National Institute for Health and Care Excellence

Draft for consultation

Post-traumatic stress disorder: management (update)

[G] Evidence reviews for psychological and psychosocial interventions for family members of people at risk of, or with, PTSD

NICE guideline <number>

Evidence reviews

June 2018

Draft for Consultation

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

Disclaimer

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ISBN:

Contents

Psychological, psychosocial and other non-pharmacological interventions for the support of family and carers of people at risk of PTSD and of people with PTSD

This evidence report contains information on 2 reviews relating to psychological, psychosocial and other non-pharmacological interventions for the support of family and carers:

- Review question 5.1 For family members (including children and carers) of people at risk of PTSD, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?
- Review question 5.2 For family members (including children and carers) of people with clinically important post-traumatic stress symptoms, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?

Introduction

The evidence for interventions to support family (including children and carers) of people at risk of PTSD [5.1] and people with PTSD [5.2] was not adequate to warrant recommendations. The committee considered this evidence and using their expertise developed overall recommendations for the support of family of people at risk of PTSD and for people with PTSD based on consensus, using good practice points. The committee discussion of the evidence as well as the recommendations they made are relevant to both populations. Therefore, although evidence is presented separately for 5.1 and 5.2, recommendations, rationale and impact of recommendations and the discussion of the committee are combined for family of people at risk of PTSD and family of people with PTSD and provided at the end of the evidence report.

Review question 5.1 For family members (including children and carers) of people at risk of PTSD, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?

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	• Family members (including children and carers) of people at risk of PTSD
Intervention	• Psychological interventions • Psychosocial interventions • Other non-pharmacological interventions
Comparison	• Any other intervention • Prevention as usual • Waitlist • Placebo
Outcome	**Critical outcomes:** • Family member/carer mental health • Family member/carer wellbeing or quality of life • Carer burden **Important outcomes:** • Employment • Housing • Lifestyle disruption • Relationship difficulties

PTSD=Post-traumatic stress disorder

For full details see review protocol in Appendix A.

Methods and processes

This evidence review was developed using the methods and process 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 family and carers of people at risk of PTSD

Introduction to clinical evidence

Psychological interventions will be considered as classes of intervention (problem solving; self-help [without support]; parent training/family interventions), and form the subsections below.

Evidence for interventions in the following classes was also searched for but none was found: trauma-focused CBT; non-trauma-focused CBT; psychologically-focused debriefing; eye movement desensitisation and reprocessing (EMDR); hypnotherapy; psychodynamic therapies; counselling; human givens therapy; combined somatic and cognitive therapies; coping skills training; couple interventions; play therapy.

Problem-solving: clinical evidence

Included studies

One RCT (N=153) of problem solving for the support of family or carers of people at risk of PTSD was identified and included (Powell 2016) in a single comparison of problem solving compared with TAU.

Excluded studies

No studies were identified and excluded at full-text for this review.

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 2 provides a brief summary of the included study and evidence from this study is summarised in the clinical GRADE evidence profile below (Table 3).

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: Problem solving for caregivers of adults at risk of PTSD

Comparison	Problem solving versus TAU
Total no. of studies (N randomised)	1 (153)
Study ID	Powell 2016
Country	US
Diagnostic status	Unclear
Mean age (range)	49.7 (19-89)
Sex (% female)	82
Ethnicity (% BME)	21
Coexisting conditions	NR
Mean months since traumatic event	NR (initiated after discharge)

Comparison	Problem solving versus TAU
Type of traumatic event	Caregiver of adult patients with moderate to severe traumatic brain injury (TBI) who received acute and/or rehabilitation care at a level I trauma centre. Cause of injury: Motor vehicle collision (40%); violence (10%); fall (31%); other (19%)
Single or multiple incident index trauma	Single
Lifetime experience of trauma	NR
Relationship to person at risk of PTSD	54% spouses/partners; 35% parents; 11% other
Intervention details	Individualized education and mentored problem-solving intervention based on model of intervention from Lorig et al. (2003), focused on increasing self-effectiveness and problem-solving
Intervention format	Individual
Intervention intensity	8-10 fortnightly sessions (target 8 + 2 additional calls at caregiver's discretion). Median number of calls 7 (interquartile range 3-9)
Comparator	TAU: free to access typically available care, with no contact from the research team between baseline interview and follow-up
Intervention length (weeks)	20
Note.	

Quality assessment of clinical studies included in the evidence review

The clinical evidence profiles for this review (problem-solving for the support of family and carers of people at risk of PTSD) are presented in Table 3.

Table 3: Summary clinical evidence profile: Problem solving versus TAU for caregivers of adults at risk of PTSD

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk TAU	Corresponding risk Problem solving			
Family member/carer mental health at 6-week follow-up BSI global T-test score Follow-up: mean 6 weeks		The mean family member/carer mental health at 6-week follow-up in the intervention groups was 0.41 standard deviations lower (0.77 to 0.05 lower)		124 (1 study)	low[1,2]
Family member/carer quality of life at 6-week follow-up Bakas Caregiving Outcomes Scale		The mean family member/carer quality of life at 6-week follow-up in the intervention groups was 0.19 standard		124 (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 Problem solving			
(BCOS) Follow-up: mean 6 weeks Better indicated by higher values		deviations higher (0.16 lower to 0.55 higher)			

[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*

See appendix F for full GRADE tables.

Self-help (without support): clinical evidence

Included studies

One RCT (N=174) of self-help (without support) for the support of family or carers of people at risk of PTSD was identified and included (Melnyk 2004) in a single comparison of self-help (without support) compared with attention-placebo.

Excluded studies

No studies were identified and excluded at full-text for this review.

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 4 provides a brief summary of the included study and evidence from this study is summarised in the clinical GRADE evidence profile below (Table 5).

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

Table 4: Summary of included studies: Self-help (without support) for parents of children at risk of PTSD

Comparison	Self-help (without support) versus attention-placebo
Total no. of studies (N randomised)	1 (174)
Study ID	Melnyk 2004
Country	US
Diagnostic status	Unclear
Mean age (range)	31.2 (18-52)
Sex (% female)	100
Ethnicity (% BME)	29
Coexisting conditions	NR

Comparison	Self-help (without support) versus attention-placebo
Mean months since traumatic event	0.03
Type of traumatic event	Mother of a child admitted to a paediatric intensive care unit. The major reasons for hospitalisation were respiratory problems (eg, asthma or pneumonia; 44%), accidental trauma (16%), neurologic problems (eg, seizures or accidents; 14%), infections (eg, meningitis or sepsis; 11%), hematologic problems (eg, bleeding after procedures; 5%), cardiac problems (2%), ingestions (4%), or other causes (eg, acidosis; 5%). The length of stay in the PICU averaged 64.3 hours (SD: 64.3 hours; range: 10.0–440.0 hours), and the total length of hospital stay averaged 6.9 days (SD: 6.3 days; range: 1–32 days)
Single or multiple incident index trauma	Single
Lifetime experience of trauma	NR
Relationship to person at risk of PTSD	Mother
Intervention details	COPE intervention (Creating Opportunities for Parent Empowerment). Psychoeducational materials focused on increasing (i) parents' knowledge and understanding of the range of behaviours and emotions that young children typically display during and after hospitalization and (ii) direct parent participation in their children's emotional and physical care
Intervention format	Individual
Intervention intensity	NR
Comparator	Control programme, structured as the COPE intervention, but providing information on the policies and services of the PICU
Intervention length (weeks)	NR (from 6-16 hours after PICU admission to 2-3 days after hospital discharge)
Note.	

Quality assessment of clinical studies included in the evidence review

The clinical evidence profiles for this review (self-help for the support of family and carers of people at risk of PTSD) are presented in Table 5.

Table 5: Summary clinical evidence profile: Self-help (without support) versus attention-placebo for parents of children at risk of PTSD

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Attention -placebo	Corresponding risk Self-help (without support)			
Family member/carer anxiety at 1-month follow-up STAI State		The mean family member/carer anxiety at 1-month follow-up in the intervention groups		103 (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 Attention -placebo	Corresponding risk Self-help (without support)			
change score Follow-up: mean 1 months		was 0.44 standard deviations lower (0.84 to 0.04 lower)			
Family member/carer anxiety at 3-month follow-up STAI State change score Follow-up: mean 3 months		The mean family member/carer anxiety at 3-month follow-up in the intervention groups was 0.25 standard deviations lower (0.66 lower to 0.16 higher)		93 (1 study)	low[1,3]
Family member/carer anxiety at 6-month follow-up STAI State change score Follow-up: mean 6 months		The mean family member/carer anxiety at 6-month follow-up in the intervention groups was 0.34 standard deviations lower (0.77 lower to 0.09 higher)		89 (1 study)	low[1,3]
Family member/carer anxiety at 1-year follow-up STAI State change score Follow-up: mean 12 months		The mean family member/carer anxiety at 1-year follow-up in the intervention groups was 0.56 standard deviations lower (1.06 to 0.05 lower)		67 (1 study)	low[1,2]
Family member/carer depression at 1-month follow-up POMS change score Follow-up: mean 1 months		The mean family member/carer depression at 1-month follow-up in the intervention groups was 0.62 standard deviations lower (1.01 to 0.22 lower)		105 (1 study)	low[1,2]
Family member/carer depression at 3-month follow-up POMS change score		The mean family member/carer depression at 3-month follow-up in the intervention groups was		97 (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 Attention -placebo	Corresponding risk Self-help (without support)			
Follow-up: mean 3 months		0.38 standard deviations lower (0.79 lower to 0.02 higher)			
Family member/carer depression at 6-month follow-up POMS change score Follow-up: mean 6 months		The mean family member/carer depression at 6-month follow-up in the intervention groups was 0.7 standard deviations lower (1.11 to 0.29 lower)		99 (1 study)	low[1,2]
Family member/carer depression at 1-year follow-up POMS change score Follow-up: mean 12 months		The mean family member/carer depression at 1-year follow-up in the intervention groups was 0.47 standard deviations lower (0.98 lower to 0.03 higher)		66 (1 study)	low[1,3]

[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*

See appendix F for full GRADE tables.

Parent training/family interventions: clinical evidence

Included studies

One study of parent training/family intervention for the support of family and carers of people at risk of PTSD 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 (abusing parents involved in the therapy that was targeted at the child rather than parents/carers receiving separate intervention).

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

Psychosocial interventions for family or carers of people at risk of PTSD

Introduction to clinical evidence

No studies on psychosocial interventions for the support of family or carers of people at risk of PTSD were identified.

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

Other non-pharmacological interventions for family or carers of people at risk of PTSD

Introduction to clinical evidence

No studies on other non-pharmacological interventions for the support of family or carers of people at risk of PTSD were identified.

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

Economic evidence

Included studies

No economic studies assessing the cost effectiveness of interventions for the support of family members (including children and carers) of people at risk of PTSD were identified.

Excluded studies

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

Economic model

No economic modelling was conducted for this question because other topics were agreed as higher priorities for economic evaluation.

Resource impact

The recommendations made by the committee 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

Psychological interventions

Problem solving

- Low quality single-RCT (N=124) evidence suggests a small but statistically significant benefit of problem solving relative to TAU on caregiver mental health at 6-week follow-up for spouses/partners and parents of adults at risk of PTSD following moderate to severe traumatic brain. However, evidence from this same study suggests neither clinically important nor statistically significant effects on caregiver quality of life. No other outcomes were available.

