist	Mean ranking (95% CrI)
TF-CBT (narrative exposure)	2.81 (0.87 to 5.13)	1.69 (1 to 4)
TF-CBT (CT)	2.66 (1.28 to 4.22)	1.72 (1 to 3)
TF-CBT (exposure/prolonged exposure)	1.62 (0.22 to 3.04)	2.81 (1 to 4)
TF-CBT (Cohen/CPT)	0.89 (0.15 to 1.64)	3.90 (3 to 5)
Supportive counselling	0.15 (-0.98 to 1.28)	5.64 (4 to 7)
Waitlist / no treatment	Reference	5.95 (5 to 7)
TAU	*-0.21 (-1.48 to 1.03)*	*6.30 (5 to 7)*
Total residual deviance 17.38 (95% CrI 8.51 to 30.01)		
CPT: cognitive processing therapy; CrI: credible intervals; LOR: log-odds ratio; TAU: treatment as usual; TF-CBT: trauma-focused cognitive behavioural therapy Positive values for the LOR indicate a better effect for the intervention compared with the reference treatment (waitlist / no treatment). Interventions in italics were not considered in the economic analysis		

Detailed results of all pair-wise comparisons between interventions are shown in Appendix N.

The committee noted the very small numbers randomised to most interventions, in particular cognitive therapy (N=26) and narrative exposure (N=13) and uncertainty characterising this analysis. The results of this analysis, as reported earlier, were used only in a secondary economic analysis, which aimed to explore whether the conclusions of the economic analysis based on use of dichotomous remission data would be different from those of the base-case analysis that utilised continuous PTSD symptom change scores.

Dichotomous remission data at 1-4 month follow-up

Dichotomous remission data at 3-month follow-up were very limited and comprised evidence on group CBT from 2 studies (Berger 2009 and Pityaratstian 2015) which compared group CBT versus waitlist. Pair-wise meta-analysis of these two studies indicated a high mean odds ratio of group CBT versus waitlist of 25.86 (95% CrI 7.28 to 91.84). This value was used in sensitivity analysis, applied onto the baseline probability of remission for no treatment at 3-6 months of the economic model, to obtain probabilities of remission for all active interventions during this period (so that all interventions were assumed to have the same effect at the 3-month follow-up due to lack of differential data); in the main secondary analysis of dichotomous remission data, the model assumed that at 3-6 months the probability of remission of each active intervention was equal to the baseline probability of remission for no treatment.

Other clinical input parameters

Other clinical input parameters included

- the baseline (no treatment) probability of remission, which was applied as the baseline in the decision-tree and also across all treatment options in the Markov part of the model

- the probability of relapse following remission, which was independent of the intervention received at the start of the model.

Baseline probability of remission in children and young people with PTSD

A number of studies were identified in the literature that reported the probability of remission over time in children and young people with PTSD (De Young 2012; Hiller 2016; Hong 2014; Kronenberg 2010; La Greca 2013a & 2013b; Rosellini 2017; Yule 2000). The majority of studies were relatively small prospective cohort studies (N ranging from 116 to 568) that explored the development and course of PTSD in children and young people following exposure to trauma over a period that varied from 6 months to 8 years (De Young et al., Hong 2014; Kronenberg 2010; La Greca 2013a & 2013b; Yule 2013). One study (Hiller 2016) was a systematic review of 27 longitudinal studies of PTSD in children and young people that assessed changes in PTSD prevalence and symptoms in this population over the first 12 months post-trauma. Finally, one study reported data on the course of PTSD derived from 1575 people with lifetime PTSD who had participated in 22 WHO World Mental Health surveys (Rosellini 2017). The study reported rates of remission of PTSD over 120 months (10 years) following PTSD onset, which was the longest follow-up period for which a sufficient number of cases were observed for stable estimation of conditional probability of remission. The publication included a graph that illustrated the probability of PTSD recovery over time for different age groups, including data on children aged 0-12 years and data on young people aged 13-24 years. The PTSD remission data from this study, as provided in the graph, were selected to populate the economic model because they were directly relevant to the study population, they were derived from a large study sample and they were available for a long time period that fully covered the time horizon of the economic analysis.

Digital software (http://www.digitizeit.de) was used to read and extract the cumulative proportions of children aged 0-12 years and young people aged 13-24 years that remitted from PTSD at 3 months, 6 months, 12 months, 24 months, and 36 months from PTSD onset. The values at each time point were averaged between the two groups, to cover the whole range of the economic analysis study population. The extracted values were used to estimate the probability of remission between 0-3 months, 3-6 months, 6-12 months, 12-24 months and 24-36 months, conditional on not having achieved remission prior to the beginning of each interval. The probability of remission between 3-6 months was very similar to that between 6-12 months, and therefore a probability of remission between 3-12 months was estimated. The estimated probabilities of remission during these time periods were subsequently transformed into 3-month probabilities that were used to inform the economic model.

Table 46 shows the estimated cumulative probability of remission for children and young people at 3, 12, 24 and 36 months from PTSD onset, the probability of remission between 0-3, 3-12, 12-24 and 24-36 months (conditional on not having achieved remission prior to the beginning of the interval), and the 3-monthly probability of remission during these time periods.

Table 46: Probability of remission overtime in children and young people with PTSD, as estimated based on data extracted from Rosellini and colleagues (2017)

Time from PTSD onset	Cumulative probability of remission	Time interval	Probability of remission over the time interval*	3-monthly probability during the time interval*
3 months	0.174	0-3 months	0.174	0.174

Time from PTSD onset	Cumulative probability of remission	Time interval	Probability of remission over the time interval*	3-monthly probability during the time interval*
12 months	0.370	3-12 months	0.238	0.087
24 months	0.445	12-24 months	0.118	0.031
36 months	0.500	24-36 months	0.100	0.026
* conditional on not having achieved remission prior to the beginning of the interval				

It needs to be noted that the economic analysis evaluated interventions for the delayed (>3 months) treatment of PTSD in children and young people. The economic model is thus assumed to start at month 3 from PTSD onset. The data reported in Table 46 refer to time periods from PTSD onset, meaning that the remission data corresponding to 0-3 months after PTSD onset refer to a time period just before treatment was received by the model's study population. Therefore these data were not utilised in the economic analysis. The economic model was informed by the following available data:

- The 3-month probability of remission over 3-12 months from PTSD onset informed months 0-9 of the economic model: these data were used to populate the no treatment arm during the first 6 months of the economic model, comprising 3 months of a full course of treatment plus the 3-month follow-up, i.e. over the duration of the decision-tree (months 0-6 of the economic model). It also informed all model arms in months 3-6 of the economic model in the base-case analysis. Finally, it informed all model arms in the first cycle of the Markov model (months 6-9 of the economic model), as the course of PTSD after 6 months of treatment was assumed to be independent of the treatment received.
- The 3-month probability of remission over 12-24 months from PTSD onset informed all model arms in the next 4 cycles of the Markov model (months 9-21 of the economic model).
- The 3-month probability of remission over 24-36 months from PTSD onset informed all model arms in the next 5 cycles of the Markov model (months 21-36 of the economic model); the 3-month probability was extrapolated to the period of 36-39 months from PTSD onset (i.e. months 33-36 of the economic model) for simplification.

Risk of relapse following remission of PTSD

No published evidence on the risk of relapse following remission from PTSD in children and young people was identified in the published literature. The committee advised that this was very low. Therefore, an annual risk of relapse of 0.10 was assumed. This was translated into a 3-month probability of relapse of 0.026, which was applied in the 3-month follow-up period of the decision-tree and over the whole duration of the Markov model. In deterministic sensitivity analysis the annual risk value of 0.10 was varied between zero and 0.20.

Utility data and estimation of quality adjusted life years (QALYs)

In order to express outcomes in the form of QALYs, the health states of the economic model (remission, response not reaching remission, no response or relapse) need to be linked to appropriate utility scores. Utility scores represent the HRQoL associated with specific health states on a scale from 0 (death) to 1 (perfect health); they are estimated using preference-based measures that capture people's preferences on the HRQoL experienced in the health states under consideration.

The systematic review of utility data on PTSD-related heath states identified 2 studies that reported utility data corresponding to PTSD-related health states in children and young people that met inclusion criteria (Gospodarevskaya, 2013; Shearer 2018). No studies reporting utility data were excluded after obtaining full text.

Gospodarevskaya (2013) reported utility scores generated using HRQoL ratings of 993 adolescents and young adults aged 16 to 21 years, some of whom had a history of childhood sexual abuse prior to the age of 18, who participated in a Mental Health Survey in Australia. Diagnosis of PTSD was made using the standardized structured World Mental Health Composite International Diagnostic Interview (WMHCIDI, Version 3.0) based on the DSM-IV-TR. HRQoL was assessed with the generic Assessment of Quality of Life (AQoL) measure, which was subsequently converted to the AQoL-4D preference-based measure. The scale includes 12 items (personal care, household tasks, ability to move around the house and community, personal relationships, relationships with other people, relationships with family, vision, hearing, communication with others, sleeping habits, feelings in general, and level of pain or discomfort) rated using 4 levels. The AQoL-4D has been valued by a sample of the Australian general population using the time-trade-off (TTO) technique. The authors reported utility scores for the total study sample of adolescents and young adults (n=993); for those with history of sexual abuse prior to 18 years (n=82); for those diagnosed with PTSD due to any traumatic event (n=30); for adolescents and young adults who had PTSD associated with sexual abuse (n=14); and for those who had PTSD comorbid with depression (n=9).

Shearer and colleagues (2018) reported utility scores derived from 29 children and adolescents aged 8-17 years that met ICD-10 criteria for PTSD who participated in an 11 week RCT of early PTSD treatment (TF-CBT) versus wait list 2-6 months after a single trauma event in the UK (Meiser-Stedman 2010/2017). HRQoL was measured using the parent-completed Strengths and Difficulties Questionnaire (SDQ). SDQ scores were mapped onto the Child Health Utility index 9D (CHU-9D) using a published mapping algorithm developed in a sample of 200 young people in Australia attending child and adolescent mental health services. The CHU-9D is a generic measure of children's health state preferences consisting of nine dimensions (sad, worried, pain, annoyed, tired, homework or schoolwork, daily routine, activities and sleep) rated using five levels; preferences for this measure were elicited from the Australian population using standard gamble (SG). Baseline HRQoL data derived from all children participating in the trial were used to determine the utility of a PTSD health state. Data obtained from all children who were PTSD-free at trial follow up, irrespective of group allocation, were used to determine the utility corresponding to a PTSD-free health state.

An overview of the study characteristics, the methods used to define health states, and the health-state utility values reported by each of the two studies is provided in Table 47.

Table 47. Summary of available health-state utility data for PTSD in children and young people

Study	Definition of health states	Utility measure, valuation method, population valuing	Health states & corresponding utility scores	
Gospodarevskaya, 2013	993 adolescents and young adults aged 16-21 years, who participated in the 2007 Australian National Survey of Mental Health and Wellbeing. Diagnosis of PTSD was made using the standardized structured World Mental Health Composite International Diagnostic Interview (WMHCIDI, Version 3.0) based on the DSM-IV-TR. HRQoL was assessed with the generic Assessment of Quality of Life (AQoL) measure, which was subsequently converted to AQoL-4D. The scale includes 12 items (personal care, household tasks, ability to move around the house and community, personal relationships, relationships with other people, relationships with family, vision, hearing, communication with others, sleeping habits, feelings in general, level of pain or discomfort) rated using 4 levels.	AQoL-4D TTO Australian general population, aged 16-74 years	**Health state** (Young people aged 16-21 years) General population (n=993) History of sexual abuse prior to 18 years (n=82) PTSD due to any traumatic event (n=30) PTSD associated with sexual abuse (n=14) PTSD + depression (n=9)	**Mean (SD)** 0.87 (0.17) 0.71 (0.25) 0.68 (0.28) 0.61 (0.31) 0.53 (0.26)
Shearer 2018	29 children and adolescents aged 8-17 years that met ICD-10 criteria for PTSD who participated in an 11 week RCT of trauma-focused CBT vs wait list 2-6 months after a single trauma event in the UK. HRQoL was measured using the parent-completed Strengths and Difficulties Questionnaire (SDQ). Data for the PTSD health state were derived from all children participating in the RCT at baseline. Data for the PTSD-free health state were obtained from all children who were PTSD-free at trial follow up irrespective of group allocation. SDQ scores were	CHU-9D SG UK adult general population	**Health state** PTSD-free following treatment (n=14) PTSD (n=29)	**Mean (95% CI)** 0.77 (0.74-0.80) 0.74 (0.63-0.85)

Study	Definition of health states	Utility measure, valuation method, population valuing	Health states & corresponding utility scores	
	mapped onto the Child Health Utility index 9D (CHU-9D) using a published mapping algorithm developed in a sample of 200 young people in Australia attending child and adolescent mental health services. CHU-9D is a generic preference-based measure for children comprising 9 dimensions (sad, worried, pain, annoyed, tired, homework or schoolwork, daily routine, activities and sleep) rated using five levels.			
CI: confidence intervals; SD: standard deviation; SG: standard gamble; TTO: time trade-off				

According to NICE guidance on the selection of utility values for use in cost-utility analysis (NICE, 2013), the measurement of changes in HRQoL should be reported directly from people with the condition examined, or, if this is not possible, by their carers, and the valuation of health states should be based on public preferences elicited using a choice-based method, such as the time trade-off (TTO) or standard gamble (SG), in a representative sample of the UK population. NICE recommends the EQ-5D (Brooks, 1996; Dolan, 1997) as the preferred measure of HRQoL in adults for use in cost-utility analysis. For children, consideration should be given to alternative standardised and validated preference-based measures of health-related quality of life that have been designed specifically for use in children, as the standard version of the EQ-5D has not been designed for use in children. An alternative version for children aged 7–12 years is available, but a validated UK valuation set is not yet available.

The committee noted that the data reported by Gospodarevskaya (2013) were obtained from an overall large study sample. However, the age of the study sample (adolescents and young adults) was not directly relevant to that of the study population of the economic model, which consisted of children and young people under 18 years of age. Moreover, the utility value of the general population in the utility study was likely to be higher than the utility of a 'no PTSD health state' that was the result of remission from PTSD. It was also noted that the utility data reported by Gospodarevskaya (2013) reflected Australian population's preferences. On the other hand, data were obtained directly from participants in the survey and preferences were elicited using TTO, which meets NICE criteria for the selection of utility values.

The data reported by Shearer and colleagues (2018) were derived from a very small study sample, which, nevertheless, was directly relevant to the study population of the economic analysis (in both the utility study and the guideline economic analysis the study population was children and young people with PTSD). HRQoL ratings were obtained from parents, rather than the children themselves, and the committee considered this as a limitations as parents may easily recognise externalising / behavioural difficulties, but they may underestimate internalising symptoms (e.g. anxiety, post-traumatic stress symptoms, depression). Moreover, the committee had concerns about the ability of the SDQ instrument to capture all aspects of HRQoL and of the accuracy of mapping of these ratings onto the CHU-9D. The committee noted that the mapping algorithm was developed in a sample of Australian young people and that UK preferences were used. The committee also noted that the study population in Shearer and colleagues was at early stages of PTSD and therefore was likely to be at an early lifetime of impairment. Finally, the committee noted the narrow difference between the PTSD and the PTSD-free state utility values.

Following these considerations, the committee advised that the economic analysis utilise data from Gospodarevskaya (2013) in the base-case analysis; the values of Shearer and colleagues (2018) were utilised in sensitivity analysis.

Changes in utility between the states of 'PTSD' and 'no PTSD' were assumed to occur linearly over the time period of the change. When running the probabilistic analysis, the utility value of the 'no PTSD' health state was not allowed to become lower than that of the 'PTSD' health state. In iterations where the utility of the 'no PTSD' health state was lower than the utility of the 'PTSD' health state, the former was forced to equal the latter.

Intervention resource use and costs

Intervention costs were estimated by combining resource use associated with each intervention with appropriate healthcare professional unit costs.

Resource use estimates of each psychological therapy in terms of number and duration of sessions, mode of delivery and number of therapists and participants in the case of group interventions were determined by resource use data described in respective RCTs that were included in the guideline NMA that informed the economic analysis, modified by the committee to represent clinical practice in the UK. All psychological interventions were assumed to be delivered by an Agenda for Change (AfC) band 7 clinical psychologist, following expert advice from the committee on optimal delivery of psychological interventions for children and young people with PTSD. Therapist unit costs were estimated using a combination of data derived from national sources (British Association for Behavioural and Cognitive Therapies, 2016; Curtis & Burns, 2017; National College for Teaching and Leadership, NHS Health Education England, 2016) and included wages/salary, salary oncosts, capital and other overheads, qualification costs and the cost of monthly supervision. Qualification costs were annuitised using the formula reported in Netten and colleagues (1998), assuming a useful working life of 25 years, a time from obtaining the qualification until retirement of 44 years, and an equal distribution of the useful working life over the period of 44 years due to lack of specific information on this distribution. In estimating the unit cost of clinical psychologists per hour of client contact, the ratio of direct (face-to-face) to indirect time (reflecting time for preparation of therapeutic sessions and other administrative tasks) of the clinical psychologists was also taken into account.

The unit cost of a band 7 clinical psychologist was estimated to be £101 per hour of direct contact with the client. An overview of the cost elements that were taken into account in this estimation is shown in Table 48.

Table 48: Unit cost of clinical psychologist band 7 (2017 prices)

Cost element	Unit cost (annual)	Source
Wages – salary	£38,951	Curtis & Burns, 2017; unit cost of community-based scientific & professional staff, including allied health professionals (Agenda for Change band 7)
Salary on-costs	£9,864	
Overheads – staff	£11,960	
Overheads - non-staff	£18,647	
Capital overheads	£5,125	
Qualifications	12,386	Based on a mean clinical psychologist training cost estimate of £159,420 (National College for Teaching and Leadership, NHS Health Education England, 2016), annuitised using the formula reported in Netten and colleagues (1998), assuming a useful working life of 25 years, a time from obtaining the qualification until retirement of 44 years, and an equal distribution of the useful working life over the period of 44 years due to lack of specific information on this distribution.
Supervision	£316	Based on the unit cost of an Agenda for Change band 8a clinical psychologist (Curtis & Burns, 2017) providing 1.5 hour of supervision per month, delivered in groups of 4 participants (British Association for Behavioural and Cognitive Therapies, 2016 and expert advice); qualification costs included, as described above.
SUM of unit costs	**£97,249**	

Cost element	Unit cost (annual)	Source
Working time	42.6 weeks /year 37.5 hours /week (1,599 hours)	Curtis & Burns, 2017
Total cost per hour	**£61**	
Ratio of direct to indirect time*	60:40	Curtis & Burns, 2017; assumption based on the committee's expert opinion and a review of respective ratios reported in the literature for clinical psychologists and other therapists delivering psychological interventions
Estimated cost per hour of direct contact	**£101**	
* ratio of face-to-face time to time for preparation and other administrative tasks		

Details on the resource use and total costs of psychological interventions are provided in Table 49.

Table 49: Intervention costs of psychological therapies for children and young people with PTSD considered in the guideline economic analysis (2017 prices)

Intervention	Resource use details	Total intervention cost per person
Supportive counselling	12 x 75 min individual sessions (15 hours)	£1,520
TF-CBT (group CBT)	10 x 60 min group sessions (10 hours), 1 therapist and 6 participants per group plus 1 x 60 min individual orientation meeting	£270
TF-CBT (Cohen/CPT)	12 x 60 min individual/family sessions (12 hours)	£1,216
TF-CBT (cognitive therapy)	10 x 90min individual sessions (15 hours)	£1,520
TF-CBT (narrative exposure)	6 x 60min individual sessions (6 hours)	£608
TF-CBT (exposure /prolonged exposure)	14 x 60 min individual sessions (14 hours)	£1,419
EMDR	8 x 45 min individual sessions (6 hours)	£608
Family therapy	4 x 75 min group sessions (5 hours), 1 therapist & 6 families per group plus 2 hours of individual contact	£287
Play therapy	20 x 30 min individual sessions (10 hours)	£1,014
Parent training	12 x 45 min individual sessions (9 hours)	£912
No treatment	No related resource use	£0
All interventions assumed to be delivered by a Band 7 clinical psychologist CPT: cognitive processing therapy; EMDR: eye movement desensitisation reprocessing; TF-CBT: trauma-focused cognitive behavioural therapy		

Costs associated with the PTSD and 'no PTSD' health states

Costs associated with the PTSD and no PTSD health states were estimated using cost data from Shearer (2018). The authors described a model-based economic analysis that utilised cost data from a 11-week RCT (Meiser-Stedman 2010/2017) that evaluated early PTSD

treatment (TF-CBT) versus waitlist 2-6 months after a single trauma event in 29 children and adolescents with PTSD aged 8-17 years the UK. Cost data from the UK NHS/PSS perspective were collected for all participants at baseline and over the trial period using the Child and Adolescent Service Use Schedule (CA-SUS) and clinical records for intervention contact time. Costs included staff time (GP, nurse, paediatrician, clinical psychologist, CAMHS worker, counsellor, educational psychologist), hospital services (inpatient, outpatient, emergency department, ambulance), advice services, social services and medication. The authors estimated the total NHS/PSS cost for all children (in both arms) at baseline, and for children who were PTSD-free at trial follow up, irrespective of allocation arm (after excluding intervention cost from children in intervention arm), and extrapolated them in order to estimate annual costs incurred by children and young people with PTSD, and those without PTSD, respectively. These costs were utilised in the guideline economic analysis to express total NHS/PSS costs of the PTSD and no PTSD health states, respectively. The annual costs associated with the 'PTSD' and 'no PTSD' health states are presented in Table 50.

Table 50. Annual NHS and PSS costs incurred by children and young people with PTSD and those without PTSD (based on Shearer 2018)

Health state	Annual NHS/PSS cost per person (2017 prices)
PTSD	£2,701
No PTSD	£1,159

NHS and PSS costs were assumed to be the same across all arms of the economic model during the period of initial treatment (0-3 months of the economic analysis) and therefore were excluded from further consideration.

All costs were expressed in 2017 prices, uplifted, where necessary, using the Hospital and Community Health Services Pay and Prices Index (Curtis & Burns, 2017). Costs and QALYs were discounted at an annual rate of 3.5%, according to NICE guidance (NICE, 2014).

Discounting

Costs and benefits were discounted at an annual rate of 3.5% as recommended by NICE (2014).

Handling uncertainty

Model input parameters were synthesised in a probabilistic analysis. This means that the input parameters were assigned probabilistic distributions (rather than being expressed as point estimates); this approach allowed more comprehensive consideration of the uncertainty characterising the input parameters and captured the non-linearity characterising the economic model structure. Subsequently, 10,000 iterations were performed, each drawing random values out of the distributions fitted onto the model input parameters. Results (mean costs and QALYs for each intervention) were averaged across the 10,000 iterations. This exercise provides more accurate estimates than those derived from a deterministic analysis (which utilises the mean value of each input parameter ignoring any uncertainty around the mean), by capturing the non-linearity characterising the economic model structure (Briggs 2006).

The distributions of the log-odds ratios of relative effects of all treatments versus no treatment were obtained from the respective NMAs, defined directly from values recorded in

each of the 10,000 iterations used after thinning the 300,000 iterations performed in WinBUGS.

Beta distribution was assigned to the following parameters: the baseline probability of remission (probability of remission of no treatment between 0-6 months and probability of remission across all interventions from 6 months onwards); the probability of relapse; and the utility values.

The odds-ratio of dichotomous remission that was applied to all active interventions versus waitlist was assigned a log-normal distribution.

Uncertainty in intervention costs was taken into account by assigning probability distributions to the number of individually delivered psychological therapy sessions, based on intervention completion data and data on mean number of sessions reported in the RCTs that informed the economic analysis. The number of therapist sessions per person attending group psychological interventions was not assigned a probability distribution because the number of group sessions remains the same, whether a participant attends the full course of treatment or a lower number of sessions. The unit cost of clinical psychologists was assigned a normal distribution.

NHS/PSS costs associated with the ‘PTSD’ and ‘no PTSD’ health states were assigned a gamma distribution.

Table 51 reports the mean values of all input parameters utilised in the economic model and provides details on the types of distributions assigned to each input parameter and the methods employed to define their range.