Self-help (without support)

- Low quality single-RCT (N=66-105) evidence suggests small to moderate but statistically significant benefits of self-help (without support) relative to attention-placebo on improving anxiety symptoms at 1-month and 1-year follow-up (non-significant at 3- and 6-month follow-ups) and depression symptoms at 1- and 6-month follow-ups (non-significant at 3-month and 1-year follow-ups) for parents of children at risk of PTSD following admission to a paediatric intensive care unit. No other outcomes were available.

Economic evidence statements

- No economic evidence on interventions for the support of family members (including children and carers) of people at risk of PTSD was identified and no economic modelling was undertaken.

Review question 5.2 For family members (including children and carers) of people with clinically important post-traumatic stress symptoms, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?

Summary of the protocol (PICO table)

Please see Table 6 for a summary of the Population, Intervention, Comparison and Outcome (PICO) characteristics of this review.

Table 6: Summary of the protocol (PICO table)

Population	Family members (including children and carers) of people with clinically important post-traumatic stress symptoms
Intervention	• Psychological interventions • Psychosocial interventions • Other non-pharmacological interventions
Comparison	• Any other intervention • Prevention as usual • Waitlist • Placebo
Outcome	**Critical outcomes:** • Family member/carer mental health • Family member/carer wellbeing or quality of life • Carer burden **Important outcomes:** • Employment • Housing • Lifestyle disruption • Relationship difficulties

For full details see review protocol in Appendix A.

Methods and processes

This evidence review was developed using the methods and process 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 family and carers of people with PTSD

Introduction to clinical evidence

Psychological interventions will be considered as classes of intervention (trauma-focused CBT; couple interventions; self-help [without support]), and form the subsections below.

Evidence for interventions in the following classes was also searched for but none was found: non-trauma-focused CBT; psychologically-focused debriefing; eye movement desensitisation and reprocessing (EMDR); hypnotherapy; psychodynamic therapies; counselling; human givens therapy; combined somatic and cognitive therapies; coping skills training; parent training/family interventions; play therapy.

Trauma-focused CBT: clinical evidence

Included studies

One RCT (N=229) of trauma-focused CBT for the support of family or carers of people with PTSD was identified and included (Cohen 2004a/Deblinger 2006 [1 study reported across 2 papers]) in a single comparison of trauma-focused CBT (caregiver and child) compared with supportive counselling (caregiver and child).

Excluded studies

No studies were identified and excluded at full-text for this review.

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 7 provides a brief summary of the included study and evidence from this study is summarised in the clinical GRADE evidence profile below (Table 8).

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

Table 7: Summary of included studies: Trauma-focused CBT for parents of children with PTSD

Comparison	Trauma-focused CBT (caregiver and child) versus supportive counselling (caregiver and child)
Total no. of studies (N randomised)	1 (229)
Study ID	Cohen 2004a/Deblinger 2006
Country	US
Diagnostic status	Unclear
Mean age (range)	37.1 (range NR)
Sex (% female)	95

Comparison	Trauma-focused CBT (caregiver and child) versus supportive counselling (caregiver and child)
Ethnicity (% BME)	NR
Coexisting conditions	24% of participating parents had drug or alcohol abuse
Mean months since traumatic event	12.3
Type of traumatic event	Family member of child who had experienced contact sexual abuse
Single or multiple incident index trauma	Multiple
Lifetime experience of trauma	8% of participating parents received treatment for personal sexual abuse
Relationship to person at risk of PTSD	78% biological mother; 3% adoptive mother; 2% stepmother; 4% foster mother; 5% grandmother; 4% other female relative; 4% biological father; 1% stepfather; 1% grandfather
Intervention details	Trauma-focused CBT delivered to caregiver and child (based on protocol from Deblinger & Heflin 1996)
Intervention format	Individual/Family
Intervention intensity	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)
Comparator	Client Centred Therapy (CCT; based on unpublished treatment manual) delivered to caregiver and child
Intervention length (weeks)	12
Note.	

Quality assessment of clinical studies included in the evidence review

The clinical evidence profiles for this review (trauma-focused CBT for the support of family and carers of people with PTSD) are presented in Table 8Table 3.

Table 8: Summary clinical evidence profile: Trauma-focused CBT (caregiver and child) versus supportive counselling (caregiver and child) for the support of parents of children with PTSD

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Supportive counselling (caregiver and child)	Corresponding risk Trauma-focused CBT (caregiver and child)			
Family member/carer depression BDI-II change score Follow-up: mean 12 weeks		The mean family member/carer depression in the intervention groups was 0.49 standard		166 (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 Supportive counselling (caregiver and child)	Corresponding risk Trauma-focused CBT (caregiver and child)			
		deviations lower (0.8 to 0.18 lower)			
Parenting difficulties Parenting Practices Questionnaire (PPQ) change score Follow-up: mean 12 weeks Better indicated by higher values		The mean parenting difficulties in the intervention groups was 0.56 standard deviations higher (0.25 to 0.87 higher)		168 (1 study)	low[1,2]

[1] *Risk of bias is high or unclear across multiple domains*
[2] *OIS not met (N<400)*

See appendix F for full GRADE tables.

Couple interventions: clinical evidence

Included studies

Two RCTs (N=97) of couple interventions for the support of family or carers of people with PTSD were identified and included. There were 2 relevant comparisons for couple interventions: 1 RCT (N=40) compared cognitive behavioural conjoint therapy with waitlist (Monson 2008/2012/Schnaider 2014 [1 study reported across 3 papers]); 1 RCT (N=57) compared cognitive behavioural conjoint therapy with psychoeducational sessions (Sautter 2015).

Excluded studies

No studies were identified and excluded at full-text for this review.

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 9 provides brief summaries of the included studies and evidence from these are summarised in the clinical GRADE evidence profiles below (Table 10 and Table 11).

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

Table 9: Summary of included studies: Couple interventions for partners of adults with PTSD

Comparison	Cognitive behavioural conjoint therapy versus waitlist	Cognitive behavioural conjoint therapy versus psychoeducational sessions
Total no. of studies (N randomised)	1 (40)	1 (57)
Study ID	Monson 2008/2012/Schnaider 2014	Sautter 2015
Country	US and Canada	US
Diagnostic status	Unclear	Unclear
Mean age (range)	37.8 (18-70)	32.2 (range NR)
Sex (% female)	33	98
Ethnicity (% BME)	20	25
Coexisting conditions	Partner group: 25% any comorbidity, 8% mood disorder, 13% anxiety disorder, 3% substance abuse, 5% 'other'	NR
Mean months since traumatic event	182	NR
Type of traumatic event	Partner/spouse of adult with PTSD. Type of trauma for partner with PTSD: Adult sexual trauma (20%); child sexual trauma (28%); noncombat physical assault (15%); motor vehicle collision (8%); witnessing/learning about death/illness (13%); combat (5%); other (13%)	Partner of veteran of Operation Iraqi Freedom (OIF)/Operation Enduring Freedom (OEF) with PTSD
Single or multiple incident index trauma	Unclear	Multiple
Lifetime experience of trauma	NR	NR
Relationship to person at risk of PTSD	Partner/spouse	Partner
Intervention details	Cognitive-behavioural conjoint therapy (following manual by Monson et al. 2012)	Structured Approach Therapy (SAT; following manual by Sautter 2011)
Intervention format	Couple	Couple

Comparison	Cognitive behavioural conjoint therapy versus waitlist	Cognitive behavioural conjoint therapy versus psychoeducational sessions
Intervention intensity	15x sessions (biweekly for phases 1-2 and weekly for phase 3)	12x 1-hour sessions (12 hours). Mean attended 10.31 sessions
Comparator	Waitlist	PTSD Family Education, conjoint psychoeducational sessions, using material adapted from the SAFE (Support and Family Education) and BFT (Behavioural Family Therapy) programmes
Intervention length (weeks)	12	12
Note.		

Quality assessment of clinical studies included in the evidence review

The clinical evidence profiles for this review (couple interventions for the support of family and carers of people with PTSD) are presented in Table 10 and Table 11Table 3.

Table 10: Summary clinical evidence profile: Cognitive behavioural conjoint therapy versus waitlist for the support of partners of adults with PTSD

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Waitlist	Corresponding risk Cognitive behavioural conjoint therapy			
Partner depression symptoms BDI-II change score Follow-up: mean 12 weeks		The mean partner depression symptoms in the intervention groups was 0.09 standard deviations lower (0.71 lower to 0.53 higher)		40 (1 study)	very low[1,2]
Relationship difficulties response Number of participants showing improvement of at least 10 points on DAS Follow-up: mean 12 weeks	300 per 1000	249 per 1000 (90 to 687)	RR 0.83 (0.3 to 2.29)	40 (1 study)	very low[1,2]
Relationship difficulties remission Number of participants scoring ≥98 on DAS	500 per 1000	550 per 1000 (305 to 995)	RR 1.1 (0.61 to 1.99)	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 Waitlist	Corresponding risk Cognitive behavioural conjoint therapy			
Follow-up: mean 12 weeks					
Discontinuation Number of participants lost to follow-up Follow-up: mean 12 weeks	150 per 1000	300 per 1000 (87 to 1000)	RR 2 (0.58 to 6.91)	40 (1 study)	very low[1,2]

[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*

Table 11: Summary clinical evidence profile: Cognitive behavioural conjoint therapy versus psychoeducational sessions for the support of partners of adults with PTSD

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Psychoeducational sessions	Corresponding risk Cognitive behavioural conjoint therapy			
Family member/carer anxiety at endpoint STAI-state change score Follow-up: mean 12 weeks		The mean family member/carer anxiety at endpoint in the intervention groups was 0.12 standard deviations higher (0.48 lower to 0.72 higher)		43 (1 study)	very low[1,2]
Family member/carer anxiety at 3-month follow-up STAI-state change score Follow-up: mean 3 months		The mean family member/carer anxiety at 3-month follow-up in the intervention groups was 0.44 standard deviations lower (1.06 lower to 0.18 higher)		41 (1 study)	very low[1,3]
Family member/carer depression at endpoint CES-D change score Follow-up: mean 12 weeks		The mean family member/carer depression at endpoint in the intervention groups was 0.03 standard deviations lower (0.63 lower to 0.57 higher)		43 (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 Psychoeducational sessions	Corresponding risk Cognitive behavioural conjoint therapy			
Family member/carer depression at 3-month follow-up CES-D change score Follow-up: mean 3 months		The mean family member/carer depression at 3-month follow-up in the intervention groups was 0.1 standard deviations lower (0.71 lower to 0.51 higher)		41 (1 study)	very low[1,4]
Relationship improvement at endpoint DAS change score Follow-up: mean 12 weeks Better indicated by higher values		The mean relationship improvement at endpoint in the intervention groups was 0.49 standard deviations higher (0.12 lower to 1.09 higher)		43 (1 study)	very low[1,3]
Relationship improvement at 3-month follow-up DAS change score Follow-up: mean 3 months Better indicated by higher values		The mean relationship improvement at 3-month follow-up in the intervention groups was 0.1 standard deviations higher (0.52 lower to 0.71 higher)		41 (1 study)	very low[1,4]
Discontinuation Number of participants lost to follow-up Follow-up: mean 12 weeks	250 per 1000	242 per 1000 (97 to 600)	RR 0.97 (0.39 to 2.4)	57 (1 study)	very low[1,4]

[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 harm*
[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*

See appendix F for full GRADE tables.

Self-help (without support): clinical evidence

Included studies

Two studies of self-help (without support) for the support of family or carers of people with PTSD were identified. Of these 2 studies, 1 RCT (N=46) was included in a single comparison of self-help (without support) compared with waitlist (Erbes submitted).

Excluded studies

One study was identified and excluded at full-text because the outcomes were not of interest.

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 12 provides a brief summary of the included study and evidence from this study is summarised in the clinical GRADE evidence profile below (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 12: Summary of included studies: Self-help (without support) for partners of adults with PTSD

Comparison	Self-help (without support) versus waitlist
Total no. of studies (N randomised)	1 (46)
Study ID	Erbes (submitted)
Country	US
Diagnostic status	Unclear
Mean age (range)	NR
Sex (% female)	NR
Ethnicity (% BME)	NR
Coexisting conditions	NR
Mean months since traumatic event	NR
Type of traumatic event	Partner (defined as being in an intimate relationship) of veteran with combat-related PTSD
Single or multiple incident index trauma	Multiple
Lifetime experience of trauma	NR
Relationship to person at risk of PTSD	Partner
Intervention details	Veterans Affairs Community Reinforcement and Family Training (VA-CRAFT), a website developed to help family members of veterans with PTSD
Intervention format	Individual

Comparison	Self-help (without support) versus waitlist
Intervention intensity	12x 15-min sessions
Comparator	Waitlist
Intervention length (weeks)	Mean 4.6
Note.	

Quality assessment of clinical studies included in the evidence review

The clinical evidence profiles for this review (self-help for the support of family and carers of people with PTSD) are presented in Table 13Table 3.

Table 13: Summary clinical evidence profile: Self-help (without support) versus waitlist for the support of partners of adults with PTSD

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of Participants (studies)	Quality of the evidence (GRADE)
	Assumed risk Waitlist	Corresponding risk Self-help (without support)			
Family/carer mental health BSI change score Follow-up: mean 5 weeks		The mean family/carer mental health in the intervention groups was 0.64 standard deviations lower (1.27 to 0.01 lower)		41 (1 study)	very low[1,2,3]
Relationship satisfaction DAS-7 change score Follow-up: mean 5 weeks Better indicated by higher values		The mean relationship satisfaction in the intervention groups was 0.47 standard deviations higher (0.15 lower to 1.1 higher)		41 (1 study)	very low[1,3,4]

[1] *Risk of bias was high or unclear across multiple domains*
[2] *OIS not met (N<400)*
[3] *Data is not reported/cannot be extracted for all outcomes*
[4] *95% CI crosses both line of no effect and threshold for clinically important benefit*

See appendix F for full GRADE tables.

Psychosocial interventions for family or carers of people with PTSD

Introduction to clinical evidence

Psychosocial interventions will be considered as classes of intervention (psychoeducation; practical support), and form the subsections below.

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

Psychoeducation: clinical evidence

Included studies

One study of psychoeducation for the support of family and carers of people with PTSD 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 small sample size (N<10 per arm).

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

Practical support: clinical evidence

Included studies

One study of practical support for the support of family and carers of people with PTSD 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 it 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.

Other non-pharmacological interventions for family or carers of people at risk of PTSD

Introduction to clinical evidence

No studies on other non-pharmacological interventions for the support of family or carers of people with PTSD were identified.

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

Economic evidence

Included studies

No economic studies assessing the cost effectiveness of interventions for the support of family members (including children and carers) of people with clinically important post-traumatic stress symptoms were identified.

Excluded studies

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

Economic model

No economic modelling was conducted for this question because other topics were agreed as higher priorities for economic evaluation.

Resource impact

The recommendations made by the committee 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

Psychological interventions

Trauma-focused CBT

- Low quality single-RCT (N=166-168) evidence suggests a small to moderate but statistically significant benefit of trauma-focused CBT for parents of children with PTSD relative to supportive counselling (for parent and child) on improving parental depression, and a clinically important but not statistically significant benefit on improving parenting difficulties. No other outcomes are available.

Couple interventions

- Very low quality single-RCT (N=40) evidence suggests non-significant effects of cognitive behavioural conjoint therapy relative to waitlist on partner depression symptoms, and the rate of response and remission in terms of relationship difficulties, for partners of adults with PTSD. Evidence from this same study suggests a higher rate of discontinuation may be associated with cognitive behavioural conjoint therapy, however this effect is not statistically significant.
- Very low quality single-RCT (N=41-57) evidence suggests non-significant effects of cognitive behavioural conjoint therapy relative to psychoeducational sessions on partner anxiety and depression symptoms and relationship improvement at endpoint and 3-month follow-up or on discontinuation, for partners of veterans with PTSD.

Self-help (without support)

- Very low quality single-RCT (N=41) evidence suggests a clinically important and statistically significant benefit of self-help (without support) relative to waitlist on improving mental health for partners of veterans with combat-related PTSD. However, evidence from this same study suggests non-significant effects on relationship satisfaction. No other outcomes are available.

Economic evidence statements

- No economic evidence on psychosocial interventions for family members (including children and carers) of people with clinically important post-traumatic stress symptoms was identified and no economic modelling was undertaken.

Recommendations

1. **Consider providing information and support to family members and carers of people at risk of PTSD and people with PTSD. This could cover:**
    - the treatment and management of psychological and behavioural problems related to PTSD, including the person's possible risk to themselves and others
    - discussing with carers how the person's PTSD symptoms are affecting the carer themselves
    - how they can support the person to access treatment, including what to do if they don't engage with or drop out of treatment.

2. **Involve family members and carers, where appropriate, in treatment for people with PTSD as a way to:**
    - inform and improve the care of the person with PTSD and
    - identify and meet their own needs as carers.

3. **Consider providing practical and emotional support and advice to family members and carers, for example directing them to health or social services or peer support group.**

4. **Think about the impact of the traumatic event on other family members because more than one family member might have PTSD. Consider further assessment, support and intervention for any family member suspected to have PTSD.**

Rationale and impact

Why the committee made the recommendations

Limited evidence showed that involving parents in the treatment of their child with PTSD, and problem solving and self-help (without support) interventions for parents or partners had benefits on family/carer mental health. However, the evidence was too uncertain to make recommendations for specific interventions to support family members and carers. The committee recommended good practice points by drawing on qualitative evidence (see evidence review H: principles of care) and their own expert opinion.

Impact of the recommendations on practice

These recommendations will help to improve consistency in practice and represent at most a minor change in practice.

The committee's discussion of the evidence

Interpreting the evidence

The outcomes that matter most

Improvement in family or carer's mental health, wellbeing or quality of life, and reductions in the burden on them were critical outcomes. Employment, housing, lifestyle disruption and relationship difficulties of carers or family members were considered as important but not critical outcomes in both reviews. This distinction was based on the primacy of improving the mental health and wellbeing of family and carers, 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 quality of the evidence

All the evidence reviewed was of very low to low quality, reflecting the high risk of bias associated with the studies (including for instance, inadequate or unclear randomisation and allocation concealment, and lack of/unclear blinding of outcome assessment), the small numbers in 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). This uncertainty of the evidence is reflected in the Committee's decision to not base any recommendations on the RCT evidence of psychological and psychosocial interventions for the support of family and carers.

Consideration of clinical benefits and harms

The committee considered the evidence for self-help (without support) as initially encouraging given the benefit observed on parental anxiety and depression symptoms, and the fact that this intervention consisted of audiotaped and written information that is inexpensive and easy to implement. Although the limited evidence, inconsistent effects across follow-ups and concerns about the generalisability of this specific intervention for parents of children admitted to intensive care, were sufficient to discourage a specific intervention recommendation. The committee also noted the benefits observed on caregiver mental health of problem solving for caregivers of adults with traumatic brain injury, and of self-help (without support) for partners of veterans with combat-related PTSD. The committee interpreted this evidence in the context of their clinical experience of best practice and agreed that information and support should be provided to family members and carers of people at risk of PTSD and people with PTSD. The committee also considered evidence from the qualitative review (see evidence report H) that suggested that a common reason for not seeking help for PTSD is a lack of awareness about interventions and services available. The committee agreed that information and support provided to family and carers could act as a facilitator for accessing services for both the carer and the person with PTSD.

The committee also discussed evidence suggesting that parental involvement in trauma-focused CBT for the child with PTSD had benefits on the parent's depression symptoms. This evidence was again considered together with the qualitative evidence review that suggests that involving families and carers in treatment provided extra support for the person while also giving the family or carer a greater understanding of PTSD.

The committee agreed that the evidence was too uncertain to support any recommendations for specific interventions for the support of family or carers. However, drawing on consensus opinion and the qualitative finding that peer support groups can facilitate access to services for people with PTSD and help individuals at risk of social isolation to integrate with others with shared experiences, the committee considered it reasonable to extrapolate to family and carers and recommend that family members and carers are provided with practical and emotional advice and support which may include directing them to peer support groups.

The committee also discussed the potential for more than one family member to have PTSD and considered it important that awareness was raised about this risk in order to provide appropriate support as promptly as possible.

Cost effectiveness and resource use

No economic evidence on interventions for the support of family and carers of people at risk of PTSD or people with PTSD was identified. The committee made recommendations that reflect good practice. They argued that providing information and support to family and carers and involving them in the care of people at risk of PTSD and of those who have developed PTSD will have minor resource implications and is likely to have a positive impact on the mental health and well-being of family and carers and to improve clinical outcomes for people at risk of PTSD and for those with PTSD. It is also likely to help increase adherence with treatment for people who have developed PTSD, which can lead to further clinical benefits. Improved clinical benefits for the family and carers and for people at risk of PTSD and those with PTSD are expected to reduce the need for more costly management further down the care pathway, thus leading to cost-savings that are likely to offset the small costs associated with provision of information, practical and emotional support to family and carers.

The committee advised that currently the care and support received by family and carers of people at risk of PTSD and people with PTSD is highly variable and that the recommendations will help reduce this variation and improve consistency in practice.

References for included studies

Psychological, psychosocial and non-pharmacological interventions for people at risk of PTSD

Problem solving

Powell 2016

Powell, J. M., Fraser, R., Brockway, J. A., Temkin, N., Bell, K. R. (2016) A telehealth approach to caregiver self-management following traumatic brain injury: A randomized controlled trial, Journal of head trauma rehabilitation, 31, 180-90

Self-help without support

Melnyk 2004

Melnyk, B. M., Alpert-Gillis, L., Feinstein, N. F., Crean, H. F., Johnson, J., Fairbanks, E., Small, L., Rubenstein, J., Slota, M., Corbo-Richert, B. (2004) Creating opportunities for parent empowerment: program effects on the mental health/coping outcomes of critically ill young children and their mothers, Pediatrics, 113, e597-607

Psychological, psychosocial and non-pharmacological interventions for the support of family and carers of people with PTSD

Trauma focused CBT

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 45(12), 1474-84

Couples interventions

Monson 2008/2012/Schnaider 2014

Monson CM, Vorstenbosch V. Cognitive-behavioral couples therapy for posttraumatic stress disorder [NCT00669981]. 2008. Available from: https://clinicaltrials.gov/ct2/show/NCT00669981 [accessed 08.08.2017]

Monson CM, Fredman SJ, Macdonald A, Pukay-Martin ND, Resick PA, Schnurr PP. Effect of cognitive-behavioral couple therapy for PTSD: A randomized controlled trial. Jama. 2012 Aug 15;308(7):700-9.

Schnaider, P., Pukay-Martin, N., Fredman, S., Macdonald, A., Monson, C. (2014) Effects of Cognitive–Behavioral Conjoint Therapy for PTSD on Partners' Psychological Functioning, Journal of Traumatic Stress, 27, 129-136.

Sautter 2015

Sautter FJ, Glynn SM, Cretu JB, Senturk D, Vaught AS. Efficacy of structured approach therapy in reducing PTSD in returning veterans: A randomized clinical trial. Psychological services. 2015 Aug;12(3):199.