Table 51: Input parameters (deterministic values and probability distributions) that informed the economic model of interventions for the treatment of PTSD in children and young people

Input parameter	Mean deterministic value	Probability distribution	Source of data - comments
Odds ratios of remission versus no treatment/waitlist at treatment endpoint			
Derived from NMA of continuous data		95% CrI	Guideline NMA; distribution based on 10,000 iterations
Supportive counselling	2.97	0.84 to 10.64	
TF-CBT (group CBT)	5.21	1.87 to 14.60	
TF-CBT (Cohen/CPT)	8.43	2.74 to 26.05	
TF-CBT (CT)	204.50	34.36 to 1271.56	
TF-CBT (narrative exposure)	15.14	3.99 to 59.20	
TF-CBT (exposure /prolonged exposure)	11.42	2.65 to 50.55	
EMDR	6.09	1.52 to 24.80	
Family therapy	1.96	0.22 to 19.03	
Play therapy	11.52	1.51 to 90.65	
Parent training	5.83	0.49 to 66.95	
Derived from NMA of remission data			
Supportive counselling	1.16	0.37 to 3.56	
TF-CBT (CT)	14.29	3.65 to 66.09	
TF-CBT (Cohen/CPT)	2.44	1.16 to 5.08	
TF-CBT (narrative exposure)	16.71	2.38 to 176.80	
TF-CBT (exposure /prolonged exposure)	5.07	1.24 to 20.66	
Odds ratios of remission versus no treatment/waitlist at 3-month follow-up (sensitivity analysis)			
Derived from NMA of continuous data		95% CrI	Guideline NMA; distribution based on 10,000 iterations Estimated 3-6 month probability of remission for CT borrowed from Cohen/CPT; estimated 3-6 months probability of remission for family therapy and play therapy assumed to equal that of no treatment
Supportive counselling	3.83	0.89 to 12.99	
TF-CBT (group CBT)	15.51	2.90 to 91.56	
TF-CBT (Cohen/CPT)	23.82	2.19 to 285.43	
TF-CBT (CT)	No data	No data	
TF-CBT (narrative exposure)	5.54	1.09 to 28.05	

Input parameter	Mean deterministic value	Probability distribution	Source of data - comments
TF-CBT (exposure/prolonged exposure) EMDR Parent training Family therapy Play therapy Derived from pairwise meta-analysis of dichotomous data – all interventions	5.31 2.94 6.51 No data No data 25.86	0.48 to 57.80 0.18 to 47.13 0.23 to 197.35 No data No data Log-normal distribution: 95% CI 7.28 to 91.84	Guideline pairwise meta-analysis
Probability of remission – no treatment			
0-3 months from PTSD onset 0-12 months from PTSD onset 0-24 months from PTSD onset 0-36 months from PTSD onset	0.174 0.370 0.445 0.500	Beta: α=87.00; β=413.00 Beta: α=185.19; β=314.81 Beta: α=222.26; β=277.74 Beta: α=250.00; β=250.00	Rosellini 2017; data averaged between children aged 0-12 years and young people aged 13-24 years; 3-month probabilities estimated using the cumulative remission data after excluding the first 3 months from PTSD onset as the model study population received treatment after 3 months from PTSD onset
Risk of relapse – all model arms 3-month risk	 0.026	 Beta: α=2.60; β=97.40	 Assumption
Utility values Base-case analysis PTSD – 3-month No PTSD – 3-month Sensitivity analysis PTSD – 3-month No PTSD – 3-month	 0.170 0.218 0.185 0.193	Beta distribution α=9.01; β=43.98 α=1271.69; β=4575.15 α=808; β=3,567 α=2,618; β=10,940	 Gospodarevskaya, 2013; distribution estimated based on method of moments Shearer 2018
Intervention costs – resource use Number of sessions Supportive counselling TF-CBT (group CBT) TF-CBT (Cohen/CPT) TF-CBT (CT) TF-CBT (narrative exposure)	 12 10 12 10 6	 0.60: 10-12, 0.22: 6-9, 0.18: 3-5 No distribution 0.60: 10-12, 0.22: 6-9, 0.18: 3-5 0.70: 8-10, 0.16: 6-7, 0.14: 3-5 0.80: 5-6, 0.10: 4, 0.10: 3	Probabilities assigned to numbers of sessions Number of visits and probabilities based on resource use and completion rate data reported in the RCTs included in the NMAs that informed the economic analysis

Input parameter	Mean deterministic value	Probability distribution	Source of data - comments
TF-CBT (exposure/prolonged exposure)	14	0.70: 11-14, 0.16: 7-10, 0.14: 3-6	
EMDR	8	0.60: 7-8, 0.22: 4-6, 0.18: 2-3	
Family therapy	4	No distribution	
Play therapy	20	0.60: 14-20, 0.22: 10-13, 0.18: 7-9	
Parent training	12	0.60: 10-12, 0.22: 6-9, 0.18: 3-5	
Unit cost of clinical psychologist Band 7	£101	Normal distribution SE = 0.05 of the mean	Estimated using data from the British Association for Behavioural and Cognitive Therapies, 2016; Curtis & Burns, 2017; National College for Teaching and Leadership, NHS Health Education England, 2016; distribution based on assumption
3-month NHS/PSS health state cost		Gamma distribution	
PTSD	£549	α=19.53; β=28.12	Shearer (2018), expressed in 2017 prices using the HCHS inflation index (Curtis & Burns, 2017).
No PTSD	£236	α=10.37; β=22.74	
Annual discount rate	0.035	No distribution	Applied to both costs and outcomes (NICE, 2014)

A number of different scenarios were explored by using the 2 sets of available utility data and 2 alternative assumptions on the efficacy of interventions at the 3-month follow-up. Consequently, 4 separate probabilistic analyses were undertaken:

- Scenario A: Use of utility data derived from Gospodarevskaya (2013); the probability of remission of all active interventions at 3-6 months was conservatively assumed to be equal to that of no treatment. This scenario formed the base-case economic analysis.
- Scenario B: Use of utility data derived from Gospodarevskaya (2013); the relative effect of active interventions versus no treatment at 3-6 months was derived from the NMA of changes in PTSD symptom scores between baseline and 1-4 month follow-up.
- Scenario C: Use of utility data derived from Shearer (2018); the probability of remission of all active interventions at 3-6 months was assumed to be equal to that of no treatment.
- Scenario D: Use of utility data derived from Shearer (2018); the relative effect of active interventions versus no treatment at 3-6 months was derived from the NMA of changes in PTSD symptom scores between baseline and 1-4 month follow-up.

For all these scenarios, secondary analysis was run in parallel, which utilised the output of the NMA of dichotomous remission data at treatment endpoint. For scenarios (B) and (D) the odds ratio of group CBT versus waitlist at 1-4 month follow-up was used to estimate the relative effect of all interventions versus no treatment at 3-6 months.

One-way deterministic sensitivity analysis was also employed to explore the impact of a change in the annual risk of relapse, which was varied between zero and 0.20.

Presentation of the results

Results of the economic analysis are presented as follows:

In each analysis, mean total costs and QALYs are presented for each intervention, averaged across 10,000 iterations of the model. An incremental analysis is provided for each cohort, in table format, where all options have been listed from the most to the least effective (in terms of QALYs gained). Options that are dominated by absolute dominance (that is, they are less effective and more costly than one or more other options) or by extended dominance (that is, they are less effective and more costly than a linear combination of two alternative options) are excluded from further analysis. Subsequently, incremental cost-effectiveness ratios (ICERs) are calculated for all pairs of consecutive options remaining in analysis.

ICERs are calculated by the following formula:

$$ICER = \Delta C / \Delta E$$

where ΔC is the difference in total costs between two interventions and ΔE the difference in their effectiveness (QALYs). ICERs express the extra cost per extra unit of benefit (QALY) associated with one treatment option relative to its comparator. The treatment option with the highest ICER below the NICE lower cost effectiveness threshold of £20,000/QALY (NICE 2008) is the most cost-effective option.

In addition to ICERs, the mean net monetary benefit (NMB) of each intervention is presented. This is defined by the following formula:

$$NMB = E \bullet \lambda - C$$

where E and C are the effectiveness (number of QALYs) and costs associated with the treatment option, respectively, and λ is the level of the willingness-to-pay (WTP) per unit of

effectiveness, set at the NICE lower cost effectiveness threshold of £20,000/QALY (NICE, 2008). The intervention with the highest NMB is the most cost-effective option (Fenwick 2001).

Incremental mean costs and effects (QALYs) of each intervention versus no treatment are also presented in the form of cost effectiveness planes.

The probability of each intervention being the most cost-effective option at the NICE lower cost effectiveness threshold of £20,000/QALY is provided, calculated as the proportion of iterations (out of the 10,000 iterations run) in which the intervention has had the highest NMB among all interventions considered in the analysis.

The mean ranking in terms of cost effectiveness is also reported for each intervention (out of the 10,000 iterations run), where a rank of 1 is best.

The probabilities of each intervention being cost-effective at various cost effectiveness thresholds are illustrated in cost-effectiveness acceptability curves (CEACs). Finally, the cost-effectiveness acceptability frontiers (CEAFs) are also plotted; these show the treatment option with the highest mean NMB over different cost effectiveness thresholds, and the probability that the option with the highest NMB is the most cost-effective among those assessed (Fenwick 2001).

Validation of the economic model

The economic model (including the conceptual model and the identification and selection of input parameters) was developed by the health economist in collaboration with a health economics sub-group formed by members of the committee. As part of the model validation, all inputs and model formulae were systematically checked; the model was tested for logical consistency by setting input parameters to null and extreme values and examining whether results changed in the expected direction. The base-case results and results of sensitivity analyses were discussed with the committee to confirm their plausibility.

Economic modelling results

Scenario A, base-case analysis: utility data from Gospodarevskaya (2013); no beneficial effect beyond treatment endpoint

The results of the base-case economic analysis are provided in Table 52. This table provides mean QALYs and mean total costs for each intervention assessed in the economic analysis, as well as the results of incremental analysis, the mean NMB of each intervention, and its mean ranking by cost effectiveness (where a rank of 1 is best). Interventions have been ordered from the most to the least effective in terms of number of QALYs gained. According to the results, cognitive therapy was the most clinically and cost-effective intervention, followed by narrative exposure and play therapy. Prolonged exposure and Cohen/CPT were in the top 5 most clinically and cost-effective treatment options. All interventions were more effective and cost-effective than no treatment. In the secondary analysis that utilised dichotomous remission data, all forms of TF-CBT were more effective and cost-effective than no treatment; however, supportive counselling was less cost-effective than no treatment.

Table 52: Scenario A, base-case results of economic modelling: interventions for the treatment of PTSD in children and young people [utility data from Gospodarevskaya (2013); no beneficial effect beyond treatment endpoint]

Intervention	Mean per person			ICER (£/QALY)	NMB £/ person	Prob best[1]	Mean rank
	QALY	Inter cost £	Total cost £				
Analysis utilising efficacy data from NMAs of changes in PTSD symptom scores							
TF-CBT cognitive therapy	2.467	1,202	4,347	Dominant	44,993	0.78	1.57
TF-CBT narrative exposure	2.322	517	4,484	Dominated	41,966	0.08	3.35
TF-CBT prolonged exposure	2.297	1,089	5,200	Dominated	40,742	0.01	5.35
Play therapy	2.297	719	4,827	Dominated	41,109	0.05	4.68
TF-CBT Cohen/CPT	2.268	915	5,188	Dominated	40,178	0.00	5.91
Parent training	2.244	684	5,099	Dominated	39,788	0.03	6.50
EMDR	2.241	460	4,897	Dominated	39,920	0.01	5.88
TF-CBT group CBT	2.224	270	4,798	Dominated	39,687	0.01	5.83
Supportive counselling	2.183	1,141	5,902	Dominated	37,753	0.00	9.57
Family therapy	2.168	287	5,133	Dominated	38,222	0.01	8.20
No treatment	2.121	0	5,113	Dominated	37,304	0.01	9.16
Analysis utilising efficacy data from NMAs of dichotomous remission							
TF-CBT narrative exposure	2.326	517	4,464	Dominant	42,066	0.62	1.53
TF-CBT cognitive therapy	2.317	1,202	5,203	Dominated	41,128	0.30	2.10
TF-CBT prolonged exposure	2.225	1,089	5,612	Dominated	38,888	0.05	3.27
TF-CBT Cohen/CPT	2.165	915	5,777	Dominated	37,525	0.00	4.29
Supportive counselling	2.131	1,141	6,198	Dominated	36,418	0.00	5.73
No treatment	2.121	0	5,113	Dominated	37,304	0.03	4.09

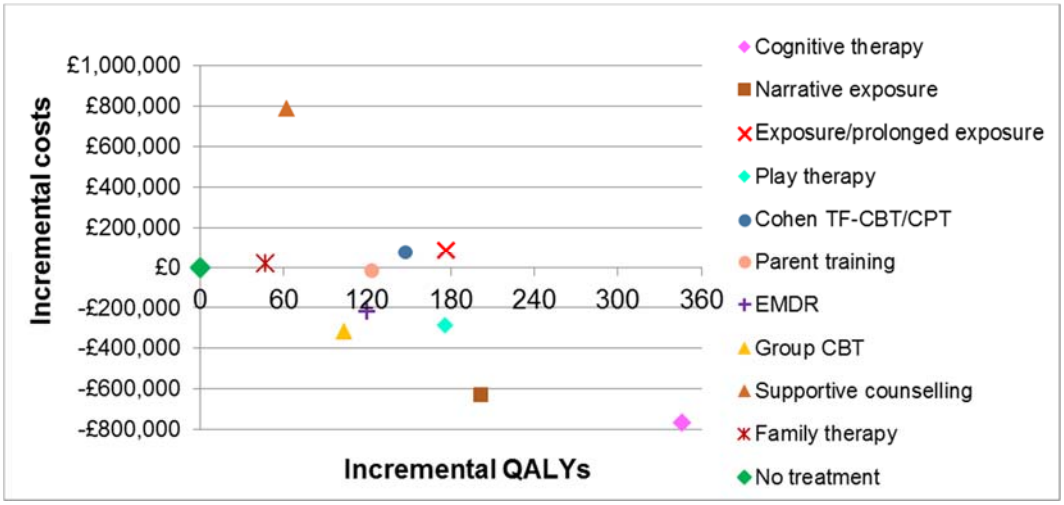
1 at the NICE lower cost-effectiveness threshold of £20,000/QALY

CPT: cognitive processing therapy; EMDR: eye movement desensitisation reprocessing; ICER: incremental cost effectiveness ratio; Inter: intervention; NMB: net monetary benefit; Prob: probability; TF-CBT: trauma-focused cognitive behavioural therapy

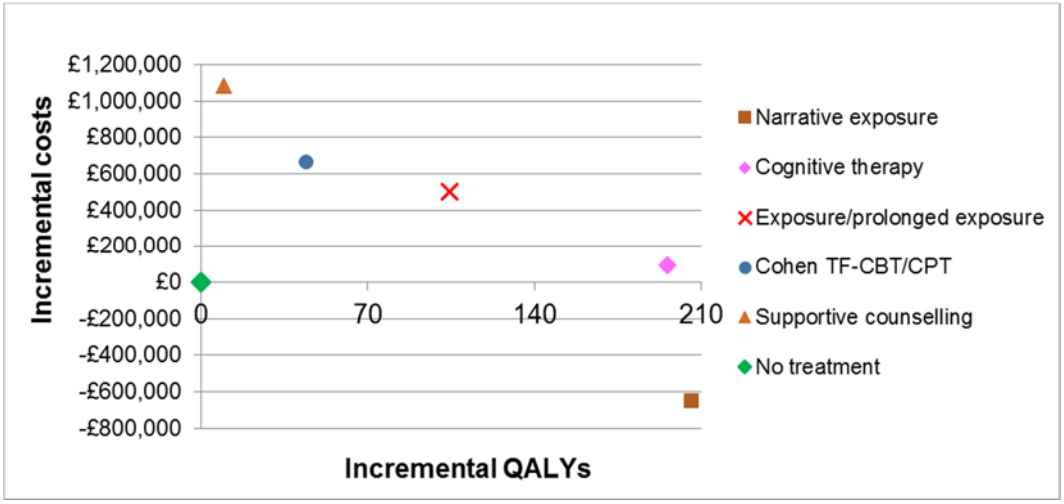
Figure 176 provides the cost effectiveness plane of the analysis. Each intervention is placed on the plane according to its incremental costs and QALYs compared with no treatment, which is placed at the origin.

Figure 176. Scenario A, base-case analysis: Cost-effectiveness plane of interventions for the treatment of PTSD in children and young people plotted against no treatment – incremental costs and QALYs per 1,000 children and young people [utility data from Gospodarevskaya (2013); no beneficial effect beyond treatment endpoint]

Analysis utilising efficacy data from NMAs of changes in PTSD symptom scores



Analysis utilising efficacy data from NMAs of dichotomous remission

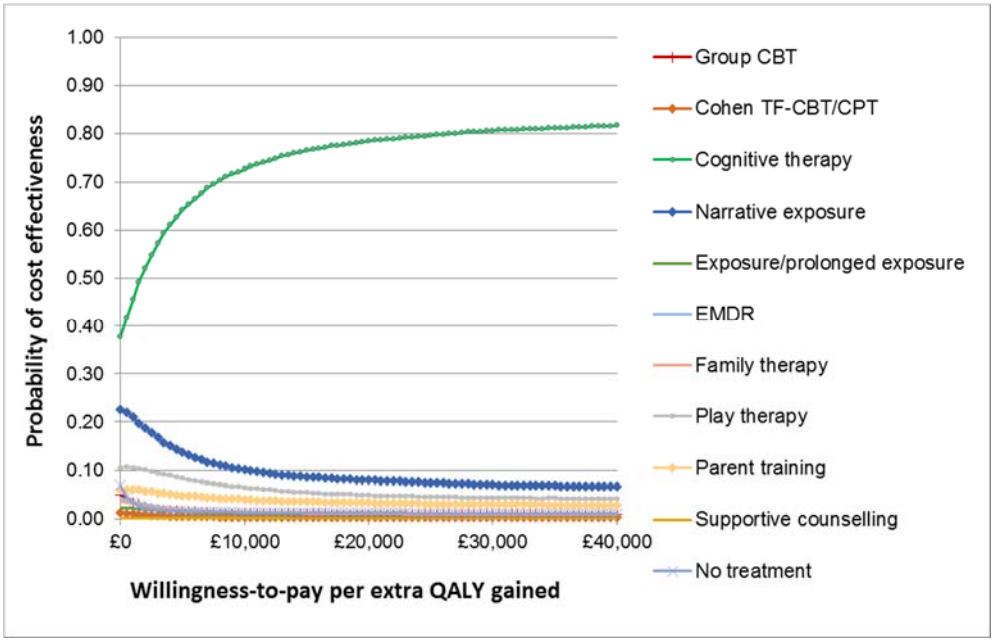


The CEAC and CEAF of the analysis are shown in Figure 177 and Figure 178, respectively. It can be seen that cognitive therapy (analysis utilising NMA of continuous data) and narrative exposure (analysis utilising NMA of dichotomous data) are the most cost-effective options at any cost effectiveness threshold between zero and £40,000/QALY, with a probability that exceeds 0.60 at the NICE lower cost effectiveness threshold of £20,000/QALY.

Figure 177. Scenario A, base-case analysis: Cost-effectiveness acceptability curves of interventions for the treatment of PTSD in children and young people [utility

data from Gospodarevskaya (2013); no beneficial effect beyond treatment endpoint]

Analysis utilising efficacy data from NMAs of changes in PTSD symptom scores



Analysis utilising efficacy data from NMAs of dichotomous remission

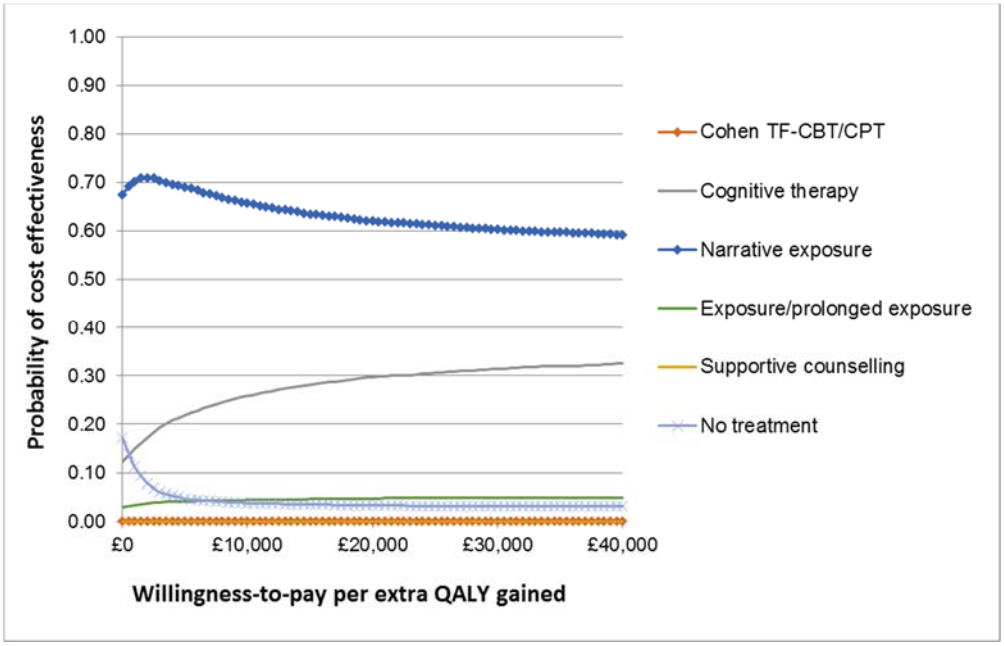
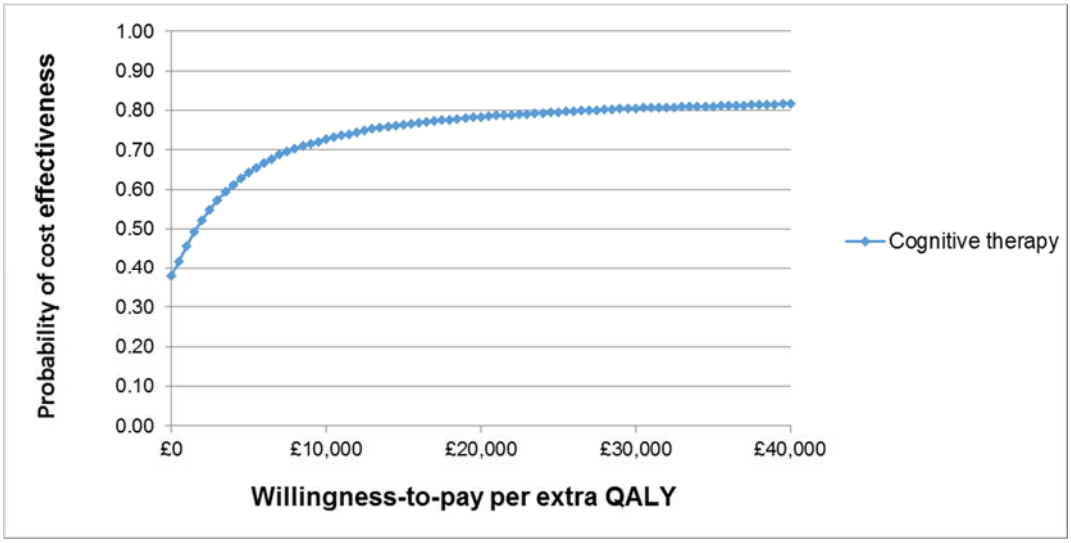
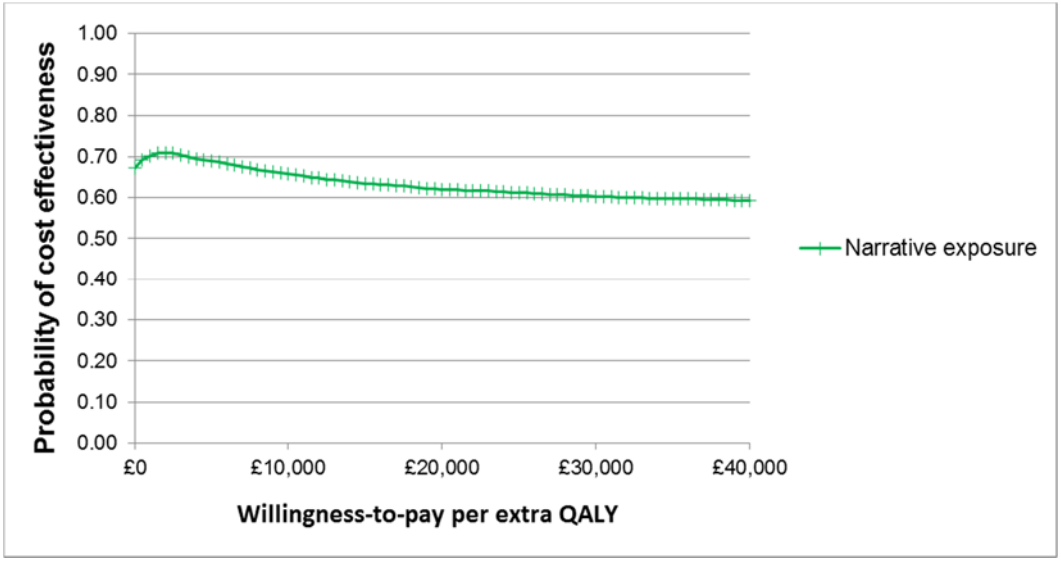


Figure 178 Scenario A, base-case analysis: Cost-effectiveness acceptability frontier of interventions for the treatment of PTSD in children and young people [utility data from Gospodarevskaya (2013); no beneficial effect beyond treatment endpoint]

Analysis utilising efficacy data from NMAs of changes in PTSD symptom scores



Analysis utilising efficacy data from NMAs of dichotomous remission



Results were robust to changes in the annual risk of relapse between zero and 0.20 and conclusions on cost effectiveness were not affected.

Scenario B: utility data from Gospodarevskaya (2013); beneficial effect up to 3-month follow-up

The results of this scenario are provided in Table 53. Cognitive therapy was the most clinically and cost-effective intervention, followed by Cohen/CPT and group CBT. Narrative

exposure and parent training were also among the 5 most clinically and cost-effective treatment options. All interventions were more effective and cost-effective than no treatment. In the secondary analysis that utilised dichotomous remission data, narrative exposure was the most clinically and cost-effective intervention and all interventions were more effective and cost-effective than no treatment.