Self-help (without support)

Erbes (submitted)

Erbes C, Kuhn E, Gifford E, Spoont M, Meis L, et al. (submitted). A pilot trial of VA-CRAFT: Online training to enhance family well-being and Veteran mental health service use.

Appendices

Appendix A – Review protocols

Review protocol for "For family members (including children and carers) of people at risk of PTSD, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?" and

Review protocol for "For family members (including children and carers) of people with clinically important post-traumatic stress symptoms, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?"

Both evidence review questions are covered by the same protocol.

Topic	Psychological, psychosocial and other non-pharmacological interventions for the support of family or carers
Review question(s)	RQ. 5.1 For family members (including children and carers) of people at risk of PTSD, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes? RQ. 5.2 For family members (including children and carers) of people with clinically important post-traumatic stress symptoms, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes? Note: Formally there are two review question but they reflect 48 sub-questions if one were to structure them by intervention
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

Topic	Psychological, psychosocial and other non-pharmacological interventions for the support of family or carers
	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 support of family or carers
Population	RQ 5.1: Family members (including children and carers) of people at risk of PTSD At risk of PTSD is defined (in accordance with DSM) as: Exposure to actual or threatened death, serious injury or sexual violation. The exposure must result from one or more of the following scenarios, in which the individual: directly experiences the traumatic event; witnesses the traumatic event in person; learns that the traumatic event occurred to a close family member or close friend (with the actual or threatened death being either violent or accidental); or experiences first-hand repeated or extreme exposure to aversive details of the traumatic event (not through media, pictures, television or movies unless work-related) The at-risk population includes people with a diagnosis of acute stress disorder/acute stress reaction (according to DSM, ICD or similar criteria), people with clinically important PTSD symptoms within a month of the traumatic event, and people with sub-threshold symptoms The at-risk population for this review will also include the following groups that may not be captured by the DSM criteria: family members of people with PTSD family members or carers of people with a life-threatening illness or injury RQ 5.2: Family members (including children and carers) of people with clinically important post-traumatic stress symptoms (as defined by a diagnosis of PTSD according to DSM, ICD or similar criteria, or clinically-significant PTSD symptoms as indicated by baseline scores above threshold on a validated scale)

Topic	Psychological, psychosocial and other non-pharmacological interventions for the support of family or carers
	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 person with (or at risk of) PTSD 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), narrative exposure therapy (NET) 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) Coping skills training Couple interventions, including cognitive-behavioural conjoint therapy Parent training/family interventions, including behavioural family therapy (such as Child and Family Traumatic Stress Intervention [CFTSI]) Play therapy

Topic	Psychological, psychosocial and other non-pharmacological interventions for the support of family or carers
	Psychosocial interventions (psychosocial interventions listed below are examples of interventions which may be included either alone or in combination and delivered to the person with (or at risk of) PTSD and/or a parent or carer in an individual or group format): 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]) Psychoeducational interventions Practical support (including financial and housing) 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 and delivered to the person with (or at risk of) PTSD and/or a parent or carer in an individual or group format): 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) 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
Comparison	Any other intervention Treatment as usual

Topic	Psychological, psychosocial and other non-pharmacological interventions for the support of family or carers
	Waitlist Placebo
Critical outcomes	Family member/carer mental health (for instance: depression symptoms assessed with a validated scale including the Patient Health Questionnaire [PHQ-9], the Hospital Anxiety and Depression [HAD] Scale and the Beck Depression Inventory [BDI]; or general mental health assessed with a validated scale including the General Health Questionnaire long or short forms [GHQ-60; GHQ-30; GHQ-28; GHQ-12] and the Neuropsychiatry Inventory Caregiver Distress Scale) Family member/carer wellbeing or quality of life (as assessed with a validated scale including the 36-item Short-Form Survey [SF-36], Health Status Questionnaire-12 and Warwick-Edinburgh Mental Well-being Scale [WEMWBS]) Carer burden (as assessed with a validated scale including the Caregiver Burden Interview, Carers Checklist, Family Burden Interview Schedule, Pearlin Caregiving Measures, Screen for Caregiver Burden, Social Behaviour Assessment Schedule, and Carers Assessment of Difficulties Index [CADI])
Important, but not critical outcomes	Employment (for instance, proportion of caregivers that stopped working in order to provide care) Housing (for instance, number homeless or in insecure accommodation) Lifestyle disruption (as assessed with a validated scale including the Activity Restriction Scale [ARS]) Relationship difficulties (with spouse and/or children, as assessed with a validated scale including the Inventory of Interpersonal Problems [IIP] and Self-Report Family Inventory [SFI])
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 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

Topic	Psychological, psychosocial and other non-pharmacological interventions for the support of family or carers
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 GC will assess their quality, completeness, and applicability to the NHS and to the scope of the guideline. If the GC 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. 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:

Topic	Psychological, psychosocial and other non-pharmacological interventions for the support of family or carers
	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. 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])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	

Appendix B – Literature search strategies

Literature search strategy for "For family members (including children and carers) of people at risk of PTSD, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?" and "For family members (including children and carers) of people with clinically important post-traumatic stress symptoms, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?"

One literature search covers both evidence review questions.

Clinical evidence

Database: Medline

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

Date of last search: 31 January 2017

#	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

#	Searches
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 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.

#	Searches
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
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.
66	psychoeducation.sh. or (psychoed* or psycho ed*).ti,ab.
67	((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.
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

#	Searches
	jogging or low impact activit* or running or swimming or sprinting or swim*1 or walking or 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 scisearch or science citation or (web adj2 science)).ti,ab.) and (review*.ti,ab,sh,pt. or systematic*.ti,ab.)

#	Searches
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
148	animal*/ not human*/ use mesz, prem
149	(animal not human).po. use psyh

#	Searches
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: 31 January 2017

#	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: 31 January 2017

#	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: Medline

Last searched on:

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/

#	Searches
24	163 use psyh
25	((decision adj (analy* or model* or tree*)) or economic model* or markov).ti,ab.
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

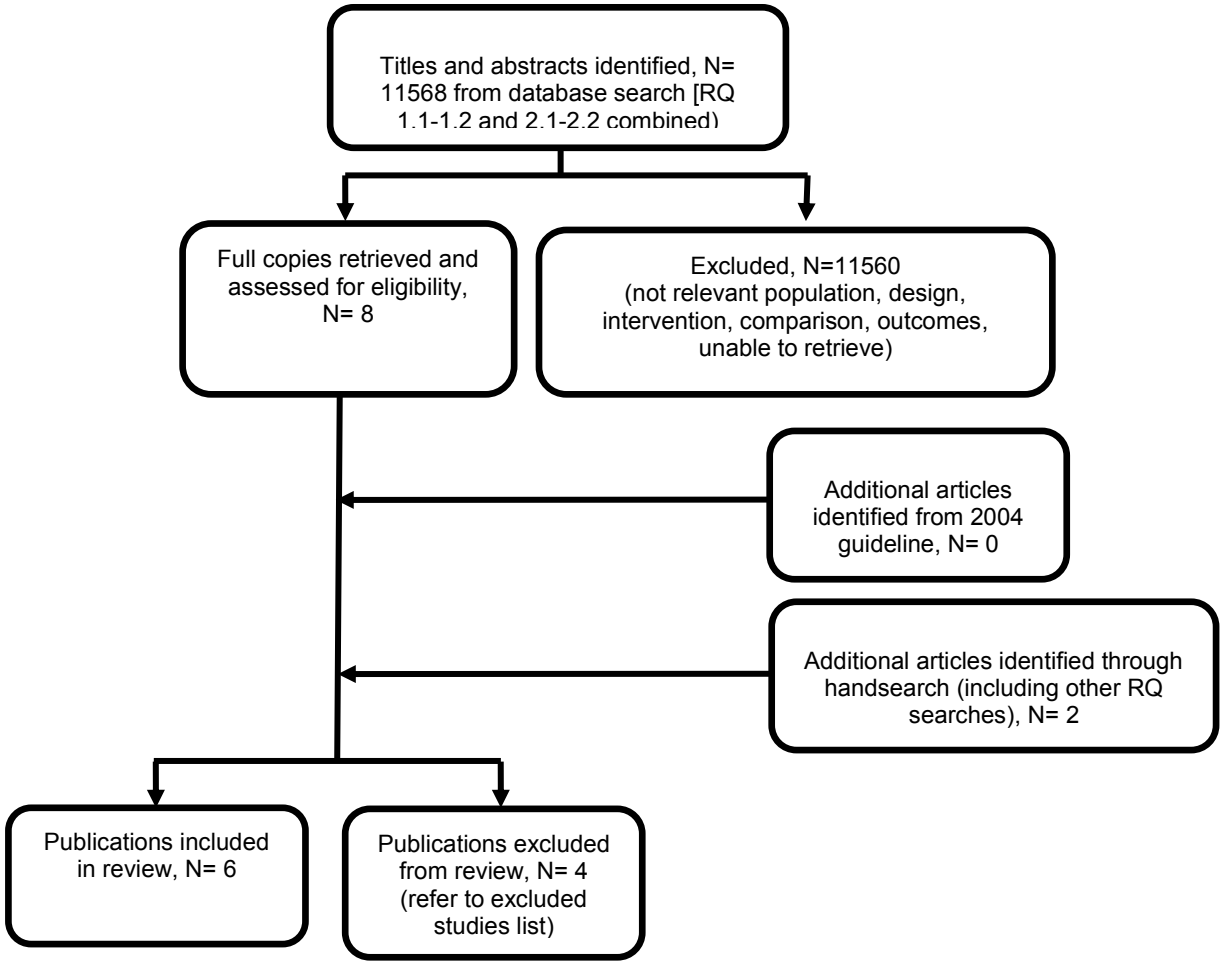
#	Searches
#7	("railway spine" or (rape near/2 trauma*) or reexperienc* or "re experienc*" or "torture syndrome" or "traumatic neuros*" or "traumatic stress"):ti (Word variations have been searched)
#8	("railway spine" or (rape near/2 trauma*) or reexperienc* or "re experienc*" or "torture syndrome" 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

Appendix C – Clinical evidence study selection

Clinical evidence study selection for "For family members (including children and carers) of people at risk of PTSD, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?" and "For family members (including children and carers) of people with clinically important post-traumatic stress symptoms, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?"

One flow diagram covers both evidence review questions.

Figure 1: Flow diagram of clinical article selection for review



Appendix D – Clinical evidence tables

Clinical evidence tables for "For family members (including children and carers) of people at risk of PTSD, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?"