Table 53: Scenario B, results of economic modelling: interventions for the treatment of PTSD in children and young people [utility data from Gospodarevskaya (2013); beneficial effect up to 3-month follow-up]

Intervention	Mean per person			ICER (£/QALY)	NMB £/ person	Prob best[1]	Mean rank
	QALY	Inter cost £	Total cost £				
Analysis utilising efficacy data from NMAs of changes in PTSD symptom scores							
TF-CBT cognitive therapy	2.482	1,204	4,271	2,497	45,373	0.67	1.88
TF-CBT Cohen/CPT	2.390	911	4,453	Ext domin	43,348	0.05	3.90
TF-CBT group CBT	2.362	270	3,971		43,269	0.15	3.35
TF-CBT narrative exposure	2.335	517	4,414	Dominated	42,296	0.02	4.71
TF-CBT prolonged exposure	2.326	1,089	5,033	Dominated	41,495	0.01	6.26
Parent training	2.320	685	4,645	Dominated	41,751	0.05	5.47
Play therapy	2.297	719	4,840	Dominated	41,094	0.02	6.31
EMDR	2.268	461	4,731	Dominated	40,636	0.02	6.65
Supportive counselling	2.244	1,135	5,534	Dominated	39,341	0.00	8.61
Family therapy	2.169	287	5,135	Dominated	38,245	0.00	9.12
No treatment	2.121	0	5,114	Dominated	37,312	0.01	9.76
Analysis utilising efficacy data from NMAs of dichotomous remission							
TF-CBT narrative exposure	2.415	517	3,934	Dominant	44,370	0.81	1.23
TF-CBT cognitive therapy	2.411	1,204	4,647	Dominated	43,570	0.10	2.97
TF-CBT prolonged exposure	2.397	1,089	4,581	Dominated	43,349	0.04	3.39
TF-CBT Cohen/CPT	2.389	911	4,428	Dominated	43,343	0.03	3.30
Supportive counselling	2.384	1,135	4,665	Dominated	43,016	0.01	4.35
No treatment	2.121	0	5,114	Dominated	37,312	0.01	5.77

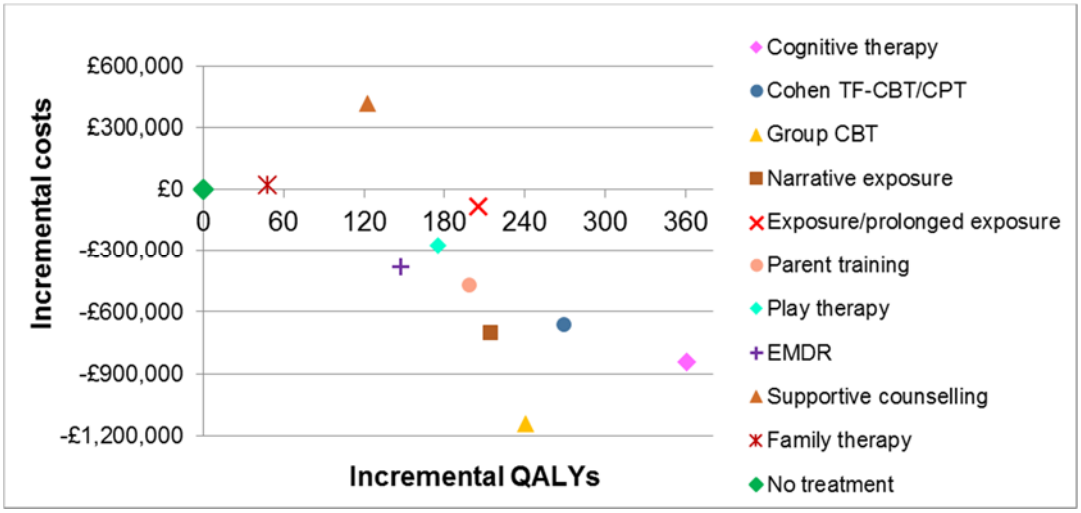
1 at the NICE lower cost-effectiveness threshold of £20,000/QALY

CPT: cognitive processing therapy; EMDR: eye movement desensitisation reprocessing; Ext domin: extendedly dominated; ICER: incremental cost effectiveness ratio; Inter: intervention; NMB: net monetary benefit; Prob: probability; TF-CBT: trauma-focused cognitive behavioural therapy

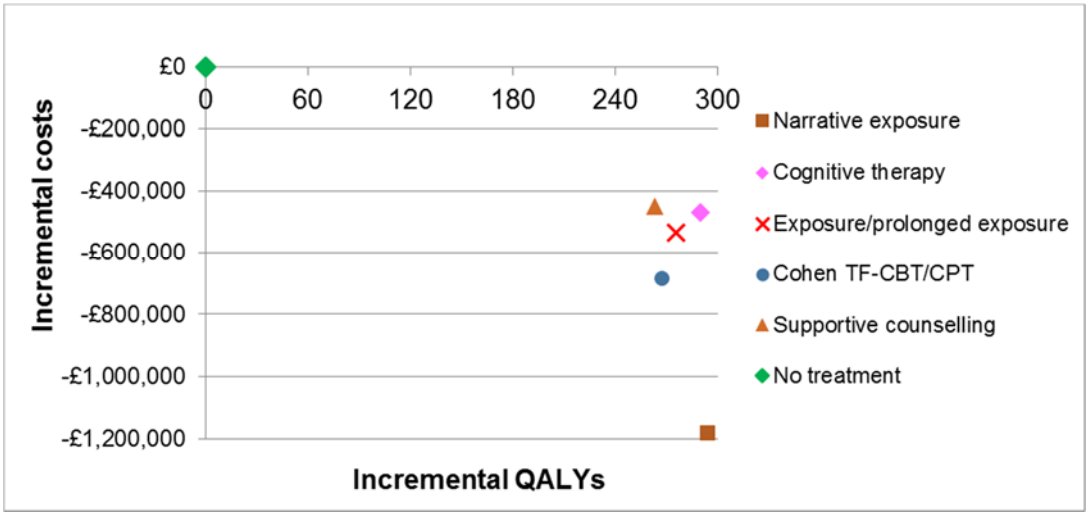
Figure 179 provides the cost effectiveness plane of the analysis. Each intervention is placed on the plane according to its incremental costs and QALYs compared with no treatment.

Figure 179. Scenario B: Cost-effectiveness plane of interventions for the treatment of PTSD in children and young people plotted against no treatment – incremental costs and QALYs per 1,000 children and young people [utility data from Gospodarevskaya (2013); beneficial effect up to 3-month follow-up]

Analysis utilising efficacy data from NMAs of changes in PTSD symptom scores



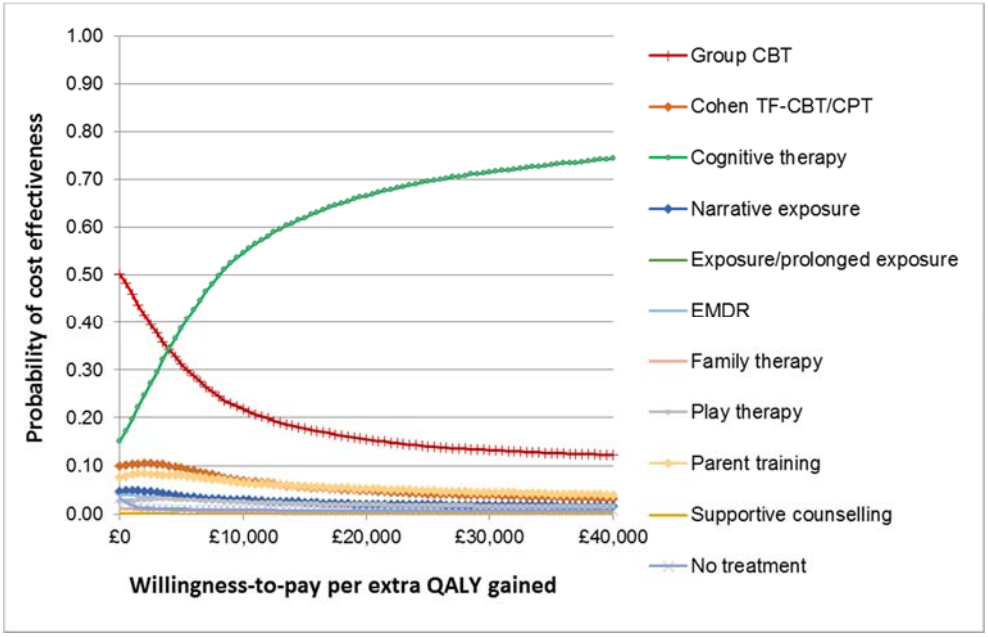
Analysis utilising efficacy data from NMAs of dichotomous remission



The CEAC and CEAF of the analysis are shown in Figure 180 and Figure 181, respectively. Cognitive therapy (analysis utilising NMA of continuous data) and narrative exposure (analysis utilising NMA of dichotomous data) are the most cost-effective options at the NICE lower cost effectiveness threshold of £20,000/QALY, each with a high probability of being cost-effective that exceeds 0.65.

Figure 180. Scenario B: Cost-effectiveness acceptability curves of interventions for the treatment of PTSD in children and young people [utility data from Gospodarevskaya (2013); beneficial effect up to 3-month follow-up]

Analysis utilising efficacy data from NMAs of changes in PTSD symptom scores



Analysis utilising efficacy data from NMAs of dichotomous remission

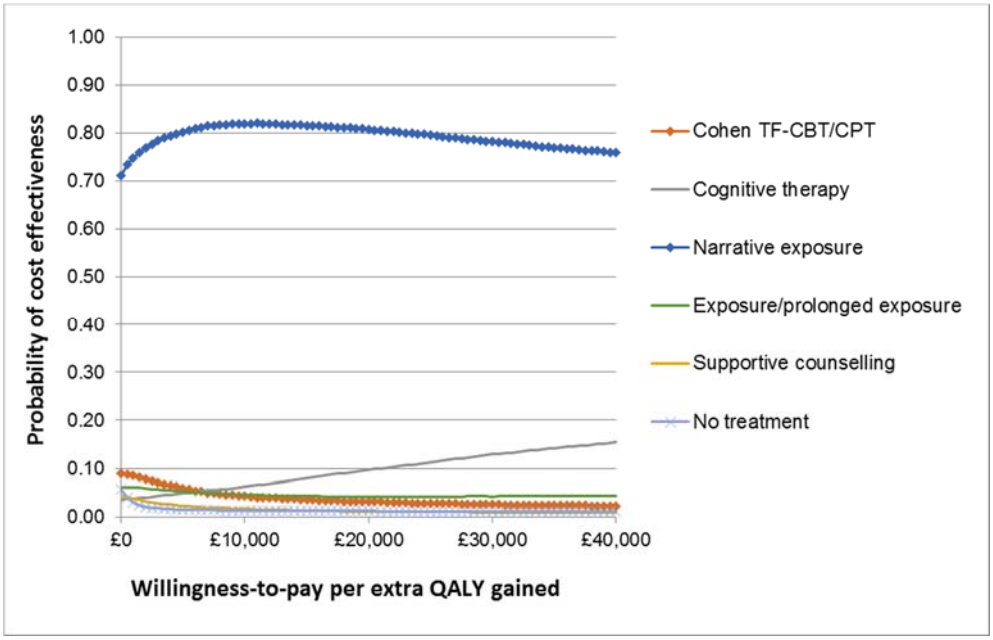
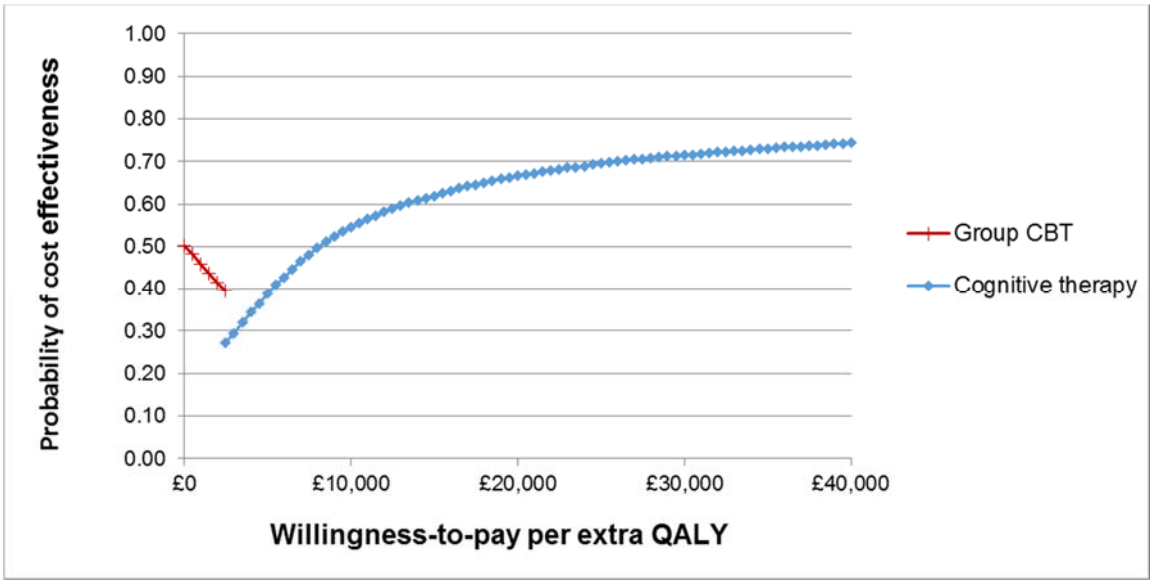
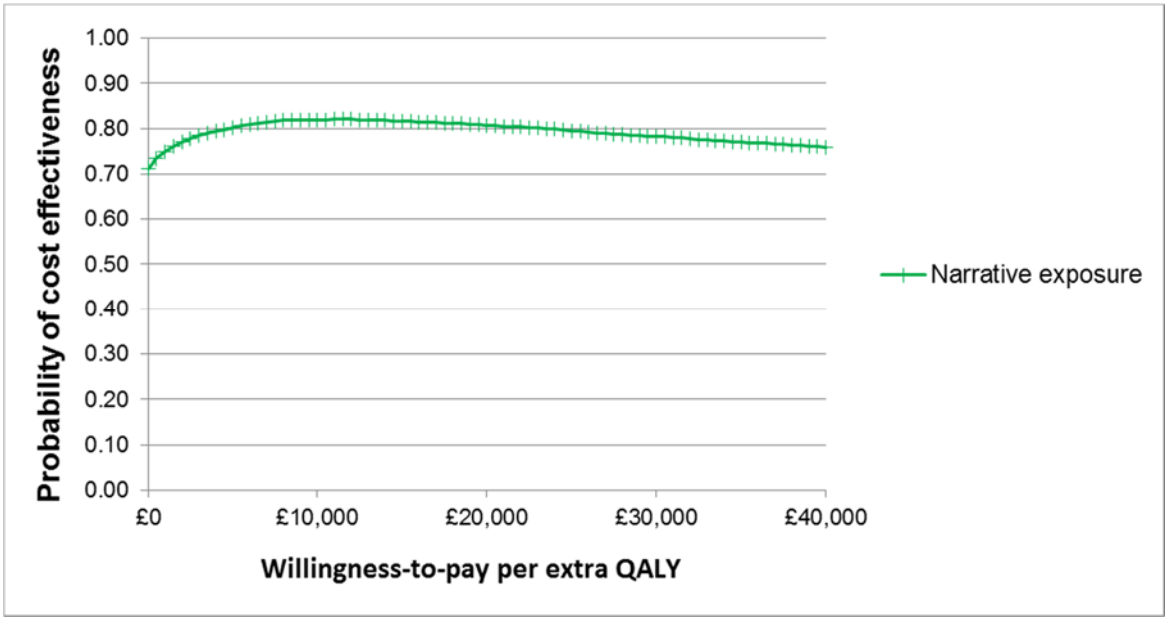


Figure 181 Scenario B: Cost-effectiveness acceptability frontier of interventions for the treatment of PTSD in children and young people [utility data from Gospodarevskaya (2013); beneficial effect up to 3-month follow-up]

Analysis utilising efficacy data from NMAs of changes in PTSD symptom scores



Analysis utilising efficacy data from NMAs of dichotomous remission



Results were robust to changes in the annual risk of relapse between zero and 0.20 and conclusions on cost effectiveness were not affected.

Scenario C: utility data from Shearer (2018); no beneficial effect beyond treatment endpoint

The results of this scenario are provided in Table 54. Cognitive therapy remained the most cost-effective intervention, followed by narrative exposure and play therapy. Group CBT and EMDR were the 4th and 5th most cost-effective treatment options. All interventions were more clinically and cost-effective than no treatment, with the exception of supportive counselling, which was more clinically effective but less cost-effective. In the secondary analysis that utilised dichotomous remission data, narrative exposure followed by cognitive therapy were more cost-effective than no treatment; however, all other interventions were less cost-effective than no treatment.

Table 54: Scenario C, results of economic modelling: interventions for the treatment of PTSD in children and young people [utility data from Shearer (2018); no beneficial effect beyond treatment endpoint]

Intervention	Mean per person			ICER (£/QALY)	NMB £/ person	Prob best[1]	Mean rank
	QALY	Inter cost £	Total cost £				
Analysis utilising efficacy data from NMAs of changes in PTSD symptom scores							
TF-CBT cognitive therapy	2.224	1,203	4,373	Dominant	40,108	0.59	2.05
TF-CBT narrative exposure	2.200	517	4,502	Dominated	39,501	0.16	3.11
TF-CBT prolonged exposure	2.196	1,089	5,221	Dominated	38,700	0.02	6.47
Play therapy	2.196	715	4,843	Dominated	39,075	0.09	4.85
TF-CBT Cohen/CPT	2.191	911	5,202	Dominated	38,622	0.01	6.66
Parent training	2.187	682	5,112	Dominated	38,635	0.05	6.61
EMDR	2.187	459	4,908	Dominated	38,824	0.02	5.59
TF-CBT group CBT	2.184	270	4,807	Dominated	38,872	0.02	5.05
Supportive counselling	2.177	1,137	5,911	Dominated	37,631	0.00	10.21
Family therapy	2.175	287	5,139	Dominated	38,357	0.02	7.59
No treatment	2.167	0	5,118	Dominated	38,224	0.02	7.82
Analysis utilising efficacy data from NMAs of dichotomous remission							
TF-CBT narrative exposure	2.201	517	4,485	Dominant	39,529	0.71	1.41
TF-CBT cognitive therapy	2.199	1,203	5,219	Dominated	38,766	0.19	2.52
TF-CBT prolonged exposure	2.184	1,089	5,625	Dominated	38,056	0.04	3.76
TF-CBT Cohen/CPT	2.174	911	5,783	Dominated	37,703	0.00	4.58
Supportive counselling	2.169	1,137	6,200	Dominated	37,174	0.00	5.68
No treatment	2.167	0	5,118	Dominated	38,224	0.05	3.06

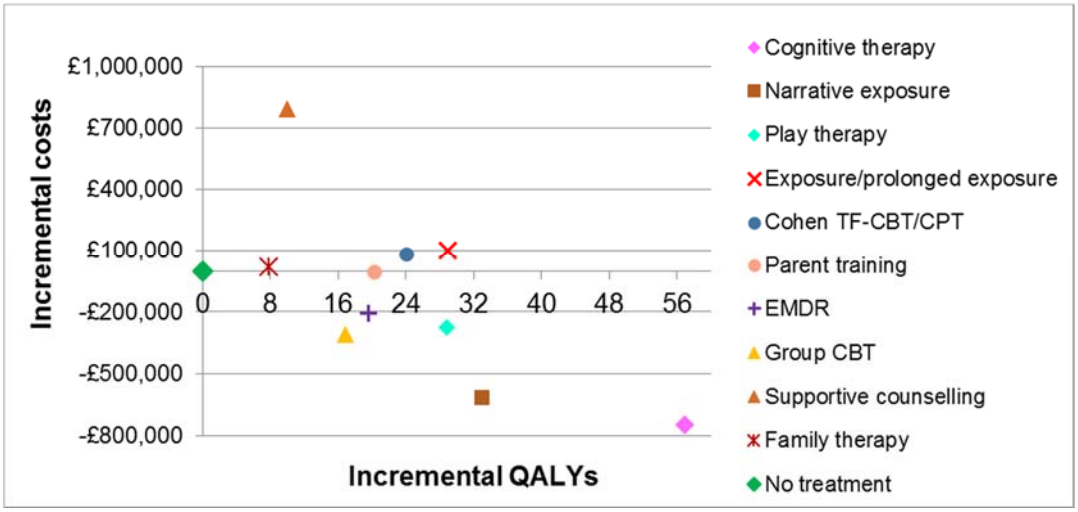
1 at the NICE lower cost-effectiveness threshold of £20,000/QALY

CPT: cognitive processing therapy; EMDR: eye movement desensitisation reprocessing; ICER: incremental cost effectiveness ratio; Inter: intervention; NMB: net monetary benefit; Prob: probability; TF-CBT: trauma-focused cognitive behavioural therapy

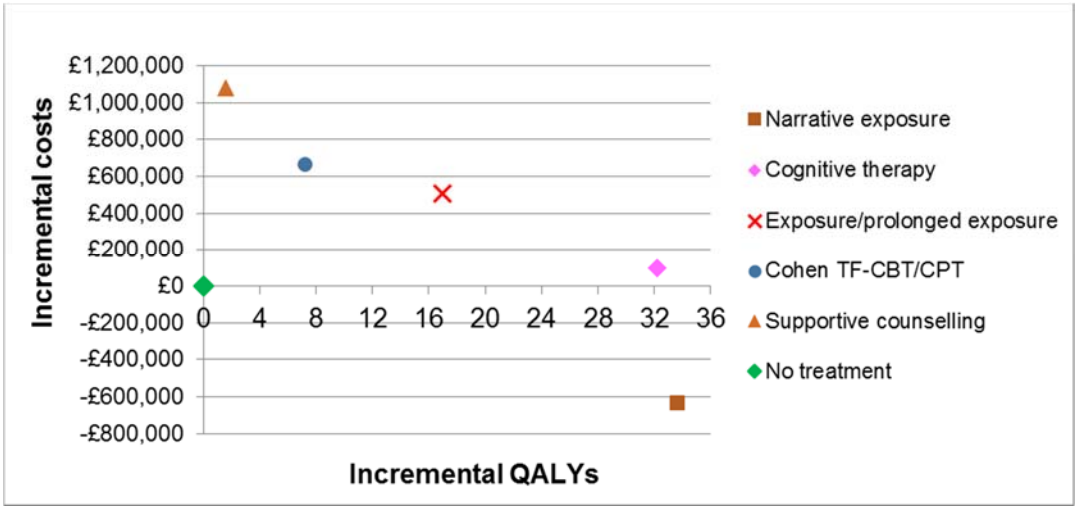
Figure 182 provides the cost effectiveness plane of the analysis. Each intervention is placed on the plane according to its incremental costs and QALYs compared with no treatment.

Figure 182. Scenario C: Cost-effectiveness plane of interventions for the treatment of PTSD in children and young people plotted against no treatment – incremental costs and QALYs per 1,000 children and young people [utility data from Shearer (2018); no beneficial effect beyond treatment endpoint]

Analysis utilising efficacy data from NMAs of changes in PTSD symptom scores



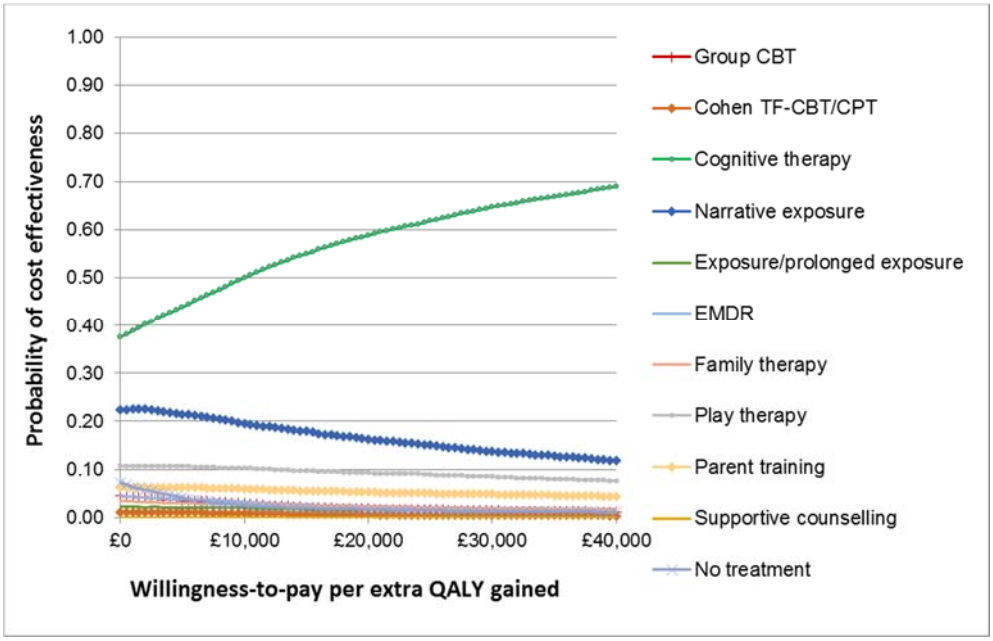
Analysis utilising efficacy data from NMAs of dichotomous remission



The CEAC and CEAF of the analysis are shown in Figure 183 and Figure 184, respectively. Cognitive therapy (analysis utilising NMA of continuous data) and narrative exposure (analysis utilising NMA of dichotomous data) are the most cost-effective options at any cost effectiveness threshold between zero and £40,000/QALY, with a probability of being cost-effective above 0.55 at the NICE lower cost effectiveness threshold of £20,000/QALY.