Problem solving versus TAU for caregivers of adults at risk of PTSD

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
Powell 2016	Problem solving: Individualized education and mentored problem-solving intervention	Unclear	Caregiver (54% spouses/partners; 35% parents; 11% other) of adult patients with moderate to severe traumatic brain injury (TBI) who received acute and/or rehabilitation care at a level I trauma centre. Cause of injury: Motor vehicle collision (40%); violence (10%); fall (31%); other (19%)	153	Age range (mean): 19-89 (49.7) Gender (% female): 82 BME (% non-white): 21 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: caregivers of adult patients with traumatic brain injury (TBI); discharge to the community directly from the hospital or from an interim facility; family member or friend with at least a 1-year relationship with the patient who assumed primary responsibility for the patient's follow-up care and well-being at the time of discharge to the community; sufficient English to allow communication without an interpreter; have a telephone. Exclusion criteria: Not reported

BME=Black and Minority Ethnic; N=number being randomised; PTSD=post-traumatic stress disorder

Self-help (without support) versus attention-placebo for parents of children at risk of PTSD

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
Melnyk 2004	Self-help (without support): Psychoeducational materials	Unclear	Mother of a child admitted to a paediatric intensive care unit. The major reasons for hospitalisation were respiratory problems (eg, asthma or pneumonia; 44%), accidental trauma (16%), neurologic problems (eg, seizures or accidents; 14%), infections (eg, meningitis or sepsis; 11%), hematologic problems (eg, bleeding after procedures; 5%), cardiac problems (2%), ingestions (4%), or other causes (eg, acidosis; 5%). The length of stay in the PICU averaged 64.3 hours (SD: 64.3 hours; range: 10.0–440.0 hours), and the total length of hospital stay averaged 6.9 days	174	Age range (mean): 18-52 (31.2) Gender (% female): 100 BME (% non-white): 29 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: mothers of children admitted to either of the 2 PICU study sites; whose children (aged 2-7 years) had an unplanned medical or surgical admission to the PICU, were expected to survive, had no prior ICU admissions, had no cancer, and had no suspected or diagnosed physical or sexual abuse. Exclusion criteria: could not read or speak English; their children were readmitted to the PICU after transfer from the PICU to the general paediatric unit; their children were hospitalized in the PICU for >21 days; made a personal decision to withdraw from the study

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
			(SD: 6.3 days; range: 1–32 days)			

BME=Black and Minority Ethnic; N=number being randomised; PTSD=post-traumatic stress disorder

Clinical evidence tables for "For family members (including children and carers) of people with clinically important post-traumatic stress symptoms, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?"

Trauma-focused CBT (caregiver and child) versus supportive counselling (caregiver and child) for the support of parents of children with PTSD

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
Cohen 2004a/Deblinger 2006	Trauma-focused CBT: CBT (caregiver and child)	Unclear	Family member of child who had experienced contact sexual abuse. 78% biological mother; 3% adoptive mother; 2% stepmother; 4% foster mother; 5% grandmother; 4% other female relative; 4% biological father; 1% stepfather; 1% grandfather	229	Age range (mean): NR (37.1) Gender (% female): 95 BME (% non-white): NR Country: US Coexisting conditions: 24% of participating parents had drug or alcohol abuse Lifetime experience of	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 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

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
					trauma (mean number of prior traumas/% with previous trauma): 8% of participating parents received treatment for personal sexual abuse Single or multiple incident index trauma: Multiple	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.

BME=Black and Minority Ethnic; N=number being randomised; PTSD=post-traumatic stress disorder

Cognitive behavioural conjoint therapy versus waitlist for the support of partners of adults with PTSD

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
Monson 2008/2012/Schnaider 2014	Couple interventions: Cognitive-behavioural conjoint therapy	Unclear	Partner/spouse of adult with PTSD. Type of trauma for partner with PTSD: Adult sexual trauma (20%); child sexual trauma (28%); noncombat physical assault (15%); motor vehicle collision (8%);	40	Age range (mean): 18-70 (37.8) Gender (% female): 33 BME (% non-white): 20 Country: US and Canada	Inclusion criteria: heterosexual and same-sex couples where one partner met criteria for PTSD (met the DSM-IV-TR symptom cluster criteria and a total CAPS severity score≥45), and both members of the couple were between 18 and 70 years old. Exclusion criteria: substance dependence that hadn't been in remission for at least 3 months, uncontrolled bipolar or psychotic disorder, acute suicidality

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
			witnessing/learning about death/illness (13%); combat (5%); other (13%)		Coexisting conditions: Partner group: 25% any comorbidity, 8% mood disorder, 13% anxiety disorder, 3% substance abuse, 5% 'other' Lifetime experience of trauma (mean number of prior traumas/% with previous trauma): NR Single or multiple incident index trauma: Unclear	or homicidality, severe cognitive impairment, severe IPV within the past year, receiving other couple therapy or individual therapy for PTSD during the study and unstable drug regimen within the 2 months prior to study entry.

BME=Black and Minority Ethnic; N=number being randomised; PTSD=post-traumatic stress disorder

Cognitive behavioural conjoint therapy versus psychoeducational sessions for the support of partners of adults with PTSD

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
Sautter 2015	Couple interventions: Cognitive-behavioural conjoint therapy	Unclear	Partner of veteran of Operation Iraqi Freedom (OIF)/Operation Enduring Freedom (OEF) with PTSD	57	Age range (mean): NR (32.2) Gender (% female): 98 BME (% non-white): 25 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: veterans of Operation Iraqi Freedom (OIF)/Operation Enduring Freedom (OEF), who met Diagnostic and Statistical Manual of Mental Disorders (fourth edition, text revision; DSM–IV–TR) criteria for PTSD, and who had been cohabiting with an opposite-sex intimate partner for at least 6 consecutive months. Exclusion criteria for both partners included: physical aggression with injury to a partner during domestic violence as measured on the Physical Assault subscale of the Revised Conflict Tactic Scales), active substance dependence within the past 3months, current psychotic symptoms, imminent suicidality, and/or homicidal behaviour. Partners with a current diagnosis of PTSD were also excluded. Veterans were asked to not participate in concurrent evidence based PTSD treatments, and couples were asked to refrain from participating in other concurrent couple therapies while in the trial. If prescribed psychotropic medications, then veterans were asked to communicate with their prescribing physicians the importance of maintaining a stable regimen during their study participation, to alert study staff to medication changes while in the study, and to avoid major changes in medication

BME=Black and Minority Ethnic; N=number being randomised; PTSD=post-traumatic stress disorder

Self-help (without support) versus waitlist for the support of partners of adults with PTSD

Study ID	Intervention	PTSD details	Trauma type	N	Demographics	Inclusion/Exclusion criteria
Erbes (submitted)	Self-help (without support): Computerised psychoeducational intervention	Unclear	Partner (defined as being in an intimate relationship) of veteran with combat-related PTSD	46	Age range (mean): NR Gender (% female): NR 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	NR

BME=Black and Minority Ethnic; N=number being randomised; PTSD=post-traumatic stress disorder

Appendix E – Forest plots

Forest plots for "For family members (including children and carers) of people at risk of PTSD, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?"

Psychological: Problem solving

Problem solving versus TAU for caregivers of adults at risk of PTSD

Figure 2: Problem solving versus TAU for caregivers of adults at risk of PTSD: Family member/carer mental health at 6-week follow-up (BSI global T-test score)

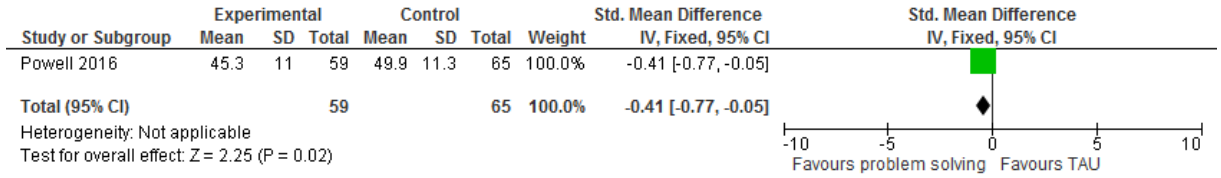
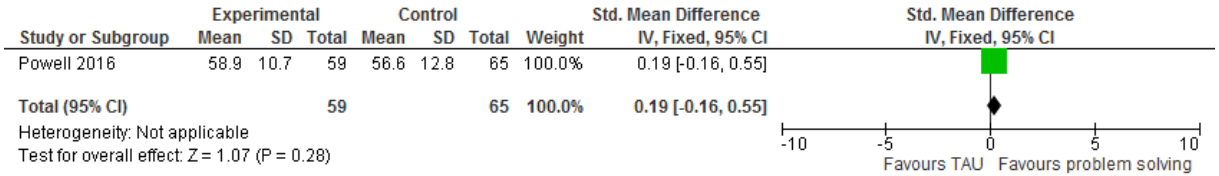


Figure 3: Problem solving versus TAU for caregivers of adults at risk of PTSD: Family member/carer quality of life at 6-week follow-up (BCOS)



Psychological: Self-help (without support)

Self-help (without support) versus attention-placebo for parents of children at risk of PTSD

Figure 4: Self-help (without support) versus attention-placebo for parents of children at risk of PTSD: Family member/carer mental health: Anxiety (STAI State change score)

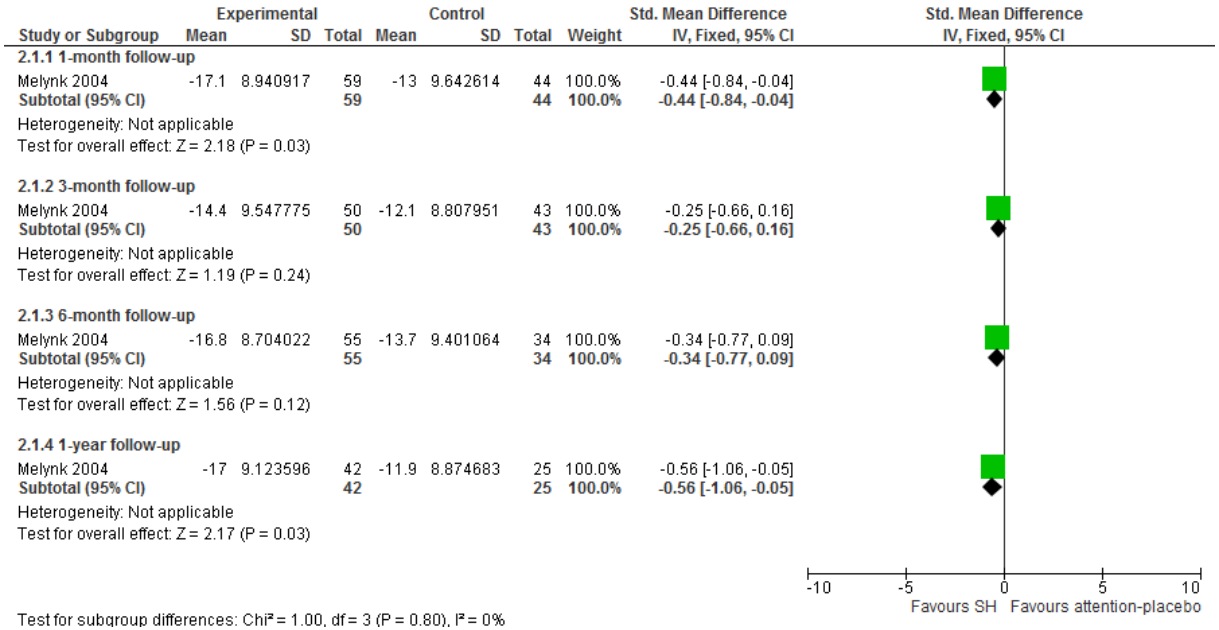
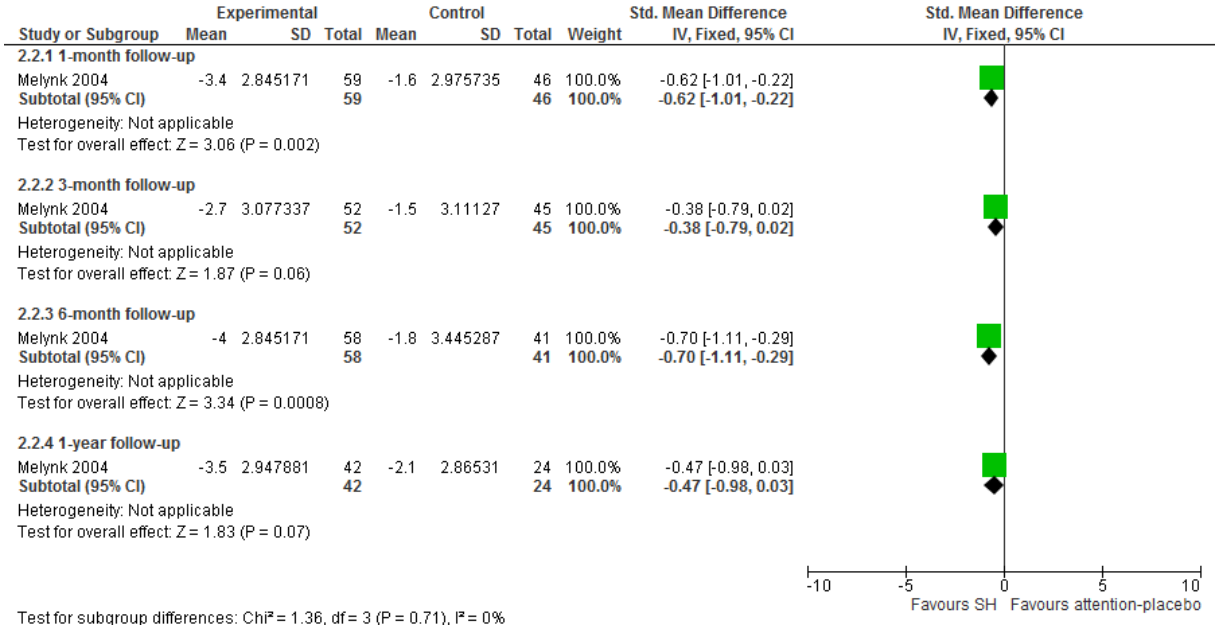