Figure 183. Scenario C: Cost-effectiveness acceptability curves of interventions for the treatment of PTSD in children and young people [utility data from Shearer (2018); no beneficial effect beyond treatment endpoint]

Analysis utilising efficacy data from NMAs of changes in PTSD symptom scores



Analysis utilising efficacy data from NMAs of dichotomous remission

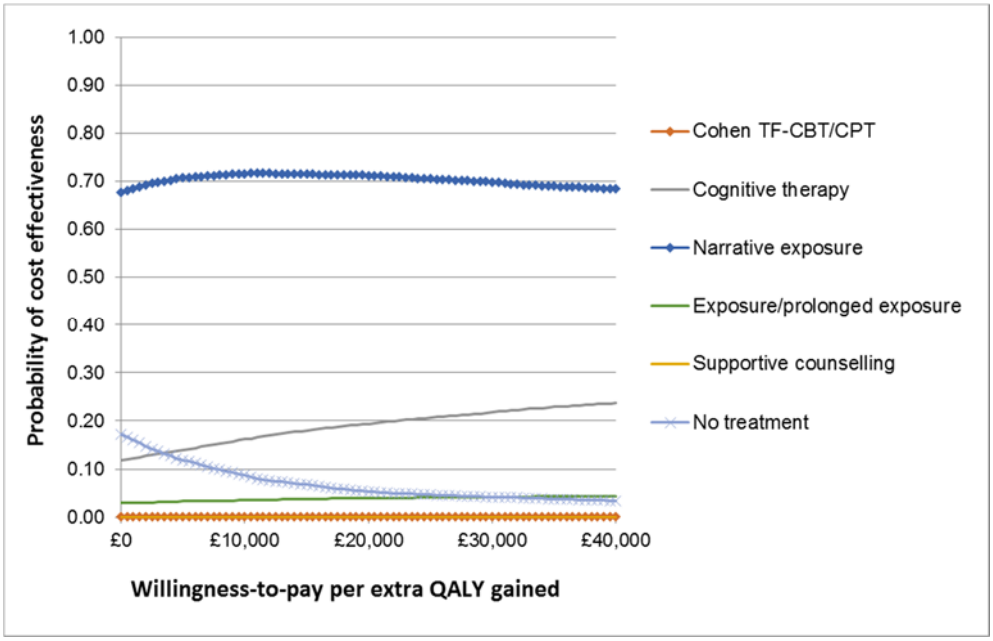
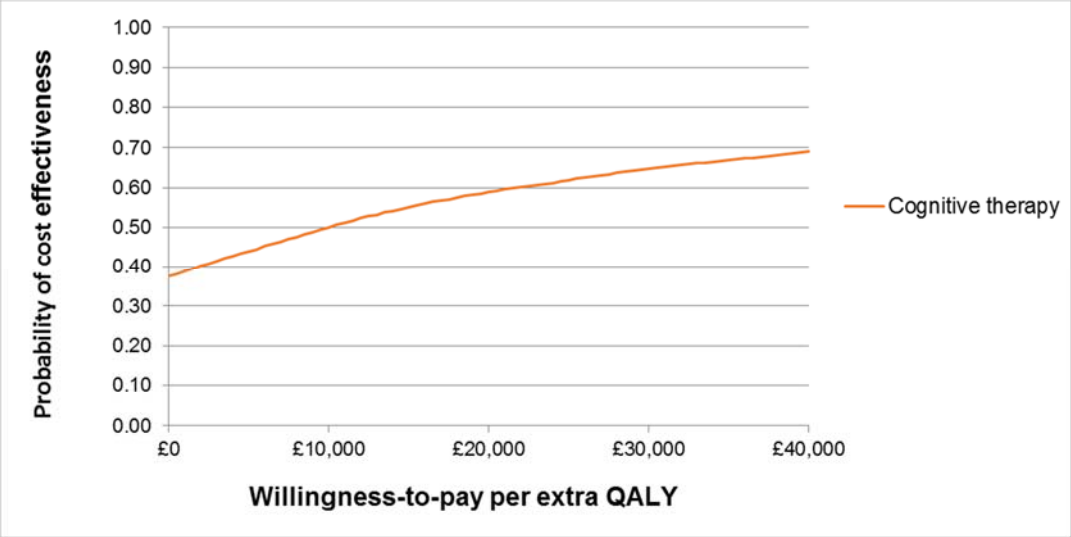
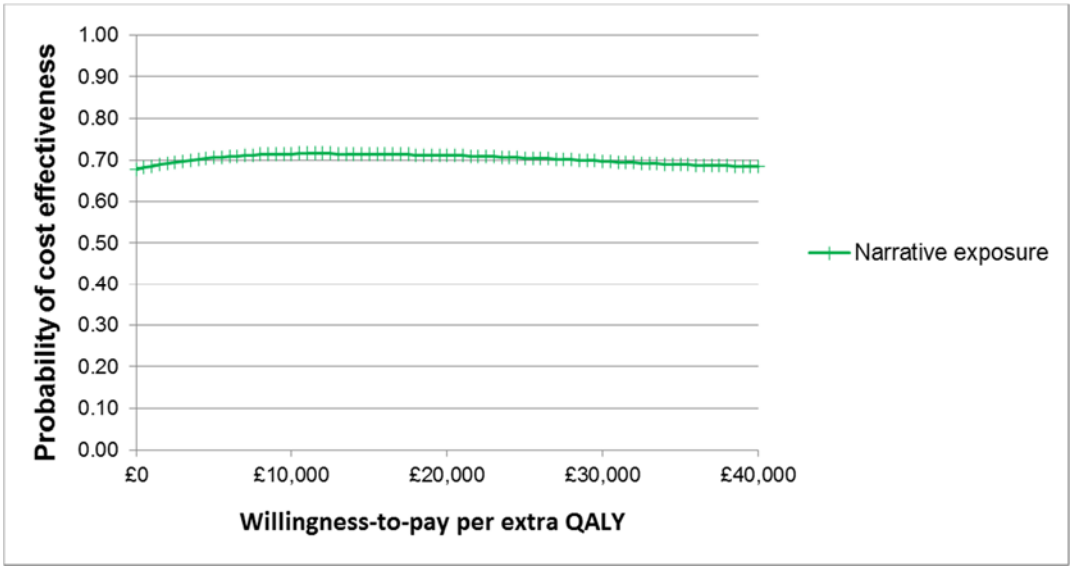


Figure 184 Scenario C: Cost-effectiveness acceptability frontier of interventions for the treatment of PTSD in children and young people [utility data from Shearer (2018); no beneficial effect beyond treatment endpoint]

Analysis utilising efficacy data from NMAs of changes in PTSD symptom scores



Analysis utilising efficacy data from NMAs of dichotomous remission



Results were sensitive to an increase in the annual risk of relapse from 0.10 to 0.20, as only cognitive therapy, narrative exposure, group CBT, play therapy and EMDR remained more cost-effective than no treatment. Results were not affected when a zero risk of relapse was assumed.

Scenario D: utility data derived from Shearer (2018); beneficial effect up to 3-month follow-up

The results of this scenario are provided in Table 55. Cognitive therapy is the most cost-effective intervention in this scenario as well, followed by group CBT and Cohen/CPT. Narrative exposure and parent training were the 4th and 5th most cost-effective options, respectively. All interventions were more clinically and cost-effective than no treatment, with the exception of supportive counselling, which was more clinically effective but less cost-effective. In the secondary analysis that utilised dichotomous remission data, narrative exposure followed by Cohen/CPT and prolonged exposure were the 3 most cost-effective treatment options. All interventions were more cost-effective compared with no treatment.

Table 55: Scenario D, results of economic modelling: interventions for the treatment of PTSD in children and young people [utility data from Shearer (2018); beneficial effect up to 3-month follow-up]

Intervention	Mean per person			ICER (£/QALY)	NMB £/ person	Prob best[1]	Mean rank
	QALY	Inter cost £	Total cost £				
Analysis utilising efficacy data from NMAs of changes in PTSD symptom scores							
TF-CBT cognitive therapy	2.227	1,203	4,271	15,627	40,276	0.31	2.79
TF-CBT Cohen/CPT	2.212	910	4,452	Ext domin	39,798	0.10	4.26
TF-CBT group CBT	2.208	270	3,966		40,190	0.37	2.54
TF-CBT narrative exposure	2.204	518	4,412	Dominated	39,661	0.05	4.40
TF-CBT prolonged exposure	2.202	1,087	5,035	Dominated	39,004	0.01	7.02
Parent training	2.201	681	4,642	Dominated	39,376	0.08	5.45
Play therapy	2.197	718	4,833	Dominated	39,113	0.03	6.40
EMDR	2.193	462	4,727	Dominated	39,130	0.03	6.25
Supportive counselling	2.189	1,136	5,529	Dominated	38,244	0.00	9.32
Family therapy	2.176	287	5,132	Dominated	38,395	0.01	8.68
No treatment	2.169	0	5,113	Dominated	38,261	0.01	8.88
Analysis utilising efficacy data from NMAs of dichotomous remission							
TF-CBT narrative exposure	2.217	518	3,929	Dominant	40,404	0.79	1.23
TF-CBT cognitive therapy	2.216	1,203	4,640	Dominated	39,678	0.04	3.62
TF-CBT prolonged exposure	2.214	1,087	4,572	Dominated	39,699	0.06	3.49
TF-CBT Cohen/CPT	2.212	910	4,420	Dominated	39,826	0.07	2.93
Supportive counselling	2.212	1,136	4,660	Dominated	39,572	0.03	4.08
No treatment	2.169	0	5,113	Dominated	38,261	0.01	5.63

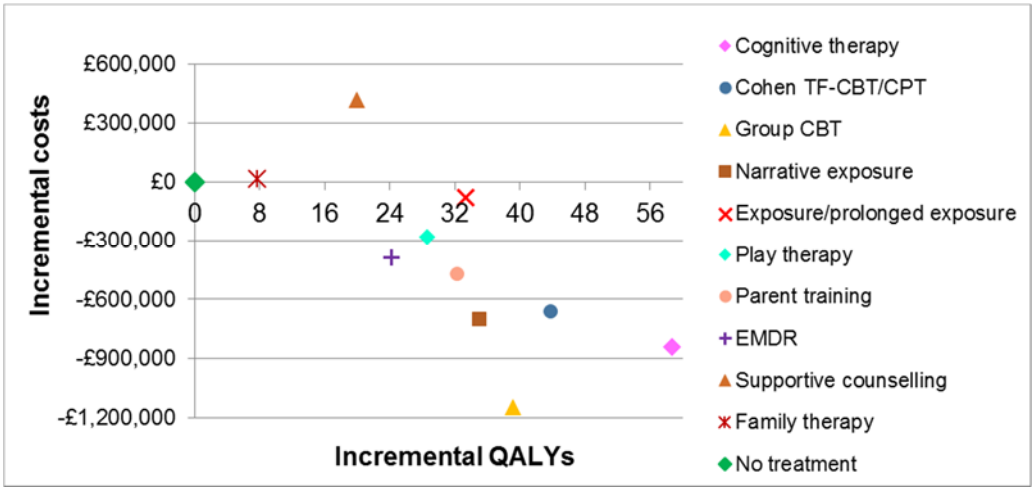
1 at the NICE lower cost-effectiveness threshold of £20,000/QALY

CPT: cognitive processing therapy; EMDR: eye movement desensitisation reprocessing; Ext domin: extendedly dominated; ICER: incremental cost effectiveness ratio; Inter: intervention; NMB: net monetary benefit; Prob: probability; TF-CBT: trauma-focused cognitive behavioural therapy

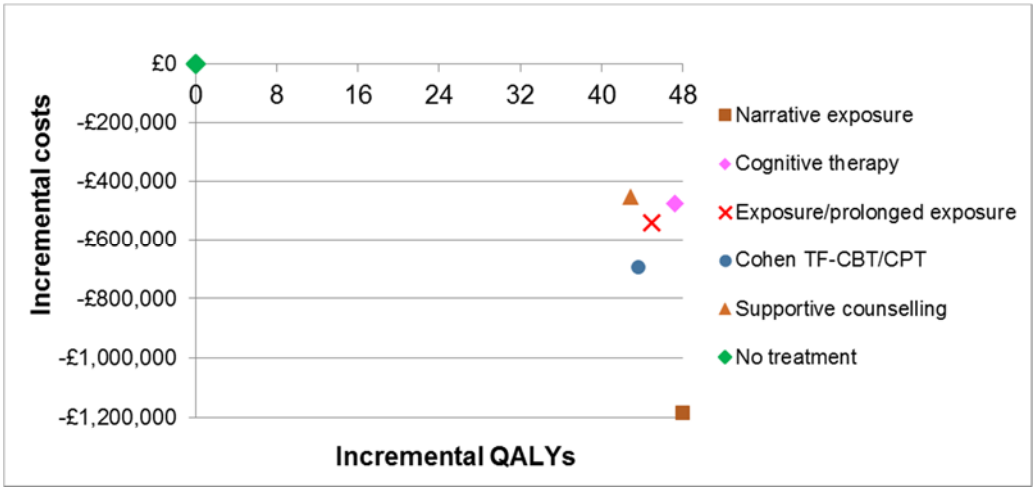
Figure 185 provides the cost effectiveness plane of the analysis. Each intervention is placed on the plane according to its incremental costs and QALYs compared with no treatment.

Figure 185. Scenario D: Cost-effectiveness plane of interventions for the treatment of PTSD in children and young people plotted against no treatment – incremental costs and QALYs per 1,000 children and young people [utility data from Shearer (2018); beneficial effect up to 3-month follow-up]

Analysis utilising efficacy data from NMAs of changes in PTSD symptom scores



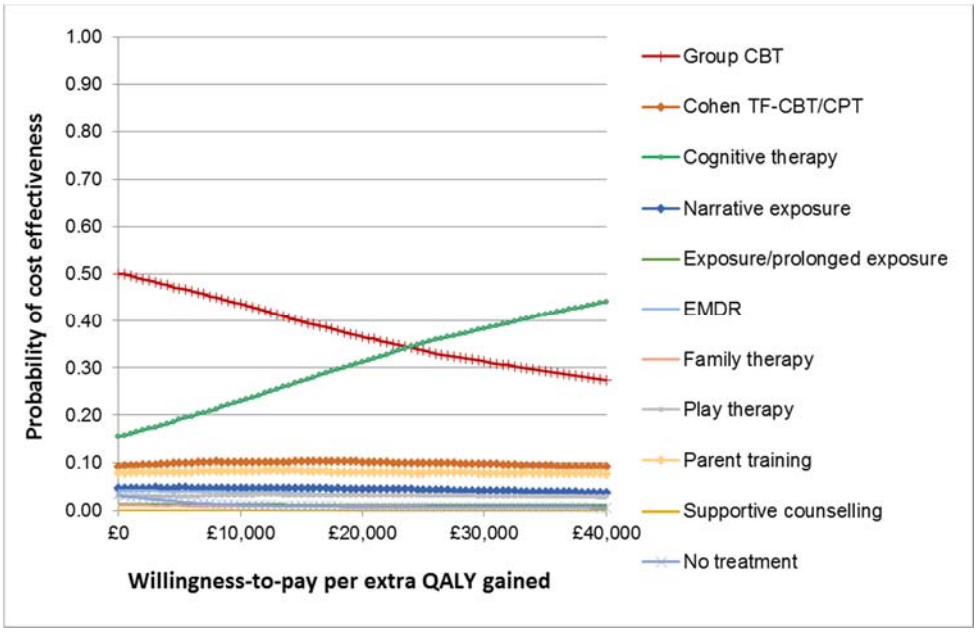
Analysis utilising efficacy data from NMAs of dichotomous remission



The CEAC and CEAF of the analysis are shown in Figure 186 and Figure 187, respectively. Cognitive therapy (analysis utilising NMA of continuous data) and narrative exposure (analysis utilising NMA of dichotomous data) are the most cost-effective options at the NICE lower cost effectiveness threshold of £20,000/QALY. However, the probability of cognitive therapy being cost-effective is only 0.31. In the analysis utilising the NMA of dichotomous data, the probability of narrative exposure being cost-effective was above 0.70 at any cost effectiveness threshold.

Figure 186. Scenario D: Cost-effectiveness acceptability curves of interventions for the treatment of PTSD in children and young people [utility data from Shearer (2018); beneficial effect up to 3-month follow-up]

Analysis utilising efficacy data from NMAs of changes in PTSD symptom scores



Analysis utilising efficacy data from NMAs of dichotomous remission

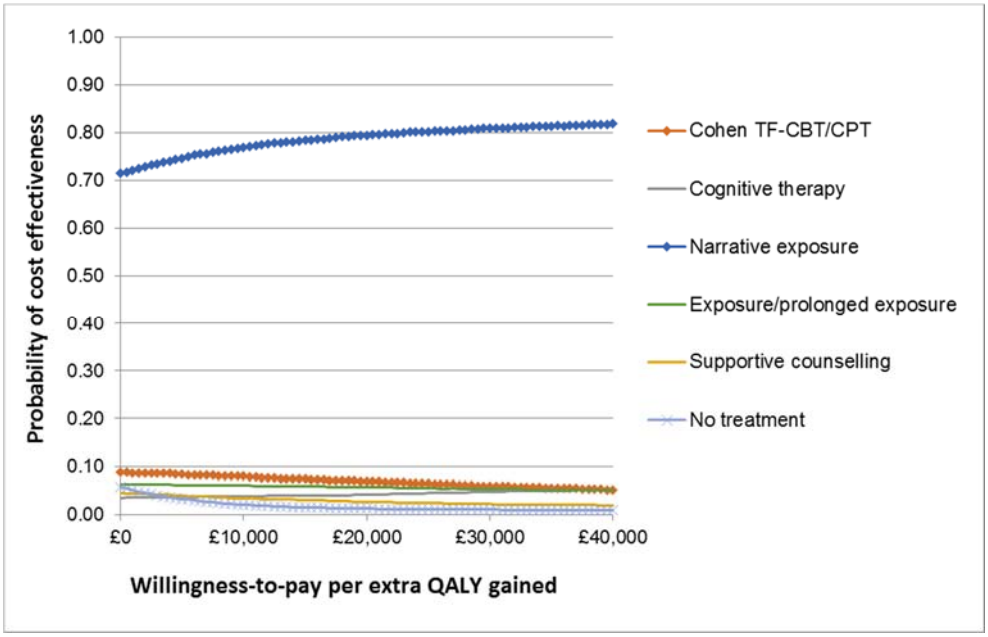
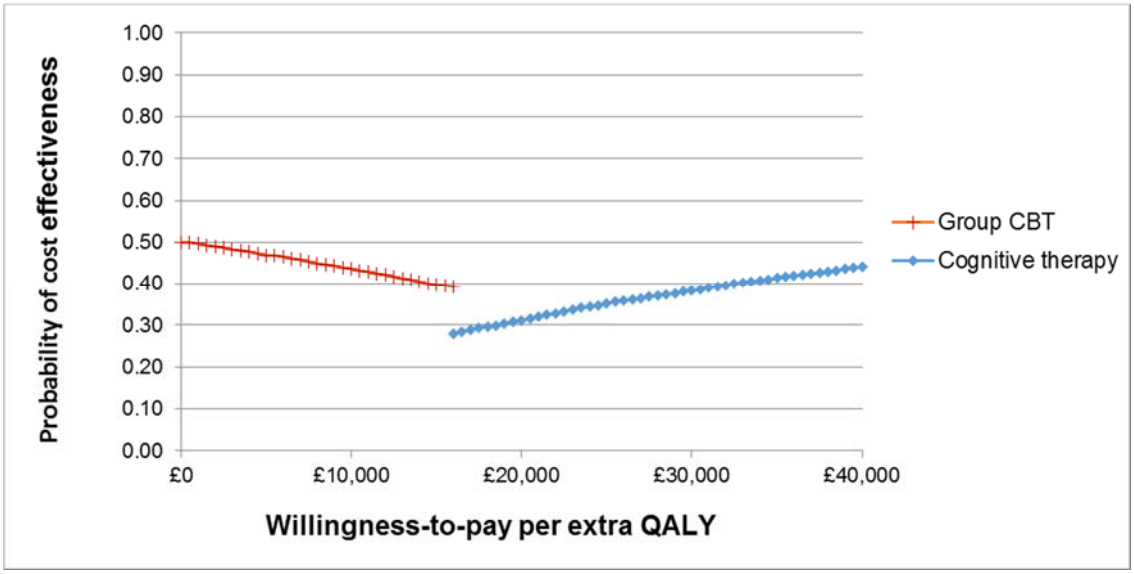
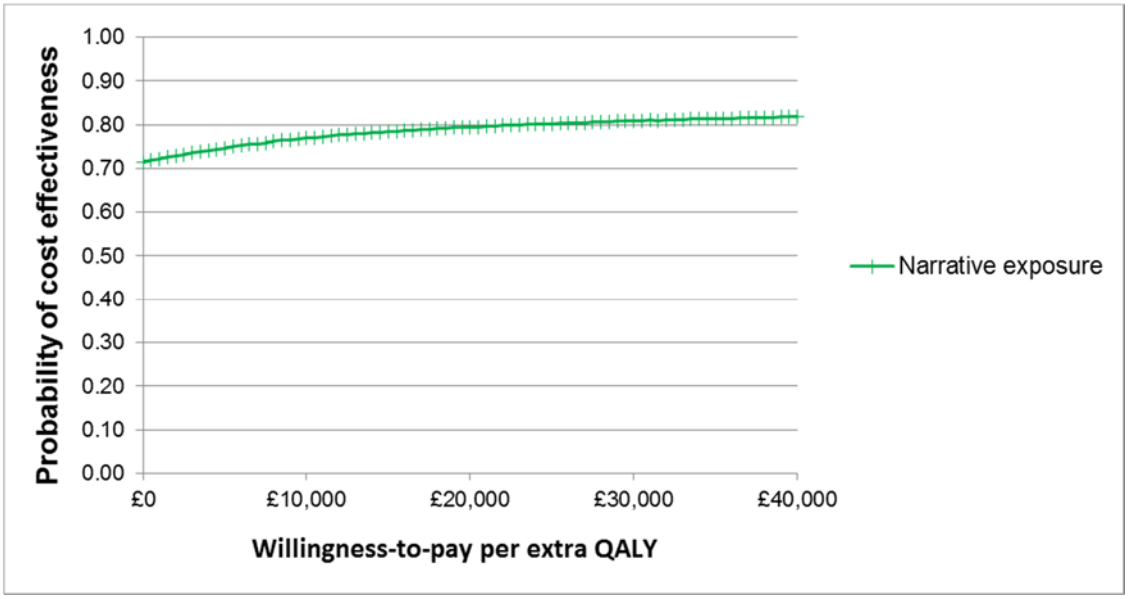


Figure 187 Scenario D: Cost-effectiveness acceptability frontier of interventions for the treatment of PTSD in children and young people [utility data from Shearer (2018); beneficial effect up to 3-month follow-up]

Analysis utilising efficacy data from NMAs of changes in PTSD symptom scores



Analysis utilising efficacy data from NMAs of dichotomous remission



Results were overall robust to changes in the annual risk of relapse.

Discussion – conclusions, strengths and limitations of economic analysis

The guideline economic analysis assessed the cost effectiveness of a range of psychological interventions for the treatment of PTSD in children and young people. The interventions assessed were determined by the availability of efficacy data obtained from the NMAs that

were conducted to inform this guideline. Interventions belonging to the TF-CBT class were assessed separately, as they differed in terms of related resource use and the results of the NMA suggested they had different efficacy as well. The base-case analysis conservatively assumed that the beneficial effect of interventions lasts only until treatment endpoint and that after this period, the probability of remission is equal to that of baseline treatment (no treatment). Alternative scenarios, using a beneficial effect of up to 3 months post-treatment (based on limited follow-up data) and a different set of utility values that translated into a narrower HRQoL benefit for people remitting were explored. The main analysis utilised continuous efficacy data, comprising changes in PTSD symptom scores, which were transformed to log-odds ratios of remission using a published formula. A secondary analysis utilised limited dichotomous efficacy data in an attempt to validate the conclusions of the main analysis. However, it needs to be noted that the definition of remission is different in the two analyses: in the analysis that derived remission from continuous data (changes in PTSD symptom scale scores), remission was defined as a final score below a hypothetical cut-off point on a PTSD symptom scale with an underlying normal distribution. In contrast, in the analysis that utilised dichotomous remission data, remission was defined as loss of PTSD diagnosis using DSM, ICD or similar criteria.