Experimental
Control
Std. Mean Difference
Std. Mean Difference
Study or Subgroup Mean SD Total Mean SD Total Weight IV, Fixed, 95% CI
IV, Fixed, 95% CI
2.1.1 1-month follow-up
Melynk 2004 -17.1 8.940917 59 -13 9.642614 44 100.0% -0.44 [-0.84, -0.04]
Subtotal (95% CI) 59 44 100.0% -0.44 [-0.84, -0.04]
Heterogeneity: Not applicable
Test for overall effect: Z = 2.18 (P = 0.03)
2.1.2 3-month follow-up
Melynk 2004 -14.4 9.547775 50 -12.1 8.807951 43 100.0% -0.25 [-0.66, 0.16]
Subtotal (95% CI) 50 43 100.0% -0.25 [-0.66, 0.16]
Heterogeneity: Not applicable
Test for overall effect: Z = 1.19 (P = 0.24)
2.1.3 6-month follow-up
Melynk 2004 -16.8 8.704022 55 -13.7 9.401064 34 100.0% -0.34 [-0.77, 0.09]
Subtotal (95% CI) 55 34 100.0% -0.34 [-0.77, 0.09]
Heterogeneity: Not applicable
Test for overall effect: Z = 1.56 (P = 0.12)
2.1.4 1-year follow-up
Melynk 2004 -17 9.123596 42 -11.9 8.874683 25 100.0% -0.56 [-1.06, -0.05]
Subtotal (95% CI) 42 25 100.0% -0.56 [-1.06, -0.05]
Heterogeneity: Not applicable
Test for overall effect: Z = 2.17 (P = 0.03)
-10
-5
0
5
10
Favours SH
Favours attention-placebo
Test for subgroup differences: Chi² = 1.00, df = 3 (P = 0.80), I² = 0%

Figure 5: Self-help (without support) versus attention-placebo for parents of children at risk of PTSD: Family member/carer mental health: Depression (POMS change score)



Forest plots for "For family members (including children and carers) of people with clinically important post-traumatic stress symptoms, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?"

Psychological: Trauma-focused CBT

Trauma-focused CBT (caregiver and child) versus supportive counselling (caregiver and child) for the support of parents of children with PTSD

Figure 6: Trauma-focused CBT (caregiver and child) versus supportive counselling (caregiver and child) for the support of parents of children with PTSD: Family member/carer depression (BDI-II change score)

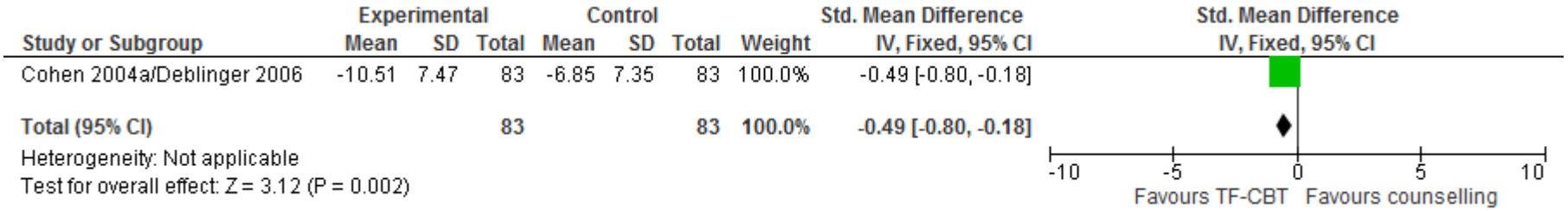
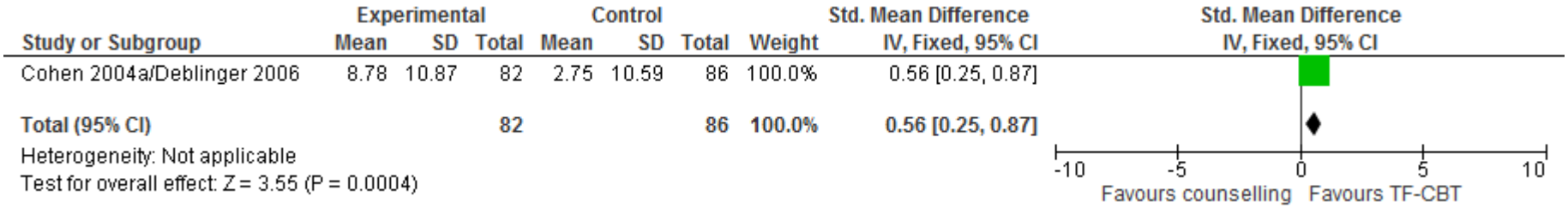


Figure 7: Trauma-focused CBT (caregiver and child) versus supportive counselling (caregiver and child) for the support of parents of children with PTSD: Relationship difficulties (parenting difficulties [PPQ] change score)



Psychological: Couples interventions

Cognitive behavioural conjoint therapy versus waitlist for the support of partners of adults with PTSD

Figure 8: Cognitive behavioural conjoint therapy versus waitlist for the support of partners of adults with PTSD: Partner depression symptoms (BDI-II change score)

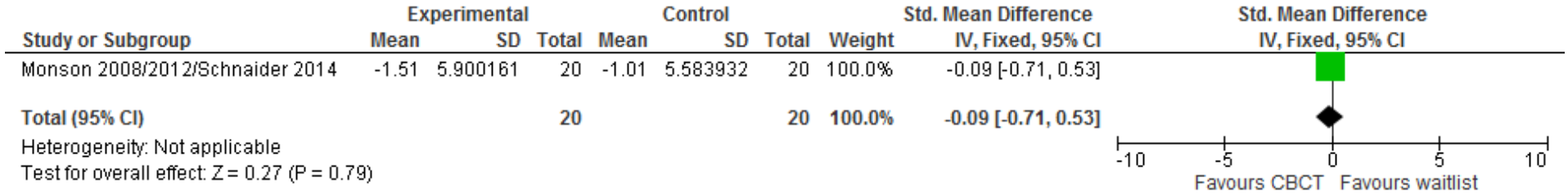


Figure 9: Cognitive behavioural conjoint therapy versus waitlist for the support of partners of adults with PTSD: Relationship difficulties response (number of participants showing improvement of at least 10 points on DAS)

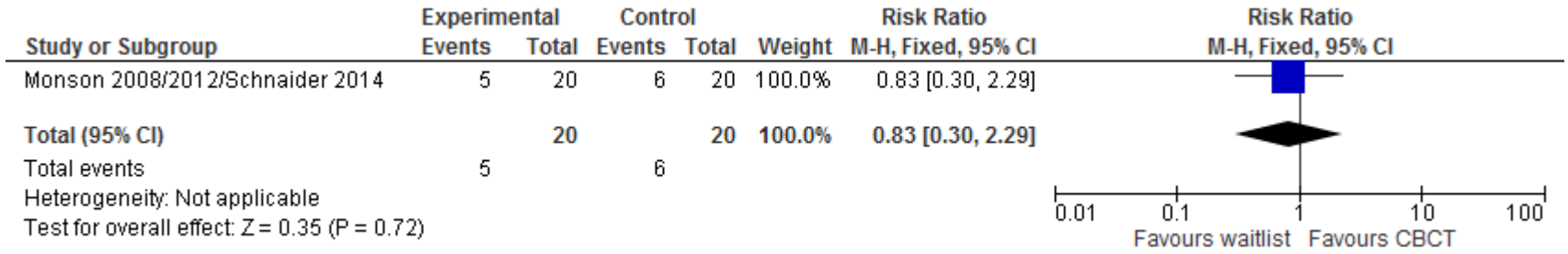


Figure 10: Cognitive behavioural conjoint therapy versus waitlist for the support of partners of adults with PTSD: Relationship difficulties remission (number of participants scoring ≥98 on DAS)

Study or Subgroup	Experimental Events	Experimental Total	Control Events	Control Total	Weight	Risk Ratio M-H, Fixed, 95% CI
Monson 2008/2012/Schnaider 2014	11	20	10	20	100.0%	1.10 [0.61, 1.99]
Total (95% CI)		**20**		**20**	**100.0%**	**1.10 [0.61, 1.99]**
Total events	11		10			
Heterogeneity: Not applicable						
Test for overall effect: Z = 0.32 (P = 0.75)						

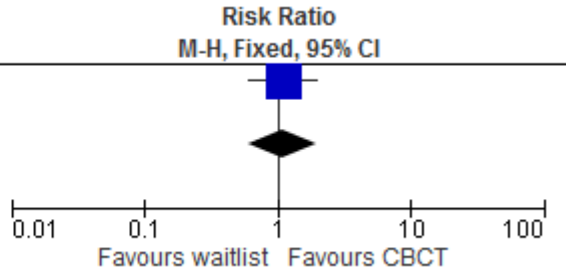
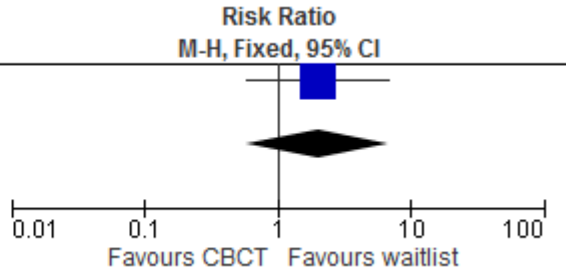


Figure 11: Cognitive behavioural conjoint therapy versus waitlist for the support of partners of adults with PTSD: Discontinuation (loss to follow-up)

Study or Subgroup	Experimental Events	Experimental Total	Control Events	Control Total	Weight	Risk Ratio M-H, Fixed, 95% CI
Monson 2008/2012/Schnaider 2014	6	20	3	20	100.0%	2.00 [0.58, 6.91]
Total (95% CI)		**20**		**20**	**100.0%**	**2.00 [0.58, 6.91]**
Total events	6		3			
Heterogeneity: Not applicable						
Test for overall effect: Z = 1.10 (P = 0.27)						



Cognitive behavioural conjoint therapy versus psychoeducational sessions for the support of partners of adults with PTSD

Figure 12: Cognitive behavioural conjoint therapy versus psychoeducational sessions for the support of partners of adults with PTSD: Family member/carer anxiety (STAI-state change score)

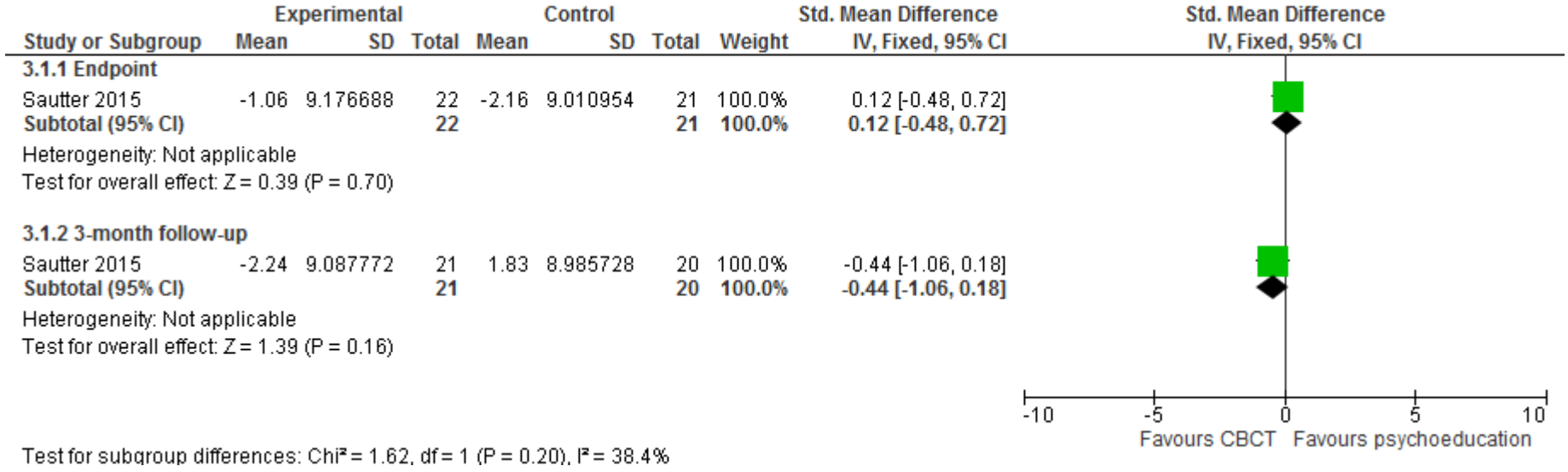


Figure 13: Cognitive behavioural conjoint therapy versus psychoeducational sessions for the support of partners of adults with PTSD: Family member/carer depression (CES-D change score)

Study or Subgroup	Experimental Mean	SD	Total	Control Mean	SD	Total	Weight	Std. Mean Difference IV, Fixed, 95% CI
3.2.1 Endpoint								
Sautter 2015	-2.49	9.002178	22	-2.24	8.940165	21	100.0%	-0.03 [-0.63, 0.57]
Subtotal (95% CI)			**22**			**21**	**100.0%**	**-0.03 [-0.63, 0.57]**
Heterogeneity: Not applicable								
Test for overall effect: Z = 0.09 (P = 0.93)								
3.2.2 3-month follow-up								
Sautter 2015	-1.07	8.971243	21	-0.14	8.905366	20	100.0%	-0.10 [-0.71, 0.51]
Subtotal (95% CI)			**21**			**20**	**100.0%**	**-0.10 [-0.71, 0.51]**
Heterogeneity: Not applicable								
Test for overall effect: Z = 0.33 (P = 0.74)								

Test for subgroup differences: Chi² = 0.03, df = 1 (P = 0.86), I² = 0%

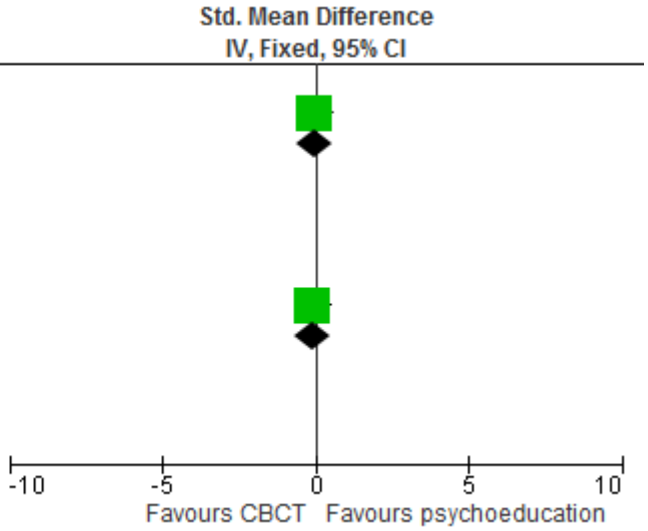


Figure 14: Cognitive behavioural conjoint therapy versus psychoeducational sessions for the support of partners of adults with PTSD: Relationship improvement (DAS change score)

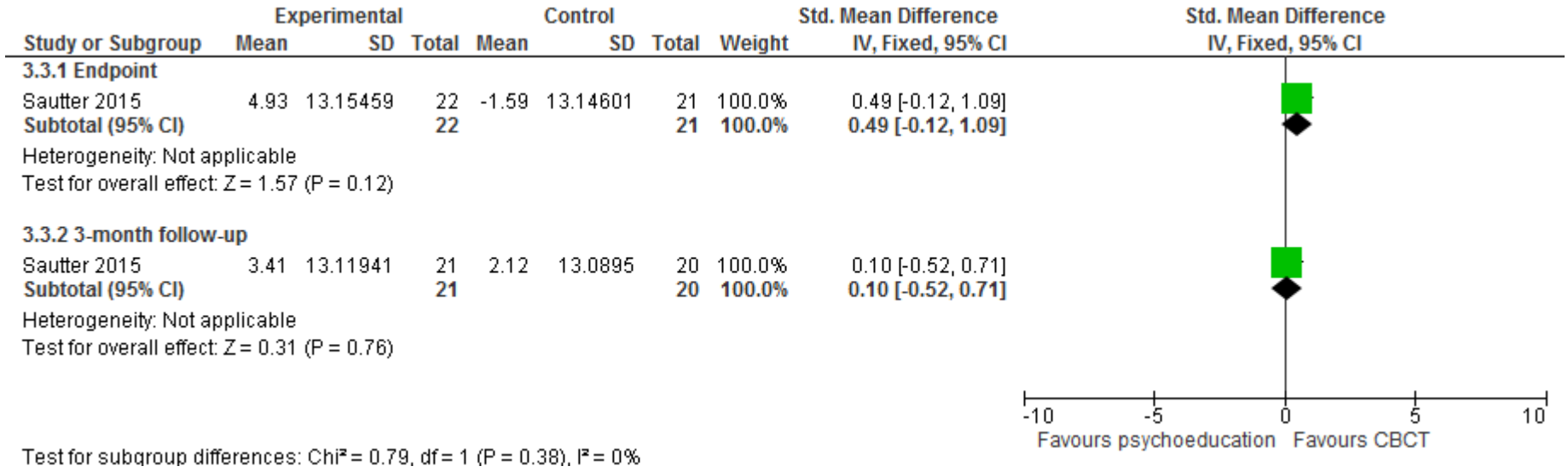
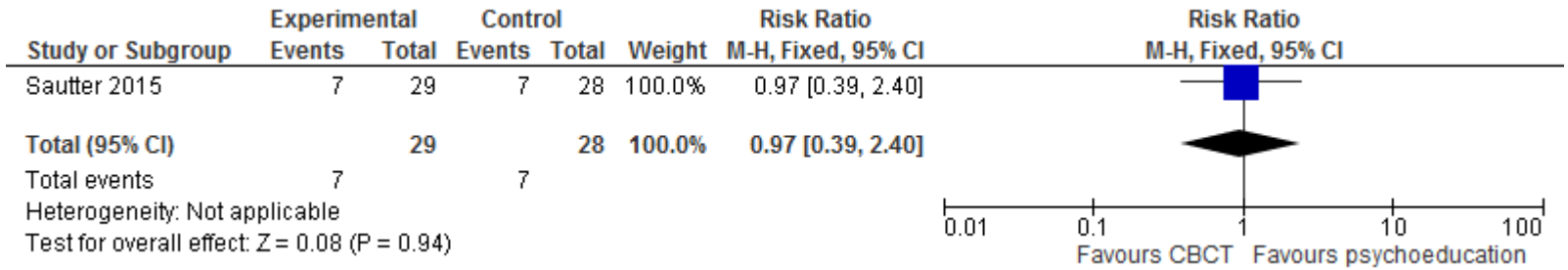


Figure 15: Cognitive behavioural conjoint therapy versus psychoeducational sessions for the support of partners of adults with PTSD: Discontinuation (loss to follow-up)



Self-help (without support) versus waitlist for the support of partners of adults with PTSD

Figure 16: Self-help (without support) versus waitlist for the support of partners of adults with PTSD: Family/carer mental health (BSI change score)

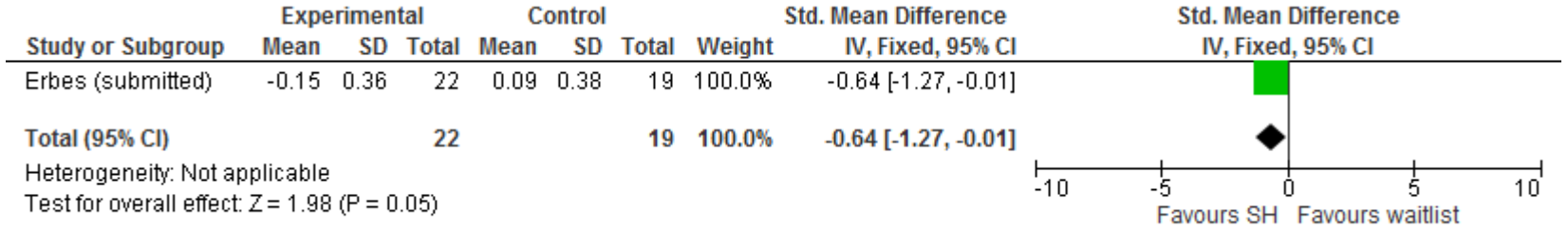
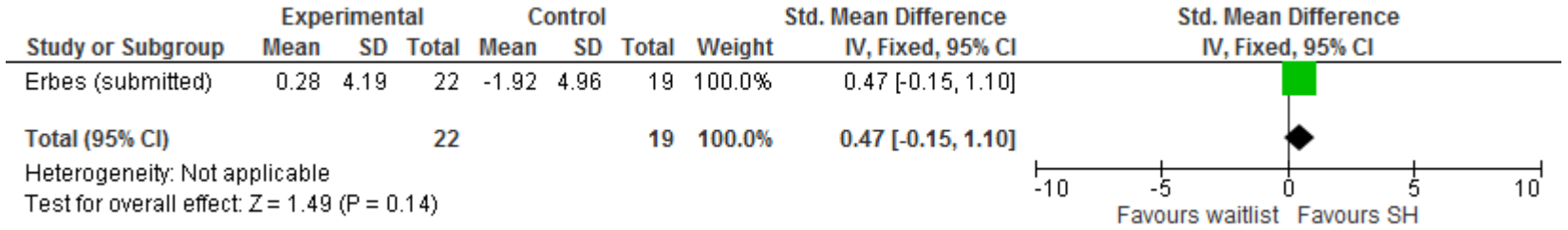


Figure 17: Self-help (without support) versus waitlist for the support of partners of adults with PTSD: Relationship satisfaction (DAS-7 change score)



Appendix F–GRADE tables

GRADE tables for "For family members (including children and carers) of people at risk of PTSD, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?"