In the base-case analysis, the order of interventions from the most to the least cost-effective for the treatment of PTSD in children and young people was: cognitive therapy (TF-CBT), narrative exposure (TF-CBT), play therapy, prolonged exposure (TF-CBT), Cohen/CPT (TF-CBT), EMDR, parent training, group CBT (TF-CBT), family therapy, supportive counselling and no treatment. The probability of cognitive therapy being the most cost-effective treatment option was 0.78. It can be seen that with the exception of group CBT, all other interventions in the TF-CBT class are among the most cost-effective interventions of those assessed. In the secondary analysis that used dichotomous remission data, all interventions in the TF-CBT class were more cost-effective than no treatment; the order of interventions from the most to least cost-effective was: narrative exposure (TF-CBT), cognitive therapy (TF-CBT), prolonged exposure (TF-CBT), Cohen/CPT (TF-CBT), no treatment and supportive counselling. The probability of narrative exposure being the most cost-effective option was 0.62.

When a beneficial effect of up to 3 months post-treatment was assumed, the relative cost effectiveness of group CBT and Cohen/CPT (both TF-CBT) improved and the cost effectiveness of play therapy was reduced. The order of interventions became cognitive therapy (TF-CBT), Cohen/CPT (TF-CBT), group CBT (TF-CBT), narrative exposure (TF-CBT), parent training, prolonged exposure (TF-CBT), play therapy, EMDR, supportive counselling, family therapy, no treatment. The probability of cognitive therapy being the most cost-effective treatment option was 0.67. In the secondary analysis, the cost effectiveness of all interventions improved. Narrative exposure remained the most cost-effective intervention with a 0.81 probability, followed by cognitive therapy and then prolonged exposure.

When narrower utility benefits for remission and no beneficial effect beyond treatment endpoint were assumed, less costly interventions, such as EMDR and group CBT, were favoured so that their relative cost effectiveness improved. The top-3 most cost-effective interventions remained the same with those of the base-case analysis and the order of interventions by cost effectiveness was as follows: cognitive therapy (TF-CBT), narrative exposure (TF-CBT), play therapy, group CBT (TF-CBT), EMDR, prolonged exposure (TF-CBT), parent training, Cohen/CPT (TF-CBT), family therapy, no treatment, supportive counselling. The probability of cognitive therapy being the most cost-effective treatment option was 0.59. In secondary analysis, only narrative exposure and cognitive therapy were more cost-effective than no treatment.

When narrower utility benefits for remission and a beneficial effect up to 3 months post-treatment were assumed, the order of interventions from most to least cost-effective became: cognitive therapy (TF-CBT), group CBT (TF-CBT), Cohen/CPT (TF-CBT), narrative exposure (TF-CBT), parent training, EMDR, play therapy, prolonged exposure (TF-CBT), family therapy, no treatment and supportive counselling. The probability of cognitive therapy being the most cost-effective intervention was only 0.31. In secondary analysis, the order of interventions by cost effectiveness was: narrative exposure, Cohen/CPT, prolonged exposure, cognitive therapy, supportive counselling, and no treatment. The probability of narrative exposure being the most cost-effective option was 0.79.

Results of the economic analysis were overall robust to the changes in the risk of relapse tested in deterministic sensitivity analysis.

Overall, individual forms of TF-CBT and, to a lesser degree, play therapy appear to be cost-effective in the treatment of children and young people with PTSD. Family therapy and supportive counselling do not appear to be cost-effective relative to other interventions and, under some scenarios, supportive counselling is less cost-effective than no treatment. In-between, there is another group of interventions (EMDR, group CBT and parent training) with modest relative cost effectiveness, which is affected by the alternative scenarios tested. The secondary analysis confirmed the cost effectiveness of individual forms of TF-CBT versus supportive counselling and no treatment, although the limited evidence did not allow further comparisons to be made.

The analysis utilised clinical effectiveness parameters derived from NMAs. This methodology enabled evidence synthesis from both direct and indirect comparisons between interventions, and allowed simultaneous inference on all treatments examined in pair-wise trial comparisons while respecting randomisation (Caldwell 2005; Lu & Ades, 2004). Global inconsistency checks indicated that there was no inconsistency between direct and indirect evidence considered in the 2 NMAs that utilised continuous data (PTSD changes in symptom scale scores). Regarding the NMA of dichotomous remission data, inconsistency checks were not relevant as there were no closed loops of direct evidence within the network.

The quality and limitations of RCTs considered in the NMAs have unavoidably impacted on the quality of the economic model clinical input parameters. For example, economic results may be have been affected by reporting and publication bias. Some interventions were informed by very limited evidence: cognitive therapy and parent training have been tested on 25 and 49 individuals, respectively, within the evidence base that informed the economic analysis. The evidence on dichotomous outcomes (remission) that informed the secondary analysis was even more limited; in particular, narrative exposure, cognitive therapy and prolonged exposure had been tested on 13, 26 and 50 people, respectively. However, the purpose of the secondary analysis was only to validate the conclusions reached using the results of the main analysis. It should be noted that, overall, the class of TF-CBT, in particular Cohen/CPT and group CBT within the class, had the most robust evidence base across all outcomes assessed in NMA.

The results of the NMAs of 1-4 month follow-up PTSD change score data and of the dichotomous remission data showed considerable uncertainty due to the small size of the included studies and the small total number of studies. Thus, results based on these data should be interpreted with caution. Nevertheless, the base-case economic analysis did not utilise the outputs of any of these NMAs. The NMA that informed the base-case economic analysis was based on more robust data and was characterised by moderate heterogeneity and no evidence of inconsistency.

The limitations characterising the data included in the NMAs and the NMA outputs informing the economic analyses should be considered when interpreting the cost effectiveness results.

The economic model did not consider discontinuation in the model structure due to the limited discontinuation data available. However, for the NMA that informed the economic analysis, ITT continuous data were extracted, where available. This means that discontinuation has been implicitly taken into account in the economic model outcomes. Moreover, the probabilistic analysis took into account the completion rates of the interventions assessed in the RCTs that informed the economic analysis, so that the number of sessions reflected, up to a degree, the attrition rates characterising each intervention.

The baseline risk of remission was estimated based on a large study that reported data on the course of PTSD derived from 1575 people with lifetime PTSD who had participated in 22 WHO World Mental Health surveys. Data on children and young people were possible to extract, so that remission data were directly relevant to the study population of the economic analysis. The risk of relapse was not possible to estimate using published evidence, and therefore was based on an assumption following advice from the committee. However, a range of values was tested in deterministic sensitivity analysis.

The time horizon of the analysis was 3 years, which were considered adequate to capture longer terms and costs associated with a course of treatment for PTSD without significant extrapolation over the course of PTSD.

Utility data used in the economic model were derived from a systematic review of studies reporting utility data for PTSD-related health states. The review included only two studies, each with different strengths and limitations. The economic analysis considered utility data from both studies in alternative scenarios.

Intervention costs were estimated based on relevant information provided in the studies included in the NMA supplemented by the committee's expert opinion, in order to reflect routine NHS practice. NHS and PSS costs incurred by children and young people with PTSD and those remitting from PTSD were taken from a small RCT due to lack of any other relevant evidence.

Overall conclusions from the guideline economic analysis

Individual forms of TF-CBT and, to a lesser degree, play therapy appear to be cost-effective in the treatment of children and young people with PTSD. Family therapy and supportive counselling do not appear to be cost-effective relative to other interventions and, under some scenarios, supportive counselling is less cost-effective than no treatment. In-between, there is another group of interventions (EMDR, group CBT and parent training) with modest relative cost effectiveness. Results need to be interpreted with caution due to the limited evidence base characterising some of the interventions.

References

Brazier J, Roberts J, Deverill M (2002) The estimation of a preference-based measure of health from the SF-36. Journal of Health Economics 21(2), 271-92

Briggs A, Sculpher M, Claxton K (2006) Decision Modelling for Health Economic Evaluation. New York, NY: Oxford University Press

British Association for Behavioural & Cognitive Psychotherapies (2016) Criteria and guidelines for re-accreditation as a behavioural and/or cognitive psychotherapist. British Association for Behavioural & Cognitive Psychotherapies. Available from: http://www.babcp.com/files/Accreditation/CBP/Full/CBP-Full-Guidelines-V5-0614.pdf

Brooks R (1996) EuroQol: the current state of play. Health Policy 37(1), 53-72

Caldwell DM, Ades AE, Higgins JP (2005) Simultaneous comparison of multiple treatments: combining direct and indirect evidence. BMJ 331(7521), 897-900

Chinn S (2000) A simple method for converting an odds ratio to effect size for use in meta-analysis. Statistics in Medicine 19(22), 3127-31

Cohen J (1969) Statistical power analysis for the behavioral sciences. New York: Academic Press

Cooper H, Hedges LV, Valentine JC (2009) The Handbook of Research Synthesis and Meta-analysis. New York: Russel Sage Foundation.

Curtis L and Burns A (2017) Unit Costs of Health & Social Care 2017. Canterbury: PSSRU, University of Kent.

De Young AC, Kenardy JA, Cobham VE et al. (2012) Prevalence, comorbidity and course of trauma reactions in young burn-injured children. Journal of Child Psychology and Psychiatry 53(1), 56-63

Dias S, Ades AE, Welton NJ et al. (2018) Network Meta-analysis for Decision-Making, Hoboken NJ: Wiley. Chapter 4: Generalised Linear Models, p93-154

Dias S, Welton NJ, Sutton AJ et al. (2011a, last updated September 2016) NICE DSU Technical support document 2: a generalised linear modelling framework for pairwise and network meta-analysis of randomised controlled trials. Available from http://nicedsu.org.uk/technical-support-documents/technical-support-documents/

Dias S, Welton NJ, Sutton AJ et al. (2011b, updated April 2014) NICE DSU Technical support document 4: inconsistency in networks of evidence based on randomised controlled trials. Available from http://nicedsu.org.uk/technical-support-documents/technical-support-documents/

Dolan P (1997) Modeling valuations for EuroQol health states. Medical Care 35(11), 1095-108.

Fenwick E, Claxton K, Sculpher M (2001) Representing uncertainty: the role of cost-effectiveness acceptability curves. Health Economics 10(8), 779-87

Furukawa TA, Noma H, Caldwell DM et al. (2014) Waiting list may be a nocebo condition in psychotherapy trials: a contribution from network meta-analysis. Acta Psychiatrica Scandinavica 130(3), 181-92

Gospodarevskaya E (2013) Post-traumatic stress disorder and quality of life in sexually abused Australian children. Journal of Child Sexual Abuse 22(3), 277-96

Hiller RM, Meiser-Stedman R, Fearon P et al. (2016) Research Review: Changes in the prevalence and symptom severity of child post-traumatic stress disorder in the year following trauma - a meta-analytic study. Journal of Child Psychology and Psychiatry 57(8), 884-98

Hong SB, Youssef GJ, Song SH, et al. (2014) Different clinical courses of children exposed to a single incident of psychological trauma: a 30-month prospective follow-up study. Journal of Child Psychology and Psychiatry 55(11), 1226-33

Kronenberg ME, Hansel TC, Brennan AM et al. (2010) Children of Katrina: lessons learned about postdisaster symptoms and recovery patterns. Child Development 81(4), 1241-59

La Greca AM, Lai BS, Joormann J et al. (2013a) Children's risk and resilience following a natural disaster: genetic vulnerability, posttraumatic stress, and depression. Journal of Affective Disorders 151(3), 860-7

La Greca AM, Lai BS, Llabre MM et al. (2013b) Children's Postdisaster Trajectories of PTS Symptoms: Predicting Chronic Distress. Child Youth Care Forum 42(4), 351-369

Lu G and Ades AE (2004) Combination of direct and indirect evidence in mixed treatment comparisons. Statistics in Medicine 23(20), 3105-24

Lunn DJ, Thomas A, Best N et al. (2000) WinBUGS-A Bayesian modelling framework: Concepts, structure, and extensibility. Statistics and Computing 10, 325-337

Mavridis D, Giannatsi M, Cipriani A et al. (2015) A primer on network meta-analysis with emphasis on mental health. Evidence-Based Mental Health 18(2), 40-6

National College for Teaching and Leadership (2016) Review of clinical and educational psychology training arrangements. NHS Health Education England

National Institute for Health and Clinical Excellence (2008) Social Value Judgements: Principles for the Development of NICE Guidance (2nd ed.)

National Institute for Health and Care Excellence (2013) Guide to the Methods of Technology Appraisal 2013 (PMG 9)

National Institute for Health and Care Excellence (2014, last updated April 2017) Developing NICE guidelines: the manual (PMG 20)

Netten A, Knight J, Dennett J et al. (1998) Development of a ready reckoner for staff costs in the NHS, Vols 1 & 2. Canterbury: PSSRU, University of Kent

Rhodes KM, Turner RM, Higgins JP (2015) Predictive distributions were developed for the extent of heterogeneity in meta-analyses of continuous outcome data. Journal of Clinical Epidemiology 68(1), 52-60

Rosellini AJ, Liu H, Petukhova MV, et al. (2018) Recovery from DSM-IV post-traumatic stress disorder in the WHO World Mental Health surveys. Psychological Medicine 48(3), 437-450

Shearer J, Papanikolaou N, Meiser-Stedman R et al. (2018) Cost-effectiveness of cognitive therapy as an early intervention for post-traumatic stress disorder in children and adolescents: a trial based evaluation and model. Journal of Child Psychology and Psychiatry 59(7), 773-780

Spiegelhalter D, Thomas A, Best N et al (2003) WinBUGS user manual: version 1.4. Cambridge: MRC Biostatistics Unit

Spiegelhalter DJ, Best NG, Carlin BP et al. (2002) Bayesian measures of model complexity and fit. Journal of the Royal Statistical Society: Series B 64(4), 583-616

van Valkenhoef G and Kuiper J (2016) gemtc: Network Meta-Analysis Using Bayesian Methods. R package. CRAN.

Yule W, Bolton D, Udwin O et al. (2000) The long-term psychological effects of a disaster experienced in adolescence: I: The incidence and course of PTSD. Journal of Child Psychology and Psychiatry 41(4), 503-11

Appendix K – Excluded studies

Excluded studies for "For children and young people with clinically important post-traumatic stress symptoms, what are the relative benefits and harms of psychological, psychosocial or other non-pharmacological interventions targeted at PTSD symptoms?"

Clinical studies

Psychological: Trauma-focused CBT

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
Adelufosi 2017	RQ 1.1-1.2 & 2.1-2.2 update	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Adelufosi A, Edet B, Arikpo D, Aquaisua E, Meremikwu MM. Cognitive behavioral therapy for post-traumatic stress disorder, depression, or anxiety disorders in women and girls living with female genital mutilation: A systematic review. International Journal of Gynecology & Obstetrics. 2017 Feb 1;136(S1):56-9.	
Capaldi 2016	Cochrane allRQ update	Subgroup/secondary analysis of RCT already included	Capaldi S, Asnaani A, Zandberg LJ, Carpenter JK, Foa EB. Therapeutic Alliance during Prolonged Exposure Versus Client-Centered Therapy for Adolescent Posttraumatic Stress Disorder. Journal of clinical psychology. 2016 Oct 1;72(10):1026-36.	
Cary 2012	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Cary CE, McMillen JC. The data behind the dissemination: A systematic review of trauma-focused cognitive behavioral therapy for use with children and	

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
			youth. Children and Youth Services Review. 2012 Apr 30;34(4):748-57.	
Chemtob 2008	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Unpublished (registered on clinical trials.gov and author contacted for full trial report but not provided)	Chemtob CM, Luthra R. Effectiveness of Trauma-Focused Cognitive Behavioral Therapy in Treating Children With Post-Traumatic Stress Disorder [NCT00614068]. 2008. Available from: https://clinicaltrials.gov/ct2/show/NCT00614068 [accessed 29.04.17]	
Cohen 2016	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Intervention outside protocol	Cohen JA, Mannarino AP, Jankowski K, Rosenberg S, Kodya S, Wolford GL. A randomized implementation study of trauma-focused cognitive behavioral therapy for adjudicated teens in residential treatment facilities. Child maltreatment. 2016 May;21(2):156-67.	
Corcoran 2008	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Corcoran J, Pillai V. A meta-analysis of parent-involved treatment for child sexual abuse. Research on Social Work Practice. 2008 Sep;18(5):453-64.	
de Arellano 2014	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	de Arellano MA, Lyman DR, Jobe-Shields L, George P, Dougherty RH, Daniels AS, Ghose SS, Huang L, Delphin-Rittmon ME. Trauma-focused cognitive-behavioral therapy for children and adolescents: Assessing the evidence.	

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
			Psychiatric Services. 2014 May;65(5):591-602.	
Deblinger 1990	2004 GL (excluded)	Non-RCT (no control group)	Deblinger E, McLEER SV, Henry D. Cognitive behavioral treatment for sexually abused children suffering post-traumatic stress: Preliminary findings. Journal of the American Academy of Child & Adolescent Psychiatry. 1990 Sep 1;29(5):747-52.	
Deblinger 2011	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Comparison outside protocol	Deblinger E, Mannarino AP, Cohen JA, Runyon MK, Steer RA. Trauma-focused cognitive behavioral therapy for children: impact of the trauma narrative and treatment length. Depression and anxiety. 2011 Jan 1;28(1):67-75.	
Dorsey 2014	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Population not relevant for this review (to be considered for other relevant RQ)	Dorsey S, Pullmann MD, Berliner L, Koschmann E, McKay M, Deblinger E. Engaging foster parents in treatment: A randomized trial of supplementing Trauma-focused Cognitive Behavioral Therapy with evidence-based engagement strategies. Child abuse & neglect. 2014 Sep 30;38(9):1508-20.	
Fernandez 2012	Handsearch	Non-RCT (no control group)	Fernandez, S., Cromer, L.D., Borntrager, C., Swopes*, R. & Davis, J. L. (2012). A Case Series: Cognitive-Behavioral Treatment (Exposure, Relaxation, and Rescripting Therapy) of Trauma-Related Nightmares	

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
			Experienced by Children. Clinical Case Studies, 12, 39-59.	
Forman-Hoffman 2013b	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Forman-Hoffman V, Knauer S, McKeeman J, Zolotor A, Blanco R, Lloyd S, et al. Child and adolescent exposure to trauma: comparative effectiveness of interventions addressing trauma other than maltreatment or family violence (Provisional abstract). Database of Abstracts of Reviews of Effects. 2013(2):1.	
Gillies 2012	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Gillies D, Taylor F, Gray C, O'Brien L, D'Abrew N. Psychological therapies for the treatment of post-traumatic stress disorder in children and adolescents. Cochrane Database of Systematic Reviews 2012, Issue 12. Art. No.: CD006726. DOI: 10.1002/14651858.CD006726.pub2.	
Goenjian 1997	Handsearch	Non-randomised group assignment	Goenjian AK, Karayan I, Pynoos RS, Minassian D, Najarian LM, Steinberg AM, Fairbanks LA. Outcome of psychotherapy among early adolescents after trauma. American Journal of Psychiatry. 1997 Apr 1;154(4):536-42.	
Haight 2012	Handsearch	Intervention not targeted at PTSD symptoms	Haight W, Black J, Sheridan K. A mental health intervention for rural, foster children from methamphetamine-involved families: Experimental	

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
			assessment with qualitative elaboration. Children and youth services review. 2010 Oct 31;32(10):1446-57.	
Harvey 2010	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Harvey ST, Taylor JE. A meta-analysis of the effects of psychotherapy with sexually abused children and adolescents. Clinical Psychology Review. 2010 Jul 31;30(5):517-35.	
Hermenau 2013	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Population not relevant for this review (to be considered for other relevant RQ)	Hermenau, K., et al. (2013). Addressing post-traumatic stress and aggression by means of narrative exposure: A randomized controlled trial with ex-combatants in the eastern DRC. Journal of Aggression, Maltreatment and Trauma 22(8): 916-934.	
Hetrick 2010	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Hetrick SE, Purcell R, Garner B, Parslow R. Combined pharmacotherapy and psychological therapies for posttraumatic stress disorder (PTSD). Cochrane Database of Systematic Reviews 2010, Issue 7. Art. No.: CD007316. DOI: 10.1002/14651858.CD007316.pub2.	
Holt 2014	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Subgroup/secondary analysis of RCT already included	Holt T, Jensen TK, Wentzel-Larsen T. The change and the mediating role of parental emotional reactions and depression in the treatment of traumatized youth: results from a randomized controlled study.	

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
			Child and adolescent psychiatry and mental health. 2014 Apr 8;8(1):11.	
Hyde 1995	Handsearch	Intervention not targeted at PTSD symptoms	Hyde C, Bentovim A, Monck E. Some clinical and methodological implications of a treatment outcome study of sexually abused children. Child Abuse & Neglect. 1995 Nov 1;19(11):1387-99.	
ISRCTN35018680	Handsearch	Unpublished (registered on clinical trials registry and author contacted for full trial report but not provided)	ISRCTN35018680. A pilot randomised clinical trial of trauma-focused cognitive behaviour therapy for posttraumatic stress disorder (PTSD) in young children aged 3-8 years (PYCES). 2013. Available from: http://www.isrctn.com/ISRCTN35018680 [accessed 11.05.2017]	
ISRCTN58027256	Handsearch	Unpublished (registered on clinical trials registry and author contacted for full trial report but not provided)	ISRCTN58027256. Identification and treatment within the Swedish Child and Adolescent Psychiatry Services of children exposed or subjected to intimate partner violence or child abuse: a randomised controlled trial. 2012. Available from: http://www.isrctn.com/ISRCTN58027256 [accessed 11.05.2017]	
Jaberghaderi 2004	2004 GL (included)	Sample size (N<10/arm)	Jaberghaderi,N., Greenwald,R., Rubin,A., Zand, S.O., Shiva Dolatabadi1, S. (2004) A Comparison of CBT and EMDR for Sexually-abused Iranian Girls.	

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
			Clinical Psychology and Psychotherapy 11, 358-368.	
Kalantari 2012	Handsearch	Population outside scope: Trials of people with traumatic grief	Kalantari M, Yule W, Dyregrov A, Neshatdoost H, Ahmadi SJ. Efficacy of writing for recovery on traumatic grief symptoms of Afghani refugee bereaved adolescents: A randomized control trial. OMEGA-Journal of death and dying. 2012 Oct;65(2):139-50.	
Kameoka 2013	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Unpublished (registered on clinical trials registry and author contacted for full trial report but not provided)	Kameoka S. Randomized controlled trial on the efficacy of the Trauma-Focused Cognitive Behavioral Therapy for children with posttraumatic stress disorder [JPRN-UMIN000010699]. Available from: https://upload.umin.ac.jp/cgi-open-bin/ctr_e/ctr_view.cgi?recptno=R000012501 [accessed 30.04.17]	
Kane 2016	RQ 1.1-1.2 & 2.1-2.2 update	Subgroup/secondary analysis that is not relevant	Kane JC, Murray LK, Cohen J, Dorsey S, Skavenski van Wyk S, Galloway Henderson J, Imasiku M, Mayeya J, Bolton P. Moderators of treatment response to trauma-focused cognitive behavioral therapy among youth in Zambia. Journal of Child Psychology and Psychiatry. 2016 Oct 1;57(10):1194-202.	
Kenardy 2012	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Unpublished (registered on clinical trials registry and author	Kenardy J. Comparison of cognitive-behavioural treatments for children with post-traumatic	

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
		contacted for full trial report but not provided)	stress disorder (PTSD) following an accidental injury: a multicentre randomised controlled trial [ISRCTN79049138]. 2012. Available from: http://www.isrctn.com/ISRCTN79049138 [accessed 30.04.17]	
Kowalik 2011	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Kowalik J, Weller J, Venter J, Drachman D. Cognitive behavioral therapy for the treatment of pediatric posttraumatic stress disorder: A review and meta-analysis. Journal of Behavior Therapy and Experimental Psychiatry. 2011 Sep 30;42(3):405-13.	
Leenarts 2013	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Leenarts LE, Diehle J, Doreleijers TA, Jansma EP, Lindauer RJ. Evidence-based treatments for children with trauma-related psychopathology as a result of childhood maltreatment: a systematic review. European child & adolescent psychiatry. 2013 May 1;22(5):269-83.	
Lenz 2015	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Lenz AS, Hollenbaugh KM. Meta-analysis of trauma-focused cognitive behavioral therapy for treating PTSD and co-occurring depression among children and adolescents. Counseling Outcome Research and Evaluation. 2015 Jun;6(1):18-32.	
McLean 2015b	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Subgroup/secondary analysis of RCT already included	McLean CP, Su YJ, Foa EB. Mechanisms of symptom reduction in a combined	

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
			treatment for comorbid posttraumatic stress disorder and alcohol dependence. Journal of consulting and clinical psychology. 2015 Jun;83(3):655.	
McLean 2017	RQ 1.1-1.2 & 2.1-2.2 update	Subgroup/secondary analysis of RCT already included	McLean CP, Su YJ, Carpenter JK, Foa EB. Changes in PTSD and depression during prolonged exposure and client-centered therapy for PTSD in adolescents. Journal of Clinical Child & Adolescent Psychology. 2017 Jul 4;46(4):500-10.	
Miller-Graff 2016	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Miller-Graff LE, Campion K. Interventions for posttraumatic stress with children exposed to violence: factors associated with treatment success. Journal of clinical psychology. 2015 Nov 1.	
Morina 2016	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Morina N, Koerssen R, Pollet TV. Interventions for children and adolescents with posttraumatic stress disorder: A meta-analysis of comparative outcome studies. Clinical Psychology Review. 2016 Jul 31;47:41-54.	
Morina 2017b	RQ 1.1-1.2 & 2.1-2.2 update	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Morina N, Malek M, Nickerson A, Bryant RA. Psychological interventions for post-traumatic stress disorder and depression in young survivors of mass violence in low-and middle-income countries: meta-analysis. The British Journal of Psychiatry. 2017 Apr 1;210(4):247-54.	