Psychological: Problem solving

Problem solving versus TAU for caregivers of adults at risk of PTSD

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Problem solving	TAU	Relative (95% CI)	Absolute		
Family member/carer mental health at 6-week follow-up (follow-up mean 6 weeks; measured with: BSI global T-test score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	59	65	-	SMD 0.41 lower (0.77 to 0.05 lower)	LOW	CRITICAL
Family member/carer quality of life at 6-week follow-up (follow-up mean 6 weeks; measured with: Bakas Caregiving Outcomes Scale (BCOS); Better indicated by higher values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	59	65	-	SMD 0.19 higher (0.16 lower to 0.55 higher)	LOW	CRITICAL

[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*

Psychological: Self-help (without support)

Self-help (without support) versus attention-placebo for parents of children at risk of PTSD

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Self-help (without support)	Control	Relative (95% CI)	Absolute		
Family member/carer anxiety at 1-month follow-up (follow-up mean 1 months; measured with: STAI State 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	Self-help (without support)	Control	Relative (95% CI)	Absolute		
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	59	44	-	SMD 0.44 lower (0.84 to 0.04 lower)	LOW	CRITICAL
Family member/carer anxiety at 3-month follow-up (follow-up mean 3 months; measured with: STAI State change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	50	43	-	SMD 0.25 lower (0.66 lower to 0.16 higher)	LOW	CRITICAL
Family member/carer anxiety at 6-month follow-up (follow-up mean 6 months; measured with: STAI State change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	55	34	-	SMD 0.34 lower (0.77 lower to 0.09 higher)	LOW	CRITICAL
Family member/carer anxiety at 1-year follow-up (follow-up mean 12 months; measured with: STAI State change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	42	25	-	SMD 0.56 lower (1.06 to 0.05 lower)	LOW	CRITICAL
Family member/carer depression at 1-month follow-up (follow-up mean 1 months; measured with: POMS change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	59	46	-	SMD 0.62 lower (1.01 to 0.22 lower)	LOW	CRITICAL
Family member/carer depression at 3-month follow-up (follow-up mean 3 months; measured with: POMS change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	52	45	-	SMD 0.38 lower (0.79 lower to 0.02 higher)	LOW	CRITICAL
Family member/carer depression at 6-month follow-up (follow-up mean 6 months; measured with: POMS change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	58	41	-	SMD 0.7 lower (1.11 to 0.29 lower)	LOW	CRITICAL
Family member/carer depression at 1-year follow-up (follow-up mean 12 months; measured with: POMS change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	42	24	-	SMD 0.47 lower (0.98 lower to 0.03 higher)	LOW	CRITICAL

[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*

GRADE tables "For family members (including children and carers) of people with clinically important post-traumatic stress symptoms, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?"

Psychological: Trauma-focused CBT

Trauma-focused CBT (caregiver and child) versus supportive counselling (caregiver and child) for the support of parents of children with PTSD

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Trauma-focused CBT (caregiver and child)	Supportive counselling (caregiver and child)	Relative (95% CI)	Absolute	Quality	Importance
Family member/carer depression (follow-up mean 12 weeks; measured with: BDI-II change score; Better indicated by lower values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	83	83	-	SMD 0.49 lower (0.8 to 0.18 lower)	LOW	CRITICAL
Parenting difficulties (follow-up mean 12 weeks; measured with: Parenting Practices Questionnaire (PPQ) change score; Better indicated by higher values)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	82	86	-	SMD 0.56 higher (0.25 to 0.87 higher)	LOW	IMPORTANT

[1] *Risk of bias is high or unclear across multiple domains*
[2] *OIS not met (N<400)*

Psychological: Couples interventions

Cognitive behavioural conjoint therapy versus waitlist for the support of partners of adults with PTSD

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Cognitive behavioural conjoint therapy	Waitlist	Relative (95% CI)	Absolute		
Partner depression symptoms (follow-up mean 12 weeks; measured with: BDI-II change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	20	20	-	SMD 0.09 lower (0.71 lower to 0.53 higher)	VERY LOW	CRITICAL
Relationship difficulties response (follow-up mean 12 weeks; assessed with: Number of participants showing improvement of at least 10 points on DAS)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	5/20 (25%)	6/20 (30%)	RR 0.83 (0.3 to 2.29)	51 fewer per 1000 (from 210 fewer to 387 more)	VERY LOW	IMPORTANT
Relationship difficulties remission (follow-up mean 12 weeks; assessed with: Number of participants scoring ≥98 on DAS)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	11/20 (55%)	10/20 (50%)	RR 1.1 (0.61 to 1.99)	50 more per 1000 (from 195 fewer to 495 more)	VERY LOW	IMPORTANT
Discontinuation (follow-up mean 12 weeks; assessed with: Number of participants lost to follow-up)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	6/20 (30%)	3/20 (15%)	RR 2 (0.58 to 6.91)	150 more per 1000 (from 63 fewer to 887 more)	VERY LOW	CRITICAL

[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*

Cognitive behavioural conjoint therapy versus psychoeducational sessions for the support of partners of adults with PTSD

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Cognitive behavioural conjoint therapy	Psychoeducational sessions	Relative (95% CI)	Absolute		
Family member/carer anxiety at endpoint (follow-up mean 12 weeks; measured with: STAI-state 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	Cognitive behavioural conjoint therapy	Psychoeducational sessions	Relative (95% CI)	Absolute		
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	22	21	-	SMD 0.12 higher (0.48 lower to 0.72 higher)	VERY LOW	CRITICAL
Family member/carer anxiety at 3-month follow-up (follow-up mean 3 months; measured with: STAI-state change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	21	20	-	SMD 0.44 lower (1.06 lower to 0.18 higher)	VERY LOW	CRITICAL
Family member/carer depression at endpoint (follow-up mean 12 weeks; measured with: CES-D change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[4]	none	22	21	-	SMD 0.03 lower (0.63 lower to 0.57 higher)	VERY LOW	CRITICAL
Family member/carer depression at 3-month follow-up (follow-up mean 3 months; measured with: CES-D change score; Better indicated by lower values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[4]	none	21	20	-	SMD 0.1 lower (0.71 lower to 0.51 higher)	VERY LOW	CRITICAL
Relationship improvement at endpoint (follow-up mean 12 weeks; measured with: DAS change score; Better indicated by higher values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	22	21	-	SMD 0.49 higher (0.12 lower to	VERY LOW	IMPORTANT

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Cognitive behavioural conjoint therapy	Psychoeducational sessions	Relative (95% CI)	Absolute	Quality	Importance
										1.09 higher)		
Relationship improvement at 3-month follow-up (follow-up mean 3 months; measured with: DAS change score; Better indicated by higher values)												
1	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[4]	none	21	20	-	SMD 0.1 higher (0.52 lower to 0.71 higher)	VERY LOW	IMPORTANT
Discontinuation (follow-up mean 12 weeks; assessed with: Number of participants lost to follow-up)												
1	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	very serious[4]	none	7/29 (24.1%)	7/28 (25%)	RR 0.97 (0.39 to 2.4)	7 fewer per 1000 (from 153 fewer to 350 more)	VERY LOW	CRITICAL

[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 harm*
[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*

Psychological: Self-help (without support)

Self-help (without support) versus waitlist for the support of partners of adults with PTSD

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Self-help (without support)	Waitlist	Relative (95% CI)	Absolute	Quality	Importance
Family/carer mental health (follow-up mean 5 weeks; measured with: BSI change score; Better indicated by lower values)												
1	randomised trials	serious [1]	no serious inconsistency	no serious indirectness	serious[2]	reporting bias[3]	22	19	-	SMD 0.64 lower (1.27 to 0.01 lower)	VERY LOW	CRITICAL
Relationship satisfaction (follow-up mean 5 weeks; measured with: DAS-7 change score; Better indicated by higher values)												
1	randomised trials	serious [1]	no serious inconsistency	no serious indirectness	serious[4]	reporting bias[3]	22	19	-	SMD 0.47 higher (0.15 lower to 1.1 higher)	VERY LOW	IMPORTANT

[1] *Risk of bias was high or unclear across multiple domains*
[2] *OIS not met (N<400)*
[3] *Data is not reported/cannot be extracted for all outcomes*
[4] *95% CI crosses both line of no effect and threshold for clinically important benefit*

Appendix G – Health economic evidence study selection

Health economic evidence study selection for "For family members (including children and carers) of people at risk of PTSD, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?" and "For family members (including children and carers) of people with clinically important post-traumatic stress symptoms, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?"

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 Supplementary Material – Methods Chapter'.

Appendix H – Health economic evidence tables

Health economic evidence tables for "For family members (including children and carers) of people at risk of PTSD, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?" and "For family members (including children and carers) of people with clinically important post-traumatic stress symptoms, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?"

No health economic evidence was identified for these reviews.

Appendix I – Health economic evidence profiles

Health economic evidence profiles for "For family members (including children and carers) of people at risk of PTSD, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?" and "For family members (including children and carers) of people with clinically important post-traumatic stress symptoms, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?"

No health economic evidence was identified for these reviews and no economic analysis was undertaken.

Appendix J – Health economic analysis

Health economic analysis for "For family members (including children and carers) of people at risk of PTSD, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?" and "For family members (including children and carers) of people with clinically important post-traumatic stress symptoms, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?"

No health economic analysis was conducted for these reviews.

Appendix K – Excluded studies

Clinical studies

Excluded studies for "For family members (including children and carers) of people at risk of PTSD, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?"

Psychological: Parent training/Family therapy

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
Swenson 2010	Handsearch	Intervention outside protocol	Swenson CC, Schaeffer CM, Henggeler SW, Faldowski R, Mayhew AM. Multisystemic Therapy for Child Abuse and Neglect: a randomized effectiveness trial. Journal of Family Psychology. 2010 Aug;24(4):497.	

Excluded studies for "For family members (including children and carers) of people with clinically important post-traumatic stress symptoms, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?"

Psychological: Self-help (without support)

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
Interian 2016	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Outcomes are not of interest	Interian, A., Kline, A., Perlick, D., Dixon, L., Feder, A., Weiner, M. D., Goldstein, M. F., Hennessy, K., Hill, L. S., Losonczy, M. (2016) Randomized controlled trial of a brief Internet-based intervention for families of Veterans with posttraumatic stress disorder, Journal of Rehabilitation Research and Development, 53, 629-640	

Psychosocial: Psychoeducation and supportive intervention

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
Sones 2015	RQ 1.1-1.2 & 2.1-2.2 (searches combined)	Sample size (N<10/arm)	Sones, H., Madsen, J., Jakupcak, M., Thorp, S. (2015) Evaluation of an educational group therapy program for female partners of veterans	

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
			diagnosed with PTSD: A pilot study, Couple and Family Psychology: Research and Practice, 4, 150-160	

Psychosocial: Practical support

Study ID	Search	Reason for exclusion	Ref 1	Ref 2
Kynoch 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	Kynoch, K., Anne, C., Fiona, C., Annie, M. (2016) The effectiveness of interventions to meet family needs of critically ill patients in an adult intensive care unit: A systematic review update, JBI Database of Systematic Reviews and Implementation Reports, 14, 3, 179-232	

Appendix L – Research recommendations

Research recommendations for "For family members (including children and carers) of people at risk of PTSD, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?" and "For family members (including children and carers) of people with clinically important post-traumatic stress symptoms, do specific psychological, psychosocial or other non-pharmacological interventions result in an improvement in their mental health and wellbeing, a reduction in burden and improved social and occupational outcomes?"

No research recommendations for this review question.