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
Murray 2015	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Efficacy or safety data cannot be extracted	Murray LK, Skavenski S, Kane JC, Mayeya J, Dorsey S, Cohen JA, Michalopoulos LT, Imasiku M, Bolton PA. Effectiveness of Trauma-Focused Cognitive Behavioral Therapy Among Trauma-Affected Children in Lusaka, Zambia: A Randomized Clinical Trial. JAMA Pediatr. 2015 Aug;169(8):761-9. doi: 10.1001/jamapediatrics.2015.0580.	
NCT00073684	Handsearch	Unpublished (registered on clinical trials.gov and author contacted for full trial report but not provided)	NCT00073684. Young Sexually Abused Children: Optimal CBT Strategies. 2003. Available from: https://clinicaltrials.gov/ct2/show/NCT00073684 [accessed 11.05.2017]	
NCT00893750	Handsearch	Dissertation	NCT00893750. Effects of Trauma-Therapy and Truth Education, Conflict Resolution and Social Skills Trainings and Traditional Ways of Coping in Northern Uganda. 2009. Available from: https://clinicaltrials.gov/ct2/show/NCT00893750 [accessed 11.05.17]	
NCT02334566	Handsearch	Unpublished (registered on clinical trials.gov and author contacted for full trial report but not provided)	NCT02334566. Lending a Hand to Our Future: Documenting, Assessing and Treating Posttraumatic Stress Disorder in Refugee Children and Youth. 2014. Available from: https://clinicaltrials.gov/ct2/show/	

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
			NCT02334566 [accessed 11.05.2017]	
NCT02402205	Handsearch	Unpublished (registered on clinical trials.gov and author contacted for full trial report but not provided)	NCT02402205. TF-CBT for Adjudicated Youth in Residential Treatment. 2015. Available from: https://clinicaltrials.gov/ct2/show/NCT02402205 [accessed 11.05.2017]	
Nenova 2013	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Nenova M, Morris L, Paul L, Li Y, Applebaum A, DuHamel K. Psychosocial interventions with cognitive-behavioral components for the treatment of cancer-related traumatic stress symptoms: a review of randomized controlled trials. J Cogn Psychother. 2013 Jan 1;27(3):258-84.	
Nixon 2012a/2017	RQ 1.1-1.2 & 2.1-2.2 (searches combined) AND RQ 1.1-1.2 & 2.1-2.2 update	Comparison outside protocol	Nixon RD, Sterk J, Pearce A. A Randomized Trial of Cognitive Behavior Therapy and Cognitive Therapy for Children with Posttraumatic Stress Disorder Following Single-Incident Trauma. Journal of Abnormal Child Psychology. 2012 Apr 1;40(3):327.	Nixon RD, Sterk J, Pearce A, Weber N. A randomized trial of cognitive behavior therapy and cognitive therapy for children with posttraumatic stress disorder following single-incident trauma: Predictors and outcome at 1-year follow-up. Psychological Trauma: Theory, Research, Practice, and Policy. 2017 Jul;9(4):471.
Ormaugh 2014	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Subgroup/secondary analysis of RCT already included	Ormhaug SM, Jensen TK, Wentzel-Larsen T, Shirk SR. The therapeutic alliance in treatment of traumatized youths: Relation to outcome in a randomized clinical trial. Journal of consulting and	

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
			clinical psychology. 2014 Feb;82(1):52.	
Parsons 2008	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Parsons TD, Rizzo AA. Affective outcomes of virtual reality exposure therapy for anxiety and specific phobias: A meta-analysis. Journal of behavior therapy and experimental psychiatry. 2008 Sep 30;39(3):250-61.	
Reynolds 2012	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Reynolds S, Wilson C, Austin J, Hooper L. Effects of psychotherapy for anxiety in children and adolescents: A meta-analytic review. Clinical psychology review. 2012 Jun 30;32(4):251-62.	
Rolfsnes 2011	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Rolfsnes ES, Idsoe T. School-based intervention programs for PTSD symptoms: A review and meta-analysis. Journal of Traumatic Stress. 2011 Apr 1;24(2):155-65.	
Salloum 2008	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Comparison outside protocol	Salloum A, Overstreet S. Evaluation of individual and group grief and trauma interventions for children post disaster. Journal of Clinical Child & Adolescent Psychology. 2008 Jul 14;37(3):495-507.	
Salloum 2014	Handsearch	Sample size (N<10/arm)	Salloum A, Robst J, Scheeringa MS, Cohen JA, Wang W, Murphy TK, Tolin DF, Storch EA. Step one within stepped care trauma-focused cognitive behavioral	

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
			therapy for young children: a pilot study. Child Psychiatry Hum Dev. 2014 Feb;45(1):65-77. doi: 10.1007/s10578-013-0378-6.	
Salloum 2015	Handsearch	Sample size (N<10/arm)	Salloum A, Small BJ, Robst J, Scheeringa MS, Cohen JA, Storch EA. Stepped and standard care for childhood trauma: A pilot randomized clinical trial. Research on Social Work Practice. 2015 Sep 24:1049731515601898.	Salloum A, Scheeringa MS, Cohen JA, Storch EA. Responder Status Criterion for Stepped Care Trauma-Focused Cognitive Behavioral Therapy for Young Children. Child Youth Care Forum. 2015 Feb;44(1):59-78.
Scheeringa 2011/Weems 2013	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Non-randomised group assignment	Scheeringa MS, Weems CF, Cohen JA, Amaya-Jackson L, Guthrie D. Trauma-focused cognitive-behavioral therapy for posttraumatic stress disorder in three-through six year-old children: A randomized clinical trial. Journal of Child Psychology and Psychiatry. 2011 Aug 1;52(8):853-60.	Weems CF, Scheeringa MS. Maternal depression and treatment gains following a cognitive behavioral intervention for posttraumatic stress in preschool children. Journal of anxiety disorders. 2013 Jan 31;27(1):140-6.
Scott 2005	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Scott RW, Mughelli K, Deas D. An overview of controlled studies of anxiety disorders treatment in children and adolescents. Journal of the National Medical Association. 2005 Jan;97(1):13.	
Silverman 2008	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Silverman WK, Ortiz CD, Viswesvaran C, Burns BJ, Kolko DJ, Putnam FW, Amaya-Jackson L. Evidence-based psychosocial treatments for children and adolescents exposed to traumatic events. Journal of Clinical Child &	

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
			Adolescent Psychology. 2008 Mar 3;37(1):156-83.	
Stallard 2006b	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Unpublished (registered on clinical trials registry and author contacted for full trial report but not provided)	Stallard P. A pilot randomised trial to determine the efficacy of early cognitive behaviour therapy (CBT) versus delayed treatment for children with significant post-traumatic reactions [ISRCTN05595708]. 2006. Available from: http://www.isrctn.com/ISRCTN05595708 [accessed 30.04.17]	
Swain 2013	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Swain J, Hancock K, Hainsworth C, Bowman J. Acceptance and commitment therapy in the treatment of anxiety: a systematic review. Clinical psychology review. 2013 Dec 31;33(8):965-78.	
Taylor 2004	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Taylor TL, Chemtob CM. Efficacy of treatment for child and adolescent traumatic stress. Archives of pediatrics & adolescent medicine. 2004 Aug 1;158(8):786-91.	
Townsend 2008	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Protocol	Townsend E, Walker DM, Sargeant S, Stocker O, Vostanis P, Sithole J, Hawton KKE. Interventions for mood and anxiety disorders, and self harm in young offenders. Cochrane Database of Systematic Reviews 2008, Issue 2. Art. No.: CD007195. DOI: 10.1002/14651858.CD007195.	

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
Trask 2011	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Trask EV, Walsh K, DiLillo D. Treatment effects for common outcomes of child sexual abuse: A current meta-analysis. Aggression and violent behavior. 2011 Feb 28;16(1):6-19.	
Tutus 2017	RQ 1.1-1.2 & 2.1-2.2 update	Efficacy or safety data cannot be extracted	Tutus D, Pfeiffer E, Rosner R, Sachser C, Goldbeck L. Sustainability of Treatment Effects of Trauma-focused Cognitive-behavioral Therapy for Children and Adolescents: Findings from 6-and 12-month Follow-ups. Psychotherapy and psychosomatics. 2017;86(6):379-81.	
UMIN000010699	Handsearch	Unpublished (registered on clinical trials registry and author contacted for full trial report but not provided)	Randomized controlled trial on the efficacy of the Trauma-Focused Cognitive Behavioral Therapy for children with posttraumatic stress disorder, https://upload.umin.ac.jp/cgi-open-bin/ctr_e/ctr_view.cgi?recptno=R000012501	

Psychological: Non-trauma-focused CBT

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
James 2015	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	James AC, James G, Cowdrey FA, Soler A, Choke A. Cognitive behavioural therapy for anxiety disorders in children and adolescents. Cochrane Database of Systematic Reviews 2015, Issue 2. Art.No.: CD004690. DOI:	

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
			10.1002/14651858.CD004690.pub4.	
March 1998	2004 GL (excluded)	Non-randomised group assignment	March, J. S., Amaya-Jackson, L., Murray, M. C., & Schulte, A. (1998). Cognitive-behavioral psychotherapy for children and adolescents with posttraumatic stress disorder after a single-incident stressor. Journal of the American Academy of Child & Adolescent Psychiatry, 37, 585-593.	
Mitchell 2011	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Intervention not targeted at PTSD symptoms	Mitchell P, Smedley K, Kenning C, McKee A, Woods D, Rennie CE, Bell RV, Aryamanesh M, Dolan M. Cognitive behaviour therapy for adolescent offenders with mental health problems in custody. Journal of adolescence. 2011 Jun 30;34(3):433-43.	
Schaeffer 2013	Handsearch	Intervention not targeted at PTSD symptoms	Schaeffer, C., Swenson, C., Tuerk, E. and Henggler, S. (2013) Comprehensive treatment for co-occurring child maltreatment and parental substance abuse: Outcomes from a 24-month pilot study of the MST-Building Stronger Families program, Child Abuse and Neglect, 37, 596-607	

Psychological: Behavioural therapy

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
Berliner 1996	2004 GL (excluded)	Intervention not targeted at PTSD symptoms	Berliner L, Saunders BE. Treating fear and anxiety in sexually	

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
			abused children: Results of a controlled 2-year follow-up study. Child maltreatment. 1996 Nov 1;1(4):294-309	
Lustig 2008	Handsearch	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Lustig, S., Tennakoon, L. (2008) Testimonials, narratives, stories and drawings: child refugees as witnesses, Child and Adolescent Psychiatric Clinics of North America, 17, 569-584	
Macfarlane 1986	Handsearch	Book Section	MacFarlane K, Cunningham C (1986), Steps to H~althy Touching. Mt Dora, FL: Kidsrights	Cohen, J., Bernet, W., Dunne, J., Adair, M., Arnold, V., Benson, R., Bukstein, O., Kinlan, J., McClellan, J., Rue, D. & Sloan, E. (1998) Practice parameters for the assessment and treatment of children and adolescents with posttraumatic stress disorder, Journal of the American Academy of Child and Adolescent Psychiatry, 37,

Psychological: Psychologically-focused debriefing

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
Pynoos 1988	Handsearch	Commentary	Pyno os RS, Nader K (1988), Psychological first aid and treatment approach to child ren exposed to community violence: research implications, Trauma Stress 1:445 - 473	Cohen, J., Bernet, W., Dunne, J., Adair, M., Arnold, V., Benson, R., Bukstein, O., Kinlan, J., McClellan, J., Rue, D. & Sloan, E. (1998) Practice parameters for the assessment and treatment of children and adolescents with posttraumatic stress disorder, Journal of the American Academy of Child and Adolescent Psychiatry, 37,

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
Thabet 2005	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Non-randomised group assignment	Thabet AA, Vostanis P, Karim K. Group crisis intervention for children during ongoing war conflict. European Child & Adolescent Psychiatry. 2005 Aug 1;14(5):262-9.	

Psychological: Eye movement desensitisation and reprocessing (EMDR)

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
Field 2011	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Field A, Cottrell D. Eye movement desensitization and reprocessing as a therapeutic intervention for traumatized children and adolescents: a systematic review of the evidence for family therapists. Journal of Family Therapy. 2011 Nov 1;33(4):374-88.	
Greyber 2012	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Greyber LR, Dulmus CN, Cristalli ME. Eye movement desensitization reprocessing, posttraumatic stress disorder, and trauma: A review of randomized controlled trials with children and adolescents. Child and Adolescent Social Work Journal. 2012 Oct 1;29(5):409-25.	
Hassanzadeh Moghaddam 2016	Handsearch	Intervention not targeted at PTSD symptoms	Hassanzadeh Moghaddam M, Khalatbari J. Investigating the Effectiveness of Eye Movement Desensitization and Reprocessing (EMDR) on Children with Post-Traumatic Stress Disorder (Traffic	

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
			Accident). The International Journal of Indian Psychology, Volume 3, Issue 3, No. 11. 2016 Jun 29:45.	
Kemp 2010	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Efficacy or safety data cannot be extracted	Kemp M, Drummond P, McDermott B. A wait-list controlled pilot study of eye movement desensitization and reprocessing (EMDR) for children with post-traumatic stress disorder (PTSD) symptoms from motor vehicle accidents. Clinical child psychology and psychiatry. 2010 Jan 1;15(1):5-25.	
Rodenburg 2009	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Rodenburg R, Benjamin A, de Roos C, Meijer AM, Stams GJ. Efficacy of EMDR in children: A meta-analysis. Clinical Psychology Review. 2009 Nov 30;29(7):599-606.	
Roos 2013	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Unpublished (registered on clinical trials registry and author contacted for full trial report but not provided)	Roos C. A Randomized Comparison of Eye Movement Desensitization and Reprocessing (EMDR) and Cognitive Behavioral Writing Therapy (CBWT) in pediatric posttraumatic stress disorder following single- incident trauma [NTR3870]. 2013. Available from: http://www.trialregister.nl/trialreg/admin/rctview.asp?TC=3870 [accessed 30.04.17]	
Rubin 2001	Handsearch	Intervention not targeted at PTSD symptoms	Rubin A, Bischofshausen S, Conroy-Moore K, Dennis B, Hastie M, Melnick L, Reeves D, Smith T. The effectiveness of	

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
			EMDR in a child guidance center. Research on Social Work Practice. 2001 Jul;11(4):435-57.	
Verardo 2017	RQ 1.1-1.2 & 2.1-2.2 update	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Verardo AR, Cioccolanti E. TRAUMATIC EXPERIENCES AND EMDR IN CHILDHOOD AND ADOLESCENCE. A REVIEW OF THE SCIENTIFIC LITERATURE ON EFFICACY STUDIES. Clinical Neuropsychiatry. 2017 Oct 1(5).	

Psychological: Hypnotherapy

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
Lesmana 2009	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Intervention outside protocol	Lesmana CB, Suryani LK, Jensen GD, Tiliopoulos N. A spiritual-hypnosis assisted treatment of children with PTSD after the 2002 Bali terrorist attack. American Journal of Clinical Hypnosis. 2009 Jul 1;52(1):23-34.	

Psychological: Psychodynamic therapies

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
Gaensbauer 1994	Handsearch	Non-RCT (no control group)	Gaensbauer TJ (1994) . Therapeutic work with a traumatized toddler. Psycboanal StudyChild 49:412-433	Cohen, J., Bernet, W., Dunne, J., Adair, M., Arnold, V., Benson, R., Bukstein, O., Kinlan, J., McClellan, J., Rue, D. & Sloan, E. (1998) Practice parameters for the assessment and treatment of children and adolescents with posttraumatic

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
				stress disorder, Journal of the American Academy of Child and Adolescent Psychiatry, 37,
Trowell 2002	2004 GL (included)	Comparison outside protocol	Trowell, J., Kolvin, I., Weeramanthri, T., Sadowski, H., Berelowitz, M., Glaser, D. et al. (2002). Psychotherapy for sexually abused girls: psychopathological outcome findings and patterns of change. Br.J Psychiatry, 180, 234-247.	

Psychological: Psychoeducation

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
Adler-Nevo 2005	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Adler-Nevo G, Manassis K. Psychosocial treatment of pediatric posttraumatic stress disorder: the neglected field of single-incident trauma. Depression and Anxiety. 2005 Jan 1;22(4):177-89.	
Ager 2011	Handsearch	Outcome measures are not validated	Ager A, Akesson B, Stark L, Flouri E, Okot B, McCollister F, Boothby N. The impact of the school-based Psychosocial Structured Activities (PSSA) program on conflict-affected children in northern Uganda. Journal of Child Psychology and Psychiatry. 2011 Nov 1;52(11):1124-33.	
Kazdin 2002	2004 GL (excluded)	Commentary	Kazdin A.(2002) Comment on a school based psychosocial intervention was effective in children with persistent post-	

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
			disaster trauma symptoms.) Evid Based Ment Health. 2002 Aug;5(3):76.	
NCT00751946	Handsearch	Unpublished (registered on clinical trials.gov and author contacted for full trial report but not provided)	NCT00751946. Girls In Recovery From Life Stress (GIRLS) Study. 2008. Available from: https://clinicaltrials.gov/ct2/show/NCT00751946 [accessed 11.05.2017]	
Peltonen 2012	Handsearch	Non-randomised group assignment	Peltonen K, Qouta S, El Sarraj E, Punamäki RL. Effectiveness of school-based intervention in enhancing mental health and social functioning among war-affected children. Traumatology. 2012 Dec;18(4):37-46.	
Salloum 2012	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Comparison outside protocol	Salloum A, Overstreet S. Grief and trauma intervention for children after disaster: Exploring coping skills versus trauma narration. Behaviour research and therapy. 2012 Mar 31;50(3):169-79.	
Santacroce 2010	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Sample size (N<10/arm)	Judge Santacroce S, Asmus K, Kadan-Lottick N, Grey M. Feasibility and preliminary outcomes from a pilot study of coping skills training for adolescent—Young adult survivors of childhood cancer and their parents. Journal of pediatric oncology nursing. 2010 Jan;27(1):10-20.	

Psychological: Counselling

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
Lowenstein 1995	Handsearch	Commentary	Lowenstein LB (1995), The resolution scrapbook as an aid in the treatment of traumatized children. Child ~/far~ 74:899- 904	Cohen, J., Bernet, W., Dunne, J., Adair, M., Arnold, V., Benson, R., Bukstein, O., Kinlan, J., McClellan, J., Rue, D. & Sloan, E. (1998) Practice parameters for the assessment and treatment of children and adolescents with posttraumatic stress disorder, Journal of the American Academy of Child and Adolescent Psychiatry, 37,
Schauer 2005/2011	Handsearch	Book Section	Schauer M, Neuner F, Elbert T (2005/2011): Narrative Exposure Therapy. A Short-Term Intervention for Traumatic Stress Disorders. 2nd Ed. Cambridge/ Göttingen: Hogrefe & Huber Publishers	
Sullivan 1994	Handsearch	Commentary	Sullivan JM, Evans K (1994), Integrated treatment for the survivor of childhood trauma who is chemically dependent. } Psycboactiue Drugs 26:369-378	Cohen, J., Bernet, W., Dunne, J., Adair, M., Arnold, V., Benson, R., Bukstein, O., Kinlan, J., McClellan, J., Rue, D. & Sloan, E. (1998) Practice parameters for the assessment and treatment of children and adolescents with posttraumatic stress disorder, Journal of the American Academy of Child and Adolescent Psychiatry, 37,

Psychological: Self-help (without support)

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
Pennant 2015	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Pennant ME, Loucas CE, Whittington C, Creswell C, Fonagy P, Fuggle P, Kelvin R, Naqvi S, Stockton S, Kendall T, Group EA. Computerised therapies for anxiety and depression in children and young people: A systematic review and meta-analysis. Behaviour research and therapy. 2015 Apr 30;67:1-8.	

Psychological: Parent training/family interventions

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
Saxe 2012	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Efficacy or safety data cannot be extracted	Saxe, G. N., Heidi Ellis, B., Fogler, J., Navalta, C. P. (2012) Innovations in Practice: Preliminary evidence for effective family engagement in treatment for child traumatic stress-trauma systems therapy approach to preventing dropout, Child and Adolescent Mental Health, 17, 58-61	

Psychosocial: Art therapy

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
Brillantes - Evangelista 2013	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Non-randomised group assignment	Brillantes-Evangelista G. An evaluation of visual arts and poetry as therapeutic interventions with abused adolescents. The Arts in	

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
			Psychotherapy. 2013 Feb 28;40(1):71-84.	
Raider 2008	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Sample size (N<10/arm)	Raider MC, Steele W, Delillo-Storey M, Jacobs J, Kuban C. Structured sensory therapy (SITCAP-ART) for traumatized adjudicated adolescents in residential treatment. Residential Treatment for Children & Youth. 2008 Sep 4;25(2):167-85.	
Schreier 2005	Handsearch	Efficacy or safety data cannot be extracted	Schreier H, Ladakakos C, Morabito D, Chapman L, Knudson MM. Posttraumatic stress symptoms in children after mild to moderate pediatric trauma: a longitudinal examination of symptom prevalence, correlates, and parent-child symptom reporting. Journal of Trauma and Acute Care Surgery. 2005 Feb 1;58(2):353-63.	

Psychosocial: Music therapy

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
Baker 2006	Handsearch	Non-randomised group assignment	Baker F, Jones C. The effect of music therapy services on classroom behaviours of newly arrived refugee students in Australia—a pilot study. Emotional and Behavioural Difficulties. 2006 Dec 1;11(4):249-60.	

Psychosocial: Meditation

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
Hartmann 2012	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Systematic review with no new useable data and any meta-analysis results not appropriate to extract	Hartmann F, Vlieger AM. Effects of mind–body therapies in children. Focus on Alternative and Complementary Therapies. 2012 Jun 1;17(2):91-6.	
NCT00202709	Handsearch	Population outside scope: <80% of the study's participants are eligible for the review and disaggregated data cannot be obtained	NCT00202709. Can Thought Field Therapy (TFT) be Helpful for Patients With an Anxiety Disorder, a Prospective, Randomized Pilot Study With Wait List as Control Group. Available from: https://clinicaltrials.gov/ct2/show/NCT00202709 [accessed 14/06/17]	
NCT01595477	Handsearch	Unpublished (registered on clinical trials.gov and author contacted for full trial report but not provided)	NCT01595477. A Randomized Controlled Study of Mind-Body Skills Groups for the Treatment of War-Related Trauma in Children in Gaza. 2012. Available from: https://clinicaltrials.gov/ct2/show/NCT01595477 [accessed 11.05.2017]	
NCT01595490	Handsearch	Unpublished (registered on clinical trials.gov and author contacted for full trial report but not provided)	NCT01595490. A Randomized Controlled Study of Mind-Body Skills Groups for the Treatment of War-Related Trauma in Adolescents in Gaza. 2012. Available from: https://clinicaltrials.gov/ct2/show/NCT01595490 [accessed 11.05.2017]	

Psychosocial: Peer support

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
Fantuzzo 1996	Handsearch	Intervention not targeted at PTSD symptoms	Fantuzzo J, Sutton-Smith B, Atkins M, Meyers R, Stevenson H, Coolahan K, Weiss A, Manz P. Community-based resilient peer treatment of withdrawn maltreated preschool children. Journal of Consulting and Clinical Psychology. 1996 Dec;64(6):1377.	
Fantuzzo 2005	Handsearch	Intervention not targeted at PTSD symptoms	Fantuzzo J, Manz P, Atkins M, Meyers R. Peer-mediated treatment of socially withdrawn maltreated preschool children: Cultivating natural community resources. Journal of Clinical Child and Adolescent Psychology. 2005 May 1;34(2):320-5.	
Hardin 2002	2004 GL (excluded)	Efficacy or safety data cannot be extracted	Hardin, S.B. Weinrich, S.; Weinrich, M.; Garrison, C.; Addy, C. & Hardin, T.L. (2002) Effects of long-term psychological nursing intervention on adolescents exposed to catastrophic stress. Issues in Mental Health Nursing, 23:537-551	
Shechtman 2010	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Efficacy or safety data cannot be extracted	Shechtman Z, Mor M. Groups for children and adolescents with trauma-related symptoms: outcomes and processes. International journal of group psychotherapy. 2010 Apr;60(2):221-44.	

Psychosocial: Psychoeducational interventions

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
Ager 2011	Handsearch	Outcome measures are not validated	Ager A, Akesson B, Stark L, Flouri E, Okot B, McCollister F, Boothby N. The impact of the school-based Psychosocial Structured Activities (PSSA) program on conflict-affected children in northern Uganda. Journal of Child Psychology and Psychiatry. 2011 Nov 1;52(11):1124-33.	
Kazdin 2002	2004 GL (excluded)	Commentary	Kazdin A.(2002) Comment on a school based psychosocial intervention was effective in children with persistent post-disaster trauma symptoms.) Evid Based Ment Health. 2002 Aug;5(3):76.	

Other non-pharmacological: Massage

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
Field 1996	2004 GL (excluded)	Efficacy or safety data cannot be extracted	Field, T., Seligman, S., Scafidi, F., & Schanberg, S. (1996). Alleviating posttraumatic stress in children following Hurricane Andrew. Journal of Applied Developmental Psychology, 17, Jan-Mar.	

Economic studies

No economic or utility studies were reviewed at full text and excluded from this review.

Appendix L – Research recommendations

Research recommendations for "For children and young people with clinically important post-traumatic stress symptoms, what are the relative benefits and harms of psychological, psychosocial or other non-pharmacological interventions targeted at PTSD symptoms?"

No research recommendations were made for this review question.

Appendix M – Network Meta-Analysis: inconsistency checks

TSU, Bristol (Caitlin Daly and Sofia Dias)

Introduction

The purpose of this analysis was to critically assess the network meta-analysis (NMA) models used to estimate the comparative effectiveness of interventions for treating post-traumatic stress disorder (PTSD) in children and young people. The outcomes included in this analysis were 1) differences in PTSD symptoms recorded at baseline and end of treatment, 2) differences in PTSD symptoms recorded at baseline and 3-month follow-up, and 3) remission of PTSD.

Methods of network meta-analysis

Conversion of Results Synthesized on Continuous Scale

The economic model required probabilities of effect, which were informed by studies reporting continuous measures. To obtain these probabilities for the continuous outcomes, i.e. 1) differences in PTSD symptoms recorded at baseline and end of treatment and 2) differences in PTSD symptoms recorded at baseline and 3-month follow-up, the results of the evidence synthesis on the standardized mean difference (SMD) scale had to be transformed to a dichotomous scale. The log-odds ratio (LOR) of effect can be related to a notional SMD for effect using the formula (Chin, 2000; Higgins & Green, 2011):

$$LOR_{ck} = -\frac{\pi}{\sqrt{3}} SMD_{ck} \quad (1)$$

noting the change in sign to retain the interpretation of a positive LOR favouring treatment k.

The LORs were obtained by transforming the pooled treatment effects from the SMD scale using Equation (1).

Model Critique

When considering models for network meta-analysis (NMA), there are several aspects of the data that will impact the choice of parameters included in the model. Two important assumptions must be made in NMA regarding heterogeneity and consistency. Heterogeneity concerns the differences in treatment effects between trials within each treatment contrast, while consistency concerns the differences between the direct and indirect evidence informing the treatment contrasts (Dias 2011b & 2013b).

A fixed effect NMA model is the simplest model available to estimate the effects of interventions separately while simultaneously synthesizing all available evidence. This model assumes no heterogeneity between trials within each treatment contrast. In other words, all trials are estimating the same treatment effect, regardless of any differences in the conduct of the trials, populations, or treatments (i.e., administration or dose). If this assumption is unreasonable, then a random effects NMA model may be considered. This model accounts for any differences in treatment effects between trials that are beyond chance through measures such as the between-study standard deviation. When critiquing NMA models, it is

good practice to assess and compare the fit of both fixed and random effects models, as differences may provide evidence of potential between-study heterogeneity.

Inconsistency was assessed by comparing the chosen consistency model (fixed or random effects) to an "inconsistency", or unrelated mean effects, model (Dias 2011b & 2013b). The latter is equivalent to having separate, unrelated, meta-analyses for every pairwise contrast, with a common variance parameter assumed in the case of random effects models. Note that inconsistency can only be assessed when there are closed loops of direct evidence on 3 treatments that are informed by at least 3 distinct trials (van Valkenhoef 2016).

The posterior mean of the residual deviance, which measures the magnitude of the differences between the observed data and the model predictions of the data, was used to assess the goodness of fit of each model (Spiegelhalter 2002). Smaller values are preferred, and in a well-fitting model the posterior mean residual deviance should be close to the number of data points in the network (each study arm contributes 1 data point) (Spiegelhalter 2002).

In addition to comparing how well the models fit the data using the posterior mean of the residual deviance, models were compared using the deviance information criterion (DIC). This is equal to the sum of the posterior mean deviance and the effective number of parameters, and thus penalizes model fit with model complexity (Spiegelhalter 2002). Lower values are preferred and typically differences of at least 3 points are considered meaningful (Spiegelhalter 2002).

The posterior mean between-study standard deviation, which measures the heterogeneity of treatment effects estimated by trials within contrasts, was also used to compare models. When comparing fixed and random effects models, it is important to assess whether there is enough evidence informing the between-study standard deviation. This was done by comparing the prior and posterior distributions of the between-study standard deviation. In addition, the magnitude of heterogeneity was considered. When comparing consistency and inconsistency models, if the inconsistency model has meaningfully smaller heterogeneity, then this indicates potential inconsistency in the data.

We performed further checks for evidence of inconsistency through node-splitting using the *gemtc* package in R (Dias 2010, 2011b & 2013b, van Valkenhoef 2016). This method permits the direct and indirect evidence contributing to an estimate of a relative effect to be split and compared (Dias 2010 & 2011b). To apply the node splitting method to the two continuous outcomes ('differences in PTSD symptoms recorded at baseline and end of treatment' and 'differences in PTSD symptoms recorded at baseline and 3-month follow-up') using the *gemtc* package, data were inputted at contrast level, where the SMDs of the treatment in arm *k* compared to the treatment in arm 1 for study *i* were calculated as

$$SMD_{ik} = \frac{\bar{x}_{ik} - \bar{x}_{i1}}{SD_{pooled_i}}, \quad SD_{pooled_i} = \begin{cases} \sqrt{\dfrac{(n_{i1}-1)sd_{i1}^2 + (n_{i2}-1)sd_{i2}^2}{n_{i1}+n_{i2}-2}} & \text{2-arm trial} \\ \sqrt{\dfrac{(n_{i1}-1)sd_{i1}^2 + (n_{i2}-1)sd_{i2}^2 + (n_{i3}-1)sd_{i3}^2}{n_{i1}+n_{i2}+n_{i3}-3}} & \text{3-arm trial} \end{cases}$$

with standard error

$$SE\left(SMD_{ik}\right)=\sqrt{Var\left(SMD_{ik}\right)}\approx\begin{cases}\sqrt{\frac{1}{n_{i1}}+\frac{1}{n_{i2}}+\frac{SMD_{ik}^2}{2\left(n_{i1}+n_{i2}-2\right)}} & \text{2-arm trial}\\ \sqrt{\frac{1}{n_{i1}}+\frac{1}{n_{ik}}+\frac{SMD_{ik}^2}{2\left(n_{i1}+n_{i2}+n_{i3}-3\right)}} & \text{3-arm trial}\end{cases}$$

For trials with more than two arms, the *gemtc* package requires specification of the standard error of the mean of the baseline arm, as this determines the covariance of the differences. On a standardized scale, this is calculated as (Dias 2018):

$$se_{i1_{\text{standardized}}}=\frac{sd_{i1}}{SD_{pooled_i}\sqrt{n_{i1}}}\quad .$$

Results

Outcome: Differences in PTSD symptoms recorded at baseline and end of treatment

Evidence on 17 interventions from 29 trials reporting the mean difference, standard deviation, and sample size across all intervention arms for this outcome was synthesized using NMA code provided by Dias for continuous data (Figure 188) (Dias 2018). Convergence was satisfactory for both fixed and random effects models (which assumed consistency) after 40,000 iterations, and the models were compared using results based on samples from a further 80,000 iterations on two chains. Large between trial heterogeneity was observed relative to the size of the intervention effect estimates (τ (95% CrI) = 0.58 (0.37 – 0.89)) and the random effects model provided a better fit over the fixed effect model (Table 56).

Figure 188: Network diagram of comparisons for which direct evidence on differences in PTSD symptoms recorded at baseline and end of treatment was available.

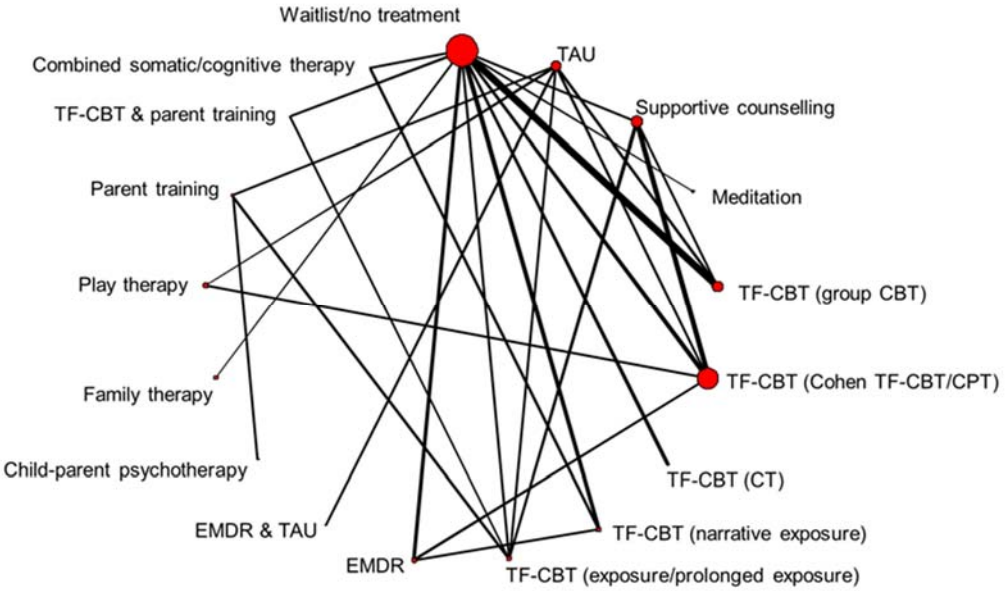


Table 56: Model fit statistics: differences in PTSD symptoms recorded at baseline and end of treatment

Model	Between Study Heterogeneity - Standard Deviation (95% CrI)	Residual deviance[a]	DIC[b]
Fixed effect - consistency	-	142.2	340.17
Random effects - consistency	0.58 (0.37 – 0.89)	63.01	275.27
Random effects - inconsistency	0.73 (0.44 – 1.21)	63.05	277.32

[a] Posterior mean residual deviance compared to 63 total data points
[b] Deviance information criteria (DIC) – lower values preferred

Since there were closed loops of direct evidence within the network that were informed by at least 3 distinct sets of trials, inconsistency checks were possible for this outcome. As the random effects model was preferred, a random effects inconsistency model was run. Convergence was satisfactory for this model after 40,000 iterations, and the consistency and inconsistency models were compared using results based on samples from a further 80,000 iterations on two chains. The WinBUGS code for the inconsistency model is provided in Appendix O.

No evidence of inconsistency was found through comparison of the consistency and inconsistency random effects models, as little difference was observed between the fit of the models (Table 56). The area below the line of equality in Figure 189 highlights where the inconsistency model better predicted data points, and the improvements were minimal. The additional parameters in the inconsistency model, which eliminates variation between treatment contrasts, did not result in a decrease in the between-study heterogeneity (Table 56). Further checks for inconsistency using the node-splitting method (random effects model) did not find any evidence of inconsistency between the direct and indirect estimates (Table 57, Figure 190).

Figure 189: Deviance contributions for the random effects consistency and inconsistency models: differences in PTSD symptoms recorded at baseline and end of treatment

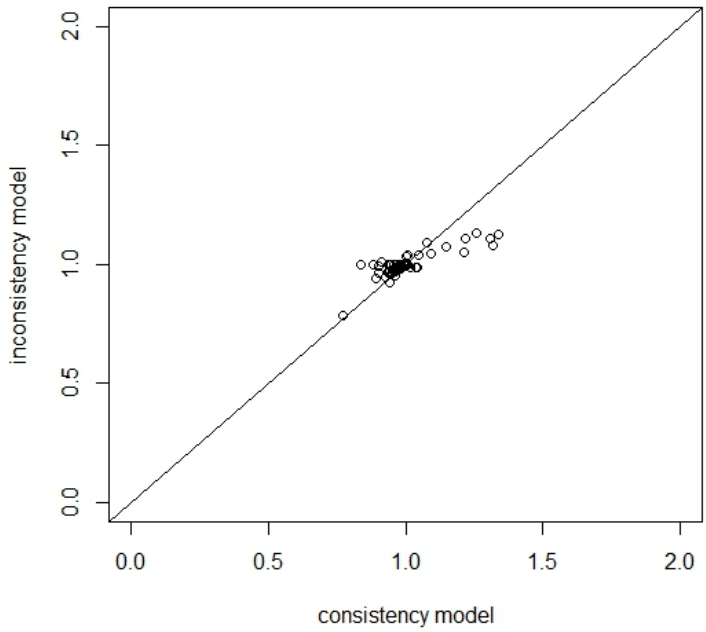
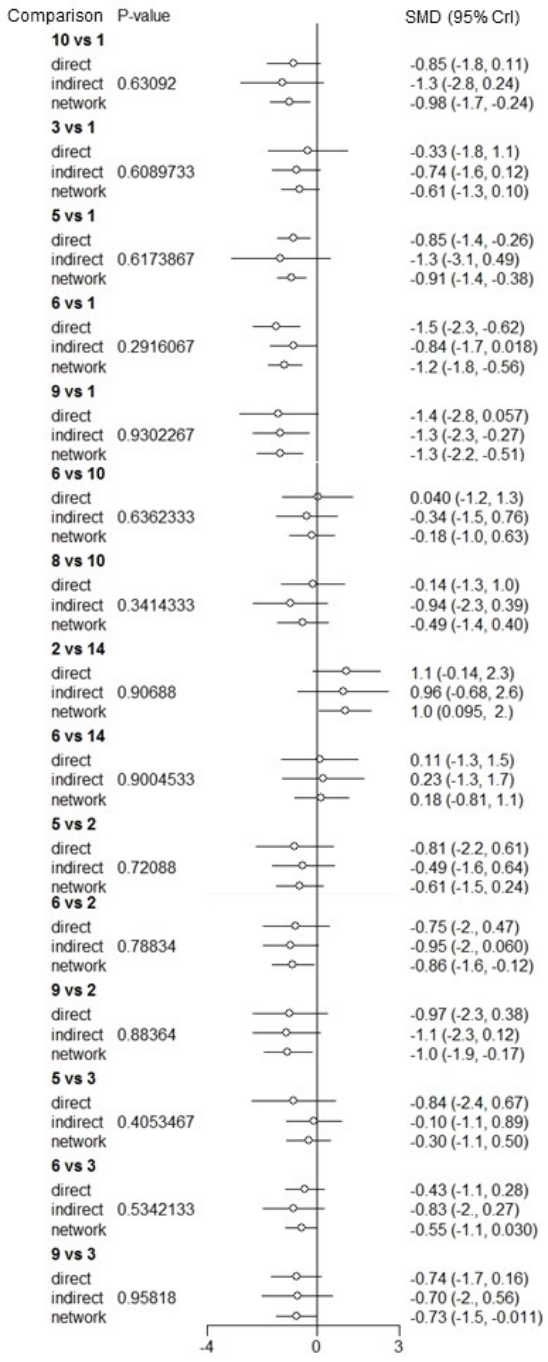


Table 57: Summary of node-splitting results: differences in PTSD symptoms recorded at baseline and end of treatment

Node split model	Heterogeneity (SD)		Residual deviance	Data points[a]	p-value[b]
	Median	95% CrI			
EMDR vs. Waitlist / no treatment	0.56	(0.35, 0.93)	33.36	33	0.63
Supportive counselling vs. Waitlist / no treatment	0.55	(0.34, 0.91)	33.6	33	0.61
TF-CBT (group CBT) vs. Waitlist / no treatment	0.55	(0.34, 0.92)	33.5	33	0.62
TF-CBT (Cohen TF-CBT / cognitive processing therapy) vs. Waitlist / no treatment	0.53	(0.33, 0.87)	34.04	34	0.29
TF-CBT (exposure/prolonged exposure) vs. Waitlist / no treatment	0.54	(0.33, 0.89)	33.55	33	0.93
TF-CBT (Cohen TF-CBT / cognitive processing therapy) vs. EMDR	0.54	(0.33, 0.89)	34.38	34	0.64
TF-CBT (narrative exposure) vs. EMDR	0.52	(0.31, 0.87)	33.3	33	0.34
TAU vs. Play therapy	0.55	(0.34, 0.89)	34.38	34	0.91
TF-CBT (Cohen TF-CBT / cognitive processing therapy) vs. Play therapy	0.55	(0.34, 0.89)	34.39	34	0.90
TF-CBT (group CBT) vs. TAU	0.54	(0.33, 0.89)	34.51	34	0.72
TF-CBT (Cohen TF-CBT / cognitive processing therapy) vs. TAU	0.55	(0.34, 0.89)	34.34	34	0.79
TF-CBT (exposure/prolonged exposure) vs. TAU	0.54	(0.33, 0.9)	33.42	33	0.88
TF-CBT (group CBT) vs. Supportive counselling	0.55	(0.34, 0.91)	33.58	33	0.41

TF-CBT (Cohen TF-CBT / cognitive processing therapy) vs. Supportive counselling	0.54	(0.33, 0.88)	34.28	34	0.53
TF-CBT (exposure/prolonged exposure) vs. Supportive counselling	0.54	(0.33, 0.89)	34.48	34	0.96
NMA (no nodes split)	0.52	(0.32, 0.85)	34.39	34	---
[a] Number of data points to compare posterior mean residual deviance to [b] p-values < 0.05 is indicative of evidence of inconsistency between the direct and indirect estimates					

Figure 190: Direct, indirect, and network estimates of relative treatment effects based on node-splitting results: differences in PTSD symptoms recorded at baseline and end of treatment



Treatments codes: 1 - Waitlist / no treatment, 2 – TAU, 3 - Supportive counselling, 4 – Meditation, 5 - TF-CBT (group CBT), 6 - TF-CBT (Cohen TF-CBT / cognitive processing therapy), 7 - TF-CBT (CT), 8 - TF-CBT (narrative exposure), 9 - TF-CBT (exposure/prolonged exposure), 10 – EMDR, 11 - EMDR & TAU, 12 - Child-parent psychotherapy, 13 - Family therapy, 14 - Play therapy, 15 - Parent training, 16 - TF-CBT & parent training, 17 - Combined somatic/cognitive therapy

In addition to the relative treatment effects estimated through NMA, we present direct and indirect estimates in the "Change Score_Endpoint" worksheet in the "Supplementary File to Evidence Report [B] Appendix M" Excel file. The direct and indirect estimates are reported based on results given by the node-split models. All NMA estimates are reported based on the results from the random effects model that assumes consistency (Dias 2011a & 2013a).

Outcome: Differences in PTSD symptoms recorded at baseline and 3-month follow-up

Evidence on 12 interventions from 10 trials reporting the mean difference, standard deviation, and sample size across all intervention arms for this outcome was synthesised using NMA code for continuous data (Dias 2018). The network diagram is shown in Figure 191. Convergence was satisfactory for both fixed and random effects models (which assumed consistency) after 60,000 iterations, and the models were compared using results based on samples from a further 120,000 iterations on two chains. Large between trial heterogeneity was observed relative to the size of the intervention effect estimates (τ (95% CrI) = 0.97 (0.30 – 2.69)). However, the distribution of the posterior between-study standard deviation suggests the prior distribution (Uniform(0,5)) has some influence on the estimate of heterogeneity (Figure 192). A sensitivity analysis with an informative prior should be conducted to assess whether this has an impact on the final results. Nevertheless, the random effects model provided a better fit over the fixed effect model (Table 58).

Figure 191: Network diagram of comparisons for which direct evidence on differences in PTSD symptoms recorded at baseline and 3-month follow-up was available.

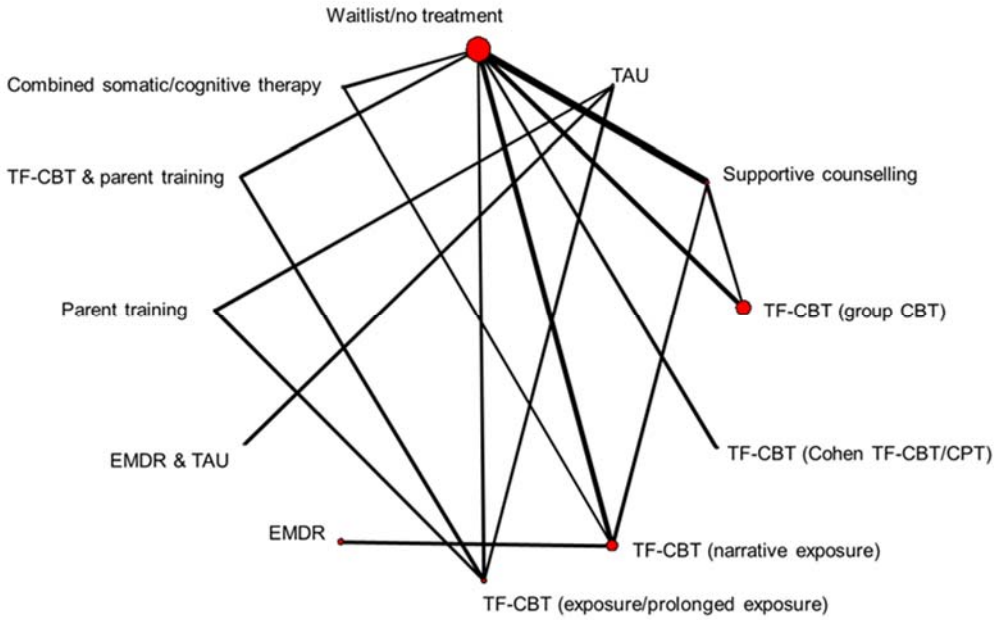


Figure 192: Density plot of the between-study standard deviation: differences in PTSD symptoms recorded at baseline and 3-month follow-up

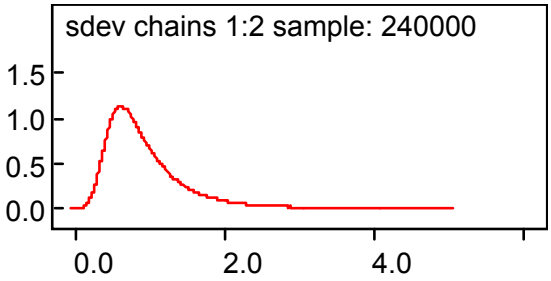


Table 58: Model fit statistics: differences in PTSD symptoms recorded at baseline and 3-month follow-up

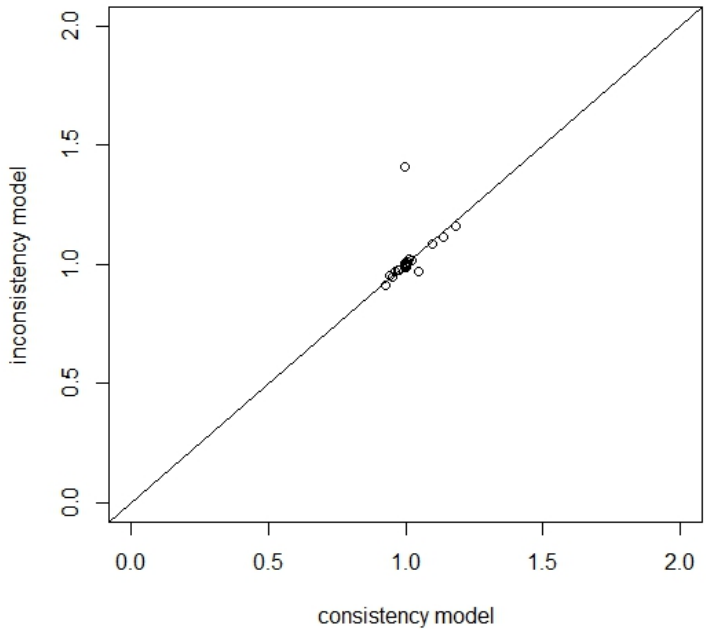
Model	Between Study Heterogeneity – Standard Deviation (95% CrI)	Residual deviance[a]	DIC[b]
Fixed effect – consistency	-	41.51	128.18
Random effects – consistency	0.97 (0.30 – 2.69)	25.22	115.57
Random effects – inconsistency	0.90 (0.28 – 2.47)	25.11	115.39
[a] Posterior mean residual deviance compared to 25 total data points [b] Deviance information criteria (DIC) – lower values preferred			

Since there were closed loops of direct evidence within the network that were informed by at least 3 distinct sets of trials, inconsistency checks were possible for this outcome. As the random effects model was preferred, a random effects inconsistency model was run. Convergence was satisfactory for this model after 60,000 iterations, and the consistency and

inconsistency models were compared using results based on samples from a further 120,000 iterations on two chains. The WinBUGS code for the inconsistency model is provided in Appendix O.

There were no meaningful differences between posterior mean residual deviance of the consistency and inconsistency random effects models (Table 58, Figure 193). The inconsistency model provided poorer prediction for one data point compared to the consistency model (Figure 193). The inconsistency model has slightly smaller between-study heterogeneity than the consistency model, although this was still large (Table 58). However, as previously noted, the between-study heterogeneity is poorly estimated from the data, and results should be interpreted with caution.

Figure 193: Deviance contributions for the random effects consistency and inconsistency models: differences in PTSD symptoms recorded at baseline and 3-month follow-up



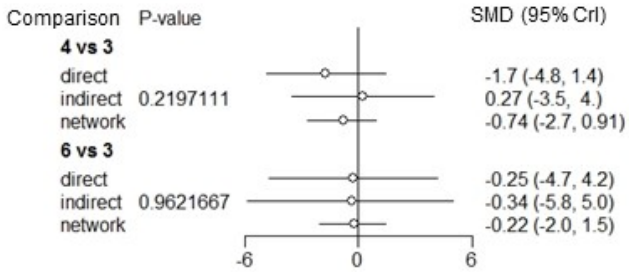
Further checks for inconsistency using the node-splitting method (random effects model) did not find any evidence of inconsistency between the direct and indirect estimates (Table 59, Figure 194). In addition to the relative treatment effects estimated through NMA, we present direct and indirect estimates in the "Change Score_Follow up" worksheet of the "Supplementary File to Evidence Report [B] Appendix M" Excel file. The direct and indirect estimates are reported based on results given by the node-split models. All NMA estimates are reported based on the results from the random effects model that assumes consistency (Dias 2011a & 2013a). There is considerable uncertainty in the results of treatment effect estimates, and this is due to the small size of the included studies, the small total number of studies, and the large heterogeneity that is present. Thus, caution should be exercised when interpreting the results.

Table 59: Summary of node-splitting results: differences in PTSD symptoms recorded at baseline and 3-month follow-up

Node split model	Heterogeneity (SD)			p-value[b]

	median	95% CrI	Residual deviance	Data points[a]	
TF-CBT (group CBT) vs. Supportive counselling	0.72	(0.09, 3.92)	14.17	14	0.22
TF-CBT (narrative exposure) vs. Supportive counselling	1.44	(0.35, 4.50)	14.21	14	0.96
NMA (no nodes split)	0.74	(0.22, 2.62)	15.46	15	---
[a]Number of data points to compare posterior mean residual deviance to [b]p-values < 0.05 is indicative of evidence of inconsistency between the direct and indirect estimates					

Figure 194: Direct, indirect, and network estimates of relative treatment effects based on node-splitting results: differences in PTSD symptoms recorded at baseline and 3-month follow-up



Treatment codes: 1 - Waitlist / no treatment, 2 - TAU, 3 - Supportive counselling, 4 - TF-CBT (group CBT), 5 - TF-CBT (Cohen TF-CBT / cognitive processing therapy), 6 - TF-CBT (narrative exposure), 7 - TF-CBT (exposure/prolonged exposure), 8 – EMDR, 9 - EMDR & TAU, 10 - Parent training, 11 - TF-CBT & parent training, 12 - Combined somatic/cognitive therapy

Outcome: Remission

Evidence on 7 interventions from 9 trials reporting the number of participants who achieved remission from PTSD and sample size across all intervention arms for this outcome was synthesized using the NMA code provided by Dias and colleagues for binary data (Dias 2011a & 2013a). The network of evidence is shown in Figure 195. Convergence was satisfactory for both fixed and random effects models (which assumed consistency) after 40,000 iterations, and the models were compared using results based on samples from a further 80,000 iterations on two chains.

Large between trial heterogeneity was observed relative to the size of the intervention effect estimates (τ (95% CrI) = 0.65 (0.03 – 1.80)). However, the distribution of the posterior between-study standard deviation suggests the prior distribution (Uniform(0,2)) has a heavy influence on the estimate of heterogeneity (Figure 196). This is because there is very little evidence to inform the between-study heterogeneity. A sensitivity analysis with an informative prior should be conducted to assess whether this has an impact on the final results. Nevertheless, the fixed and random effects models both provided good fit and no meaningful differences were observed between the fit of both models (Table 60). Therefore, the simpler, fixed effect model was chosen.

Figure 195: Network diagram of comparisons for which direct evidence on remission from PTSD was available: remission

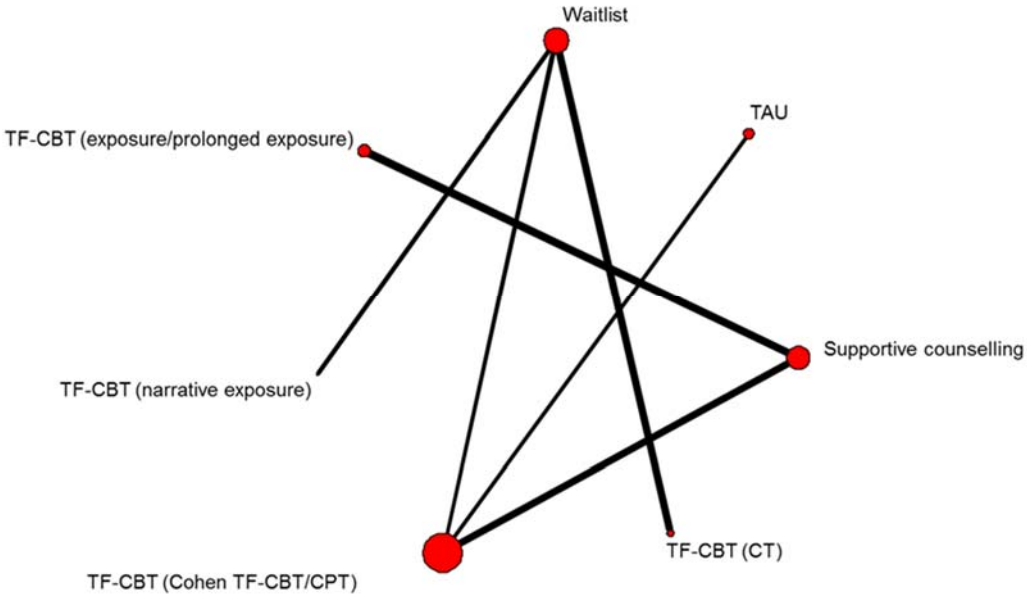


Figure 196: Density plot of the between-study standard deviation: remission

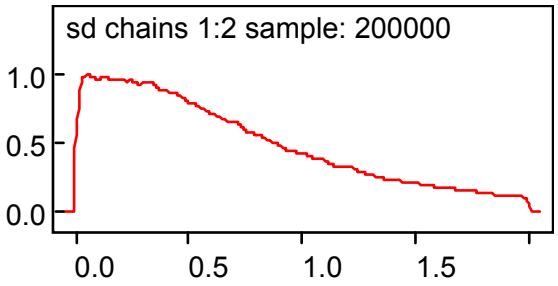


Table 60: Model fit statistics: remission

Model	Between Study Heterogeneity - Standard Deviation (95% CrI)	Residual deviance[a]	DIC[b]
Fixed effect - consistency	-	17.37	93.71
Random effects - consistency	0.65 (0.03 – 1.80)	17.38	95.03
[a] Posterior mean residual deviance compared to 18 total data points [b] Deviance information criteria (DIC) – lower values preferred			

Since there were no closed loops of direct evidence within the network (Figure 195), inconsistency checks were not possible for this outcome.

Conclusion

The inconsistency checks did not identify any evidence of inconsistency in the direct and indirect evidence included in the network meta-analyses. However, the small amount of evidence informing the 'differences in PTSD symptoms recorded at baseline and 3-month follow-up' and 'remission of PTSD' outcomes is reflected by the large uncertainty of the results. For example, the odds ratio and 95% credible interval of TF-CBT (narrative exposure) compared to waitlist in the remission outcome is 15.58 (2.44 – 163.1). The large amount of uncertainty in these results decreases the reliability of the probability of a treatment ranking best and thus it is not a suitable measure to base decisions on (Kibret 2014). Caution must be exercised when interpreting the results.

References

Chinn S (2000) A simple method for converting an odds ratio to effect size for use in meta-analysis. Statistics in Medicine 19, 3127–31

Dias S, Ades A, Sutton A et al. (2013a) Evidence Synthesis for Decision Making 2: A Generalized Linear Modeling Framework for Pairwise and Network Meta-analysis of Randomized Controlled Trials. Medical Decision Making 33, 607-17

Dias S, Ades AE, Welton NJ et al. (2018) Network Meta-analysis for Decision-Making. Hoboken NJ: Wiley. Chapter 4: Generalised Linear Models.

Dias S, Welton NJ, Caldwell DM et al. (2010) Checking consistency in mixed treatment comparison meta-analysis. Statistics in Medicine 29(7-8), 932-944

Dias S, Welton NJ, Sutton AJ et al. (2011a, last updated September 2016) NICE DSU Technical Support Document 2: A Generalised Linear Modelling Framework for Pairwise and Network Meta-Analysis of Randomised Controlled Trials. Available from http://scharr.dept.shef.ac.uk/nicedsu/technical-support-documents/evidence-synthesis-tsd-series/

Dias S, Welton NJ, Sutton AJ et al. (2013b) Evidence Synthesis for Decision Making 4: Inconsistency in Networks of Evidence Based on Randomized Controlled Trials. Medical Decision Making 33(5), 641-656

Dias S, Welton NJ, Sutton AJ et al. (2011b, last updated April 2014) NICE DSU Technical Support Document 4: Inconsistency in networks of evidence based on randomised controlled trials. Available from http://scharr.dept.shef.ac.uk/nicedsu/technical-support-documents/evidence-synthesis-tsd-series/

Kibret T, Richer D, Beyene J (2014). Bias in identification of the best treatment in a Bayesian network meta-analysis for binary outcome: a simulation study. Clinical Epidemiology 3(6), 451-60

Higgins JPT, Green S (editors) (2011). Cochrane Handbook for Systematic Reviews of Interventions Version 5.1.0 [updated March 2011]. The Cochrane Collaboration. Available from www.cochrane-handbook.org

Spiegelhalter DJ, Best NG, Carlin BP et al. (2002) Bayesian measures of model complexity and fit. Journal of the Royal Statistical Society: Series B 64(4), 583-616

van Valkenhoef G, Dias S, Ades AE et al. (2016) Automated generation of node-splitting models for assessment of inconsistency in network meta-analysis. Research Synthesis Methods 7, 80-93

Appendix N – additional results of Network Meta-Analysis described in Appendix J (all pair-wise comparisons)

PTSD symptom scores, change from baseline to endpoint: Standardised Mean Differences (SMD)

[negative values favour second intervention in the comparison]

Comparison	Effect (mean SMD, 95% CrI)	Comparison	Effect (mean SMD, 95% CrI)
diff[2,3]	-0.289 (-1.175 to 0.593)	diff[3,4]	-1.074 (-2.533 to 0.343)
diff[2,4]	-1.363 (-2.883 to 0.162)	diff[3,5]	-0.314 (-1.127 to 0.502)
diff[2,5]	-0.603 (-1.509 to 0.311)	diff[3,6]	-0.574 (-1.179 to 0.0249)
diff[2,6]	-0.864 (-1.653 to -0.074)	diff[3,7]	-2.343 (-3.562 to -1.155)
diff[2,7]	-2.632 (-3.973 to -1.329)	diff[3,8]	-0.899 (-1.924 to 0.110)
diff[2,8]	-1.188 (-2.320 to -0.072)	diff[3,9]	-0.742 (-1.490 to 0.004)
diff[2,9]	-1.031 (-1.941 to -0.124)	diff[3,10]	-0.395 (-1.366 to 0.545)
diff[2,10]	-0.685 (-1.782 to 0.391)	diff[3,11]	0.310 (-1.398 to 2.027)
diff[2,11]	0.021 (-1.445 to 1.479)	diff[3,12]	-1.567 (-3.438 to 0.295)
diff[2,12]	-1.856 (-3.634 to -0.079)	diff[3,13]	0.225 (-1.184 to 1.619)
diff[2,13]	-0.067 (-1.591 to 1.407)	diff[3,14]	-0.750 (-1.914 to 0.399)
diff[2,14]	-1.039 (-2.043 to -0.061)	diff[3,15]	-0.366 (-1.710 to 0.996)
diff[2,15]	-0.655 (-1.923 to 0.595)	diff[3,16]	-1.194 (-2.604 to 0.249)
diff[2,16]	-1.483 (-3.011 to 0.025)	diff[3,17]	-1.542 (-2.934 to -0.150)
diff[2,17]	-1.831 (-3.295 to -0.361)		
diff[4,5]	0.760 (-0.620 to 2.147)	diff[5,6]	-0.260 (-1.030 to 0.514)
diff[4,6]	0.500 (-0.887 to 1.905)	diff[5,7]	-2.029 (-3.182 to -0.885)
diff[4,7]	-1.269 (-2.874 to 0.335)	diff[5,8]	-0.585 (-1.524 to 0.355)
diff[4,8]	0.175 (-1.286 to 1.637)	diff[5,9]	-0.428 (-1.363 to 0.503)
diff[4,9]	0.332 (-1.167 to 1.834)	diff[5,10]	-0.081 (-1.020 to 0.856)
diff[4,10]	0.679 (-0.771 to 2.166)	diff[5,11]	0.624 (-1.079 to 2.340)
diff[4,11]	1.384 (-0.743 to 3.525)	diff[5,12]	-1.253 (-3.146 to 0.663)
diff[4,12]	-0.493 (-2.756 to 1.781)	diff[5,13]	0.537 (-0.829 to 1.869)
diff[4,13]	1.296 (-0.468 to 3.015)	diff[5,14]	-0.436 (-1.617 to 0.777)
diff[4,14]	0.324 (-1.355 to 2.003)	diff[5,15]	-0.0515 (-1.470 to 1.369)
diff[4,15]	0.708 (-1.130 to 2.585)	diff[5,16]	-0.880 (-2.329 to 0.566)
diff[4,16]	-0.120 (-1.969 to 1.712)	diff[5,17]	-1.228 (-2.547 to 0.114)
diff[4,17]	-0.468 (-2.219 to 1.279)		
diff[6,7]	-1.768 (-2.949 to -0.615)	diff[7,8]	1.444 (0.183 to 2.688)
diff[6,8]	-0.325 (-1.276 to 0.616)	diff[7,9]	1.601 (0.331 to 2.900)
diff[6,9]	-0.168 (-0.986 to 0.642)	diff[7,10]	1.947 (0.687 to 3.232)
diff[6,10]	0.179 (-0.674 to 1.031)	diff[7,11]	2.652 (0.697 to 4.623)
diff[6,11]	0.884 (-0.759 to 2.525)	diff[7,12]	0.776 (-1.353 to 2.893)
diff[6,12]	-0.993 (-2.85 to 0.854)	diff[7,13]	2.565 (0.972 to 4.139)

diff[6,13]	0.797 (-0.578 to 2.159)	diff[7,14]	1.593 (0.074 to 3.120)
diff[6,14]	-0.176 (-1.205 to 0.868)	diff[7,15]	1.977 (0.280 to 3.691)
diff[6,15]	0.209 (-1.134 to 1.559)	diff[7,16]	1.149 (-0.545 to 2.828)
diff[6,16]	-0.620 (-2.043 to 0.798)	diff[7,17]	0.8010 (-0.746 to 2.385)
diff[6,17]	-0.967 (-2.305 to 0.374)		
diff[8,9]	0.157 (-0.938 to 1.251)	diff[9,10]	0.347 (-0.710 to 1.417)
diff[8,10]	0.504 (-0.425 to 1.447)	diff[9,11]	1.052 (-0.661 to 2.793)
diff[8,11]	1.209 (-0.628 to 3.049)	diff[9,12]	-0.825 (-2.608 to 0.968)
diff[8,12]	-0.668 (-2.671 to 1.356)	diff[9,13]	0.964 (-0.523 to 2.437)
diff[8,13]	1.121 (-0.329 to 2.563)	diff[9,14]	-0.008 (-1.219 to 1.220)
diff[8,14]	0.149 (-1.205 to 1.488)	diff[9,15]	0.376 (-0.857 to 1.617)
diff[8,15]	0.533 (-1.005 to 2.103)	diff[9,16]	-0.452 (-1.83 to 0.919)
diff[8,16]	-0.295 (-1.811 to 1.247)	diff[9,17]	-0.800 (-2.254 to 0.639)
diff[8,17]	-0.643 (-1.831 to 0.566)		
diff[10,11]	0.705 (-1.104 to 2.520)	diff[11,12]	-1.877 (-4.180 to 0.426)
diff[10,12]	-1.172 (-3.151 to 0.825)	diff[11,13]	-0.087 (-2.200 to 2.007)
diff[10,13]	0.618 (-0.817 to 2.052)	diff[11,14]	-1.060 (-2.826 to 0.719)
diff[10,14]	-0.355 (-1.668 to 0.927)	diff[11,15]	-0.675 (-2.635 to 1.258)
diff[10,15]	0.030 (-1.500 to 1.550)	diff[11,16]	-1.504 (-3.609 to 0.624)
diff[10,16]	-0.799 (-2.342 to 0.728)	diff[11,17]	-1.852 (-3.941 to 0.249)
diff[10,17]	-1.146 (-2.532 to 0.221)		
diff[12,13]	1.789 (-0.462 to 4.045)	diff[13,14]	-0.973 (-2.640 to 0.702)
diff[12,14]	0.817 (-1.170 to 2.812)	diff[13,15]	-0.588 (-2.432 to 1.258)
diff[12,15]	1.201 (-0.088 to 2.475)	diff[13,16]	-1.417 (-3.223 to 0.412)
diff[12,16]	0.373 (-1.848 to 2.551)	diff[13,17]	-1.764 (-3.479 to -0.040)
diff[12,17]	0.025 (-2.211 to 2.211)		
diff[14,15]	0.385 (-1.171 to 1.905)	diff[15,16]	-0.829 (-2.611 to 0.980)
diff[14,16]	-0.444 (-2.156 to 1.270)	diff[15,17]	-1.176 (-3.002 to 0.618)
diff[14,17]	-0.792 (-2.437 to 0.842)		
diff[16,17]	-0.3476 (-2.18 to 1.458)		

PTSD symptom scores, change from baseline to 1-4 months follow-up: Standardised Mean Differences (SMD)

[negative values favour second intervention in the comparison]

Comparison	Effect (mean SMD, 95% CrI)	Comparison	Effect (mean SMD, 95% CrI)
diff[2,3]	-0.390 (-2.351 to 1.740)	diff[3,4]	-0.776 (-1.930 to 0.244)
diff[2,4]	-1.166 (-3.315 to 0.923)	diff[3,5]	-1.006 (-2.590 to 0.446)
diff[2,5]	-1.396 (-3.695 to 0.904)	diff[3,6]	-0.205 (-1.279 to 0.742)
diff[2,6]	-0.595 (-2.654 to 1.529)	diff[3,7]	-0.186 (-1.759 to 1.253)
diff[2,7]	-0.576 (-1.958 to 0.789)	diff[3,8]	0.144 (-1.521 to 1.698)
diff[2,8]	-0.247 (-2.642 to 2.209)	diff[3,9]	-0.362 (-2.944 to 2.050)
diff[2,9]	-0.752 (-2.193 to 0.683)	diff[3,10]	-0.303 (-2.383 to 1.603)
diff[2,10]	-0.693 (-2.097 to 0.690)	diff[3,11]	-0.750 (-2.411 to 0.778)
diff[2,11]	-1.141 (-3.170 to 0.901)	diff[3,12]	-1.061 (-2.503 to 0.238)
diff[2,12]	-1.452 (-3.651 to 0.810)		
diff[4,5]	-0.230 (-1.861 to 1.412)	diff[5,6]	0.801 (-0.8054 to 2.394)
diff[4,6]	0.571 (-0.660 to 1.885)	diff[5,7]	0.820 (-1.003 to 2.692)
diff[4,7]	0.590 (-1.026 to 2.233)	diff[5,8]	1.150 (-0.847 to 3.201)
diff[4,8]	0.920 (-0.8327 to 2.72)	diff[5,9]	0.644 (-2.057 to 3.327)
diff[4,9]	0.415 (-2.123 to 2.972)	diff[5,10]	0.703 (-1.558 to 2.943)
diff[4,10]	0.473 (-1.596 to 2.554)	diff[5,11]	0.256 (-1.687 to 2.187)
diff[4,11]	0.026 (-1.658 to 1.720)	diff[5,12]	-0.055 (-1.872 to 1.779)
diff[4,12]	-0.285 (-1.752 to 1.281)		
diff[6,7]	0.019 (-1.570 to 1.579)	diff[7,8]	0.330 (-1.695 to 2.381)
diff[6,8]	0.348 (-0.920 to 1.612)	diff[7,9]	-0.176 (-2.151 to 1.828)
diff[6,9]	-0.157 (-2.72 to 2.338)	diff[7,10]	-0.117 (-1.454 to 1.172)
diff[6,10]	-0.098 (-2.169 to 1.888)	diff[7,11]	-0.564 (-2.022 to 0.903)
diff[6,11]	-0.546 (-2.234 to 1.128)	diff[7,12]	-0.875 (-2.658 to 0.900)
diff[6,12]	-0.857 (-2.069 to 0.366)		
diff[8,9]	-0.505 (-3.323 to 2.273)	diff[9,10]	0.059 (-1.974 to 2.058)
diff[8,10]	-0.447 (-2.854 to 1.918)	diff[9,11]	-0.389 (-2.873 to 2.112)
diff[8,11]	-0.894 (-2.974 to 1.173)	diff[9,12]	-0.700 (-3.330 to 1.988)
diff[8,12]	-1.205 (-2.954 to 0.564)		
diff[10,11]	-0.447 (-2.386 to 1.551)	diff[11,12]	-0.311 (-2.164 to 1.554)
diff[10,12]	-0.758 (-2.948 to 1.433)		

Remission (loss of PTSD diagnosis according to ICD/DCM criteria or similar): log-odds ratios

[positive values favour second intervention in the comparison]

Comparison	Effect (mean, 95% CrI)	Comparison	Effect (mean, 95% CrI)
lor[2,3]	0.36 (-0.95 to 1.69)	lor[3,4]	2.51 (0.72 to 4.44)
lor[2,4]	2.87 (1.01 to 4.88)	lor[3,5]	0.74 (-0.11 to 1.60)
lor[2,5]	1.10 (0.13 to 2.15)	lor[3,6]	2.66 (0.40 to 5.18)
lor[2,6]	3.02 (0.71 to 5.62)	lor[3,7]	1.47 (0.62 to 2.36)
lor[2,7]	1.83 (0.26 to 3.45)		
lor[4,5]	-1.77 (-3.49 to -0.20)	lor[5,6]	1.92 (-0.16 to 4.31)
lor[4,6]	0.15 (-2.33 to 2.83)	lor[5,7]	0.73 (-0.49 to 1.96)
lor[4,7]	-1.04 (-3.14 to 0.95)		
lor[6,7]	-1.19 (-3.83 to 1.27)		

Appendix O – WinBUGS code for inconsistency model described in Appendix M – 'Changes in PTSD Symptom Scores between Baseline and Treatment Endpoint' and 'Changes in PTSD Symptom Scores between Baseline and 1-4 Month Follow-Up'

```
# Normal likelihood, identity link: SMD with arm-based means;
# Random effects inconsistency model
model{                          # *** PROGRAM STARTS
for(i in 1:ns){                 #   LOOP THROUGH STUDIES
  delta[i,1] <- 0               # treatment effect is zero for control arm
  mu[i] ~ dnorm(0,.0001)            # vague priors for all trial baselines
 }
# CONTINUOUS DATA AS ARM MEANS
for(i in 1:ns){
  # calculate pooled.sd and adjustment for SMD
  df[i] <- sum(n[i,1:na[i]]) - na[i] # denominator for pooled.var
  Pooled.var[i] <- sum(nvar[i,1:na[i]])/df[i]
  Pooled.sd[i] <- sqrt(Pooled.var[i]) # pooled sd for study i, for SMD
#  H[i] <- 1 - 3/(4*df[i]-1)         # use Hedges' g
  H[i] <- 1                       # use Cohen's d (ie no adjustment)
  for (k in 1:na[i]){
    se[i,k] <- sd[i,k]/sqrt(n[i,k])
    var[i,k] <- pow(se[i,k],2)       # calcultate variances
    prec[i,k] <- 1/var[i,k]          # set precisions
    y[i,k] ~ dnorm(phi[i,k], prec[i,k]) # normal likelihood
    phi[i,k] <- theta[i,k] * (Pooled.sd[i]/H[i]) # theta is standardised mean
    theta[i,k] <- mu[i] + delta[i,k] # model for linear predictor, delta is SMD
    dev[i,k] <- (y[i,k]-phi[i,k])*(y[i,k]-phi[i,k])*prec[i,k]
    nvar[i,k] <- (n[i,k]-1) * pow(sd[i,k],2) # for pooled.sd
   }
  # summed residual deviance contribution for this trial
```

```
  resdev[i] <- sum(dev[i,1:na[i]])
 }
# RE MODEL
for(i in 1:ns){                    # LOOP THROUGH ALL STUDIES
  for (k in 2:na[i]){               # LOOP THROUGH ARMS
    # trial-specific RE distributions
    delta[i,k] ~ dnorm(d[t[i,1], t[i,k]], tau)
    }
 }
#
totresdev <- sum(resdev[])           # Total Residual Deviance (all data)
# Priors distributions
sdev ~ dunif(0,5)                  # vague prior for between-trial SD
tau <- pow(sdev,-2)                  # between-trial precision
# vague prior for treatment effects
for (c in 1:(nt-1)){
  d[c,c]<-0
  for (k in (c+1):nt){ d[c,k] ~ dnorm(0,.001) }
 }
}                              # *** PROGRAM ENDS
```