



THE IMPACT OF MENTAL HEALTH AND PSYCHOSOCIAL SUPPORT PROGRAMMES FOR POPULATIONS AFFECTED BY HUMANITARIAN EMERGENCIES

About this systematic review

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Rebuilding lives and hope in Pakistan, a year on from the floods. Vicki Francis/DFID.

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ABBREVIATIONS

CBI	Classroom/school-based intervention
CBT	Cognitive behavioural therapy
CI	Confidence interval
CPT	Cognitive processing therapy
cRCT	Cluster randomized controlled trial
CYP	Children and young people
EMDR	Eye movement desensitization and reprocessing
EPPI-Cent	Evidence for Policy and Practice Information and Co-coordinating Centre
FCS	Former child soldier
GBV	Gender-based violence
IASC	Inter-Agency Standing Committee
IDP	Internally displaced person
IPT	Interpersonal psychotherapy
IPT-G	Group interpersonal therapy
LMICs	Low- and middle-income countries
MHPSS	Mental health and psychosocial support
NET	Narrative Exposure Therapy
nRCT	Non-randomized controlled trial
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
PTSD	Post-traumatic stress disorder
RCT	Randomized controlled trial
RR	Risk ratio
SD	Standard deviation
SMD	Standardized mean difference
TAU	Treatment as usual
TFT	Thought Field Therapy
TF-CBT	Trauma-focused cognitive behavioural therapy
TRT	Teaching Recovery Techniques
YRI	Youth Readiness Intervention

0 EXECUTIVE SUMMARY

This systematic review, commissioned by the Humanitarian Evidence Programme and carried out by a team from the EPPI-Centre, University College London (UCL), draws together primary research on mental health and psychosocial support (MHPSS) programmes for people affected by humanitarian crises in low- and middle-income countries (LMICs). It investigates both the process of implementing MHPSS programmes and their receipt by affected populations, as well as assessing their intended and unintended effects.^a

What are ‘mental health and psychosocial support programmes’?

Humanitarian emergencies can impact the mental health and psychosocial well-being of local populations. MHPSS programmes are one way of seeking to reduce negative impacts and provide assistance to affected populations. MHPSS interventions may vary regarding the extent to which they develop contextually unique programmes. We broadly define MHPSS in this review as interventions ‘to protect or promote psychosocial well-being and/or prevent or treat mental disorder’ (IASC, 2007: 11)

We asked the following research questions:

1. What are the barriers to, and facilitators of, implementing and receiving MHPSS interventions delivered to populations affected by humanitarian emergencies?
2. What are the effects of MHPSS interventions delivered to populations affected by humanitarian emergencies?
3. What are the key features of effective MHPSS interventions and how can they be successfully developed and implemented?
4. What are the gaps in research evidence for supporting delivery and achieving the intended outcomes of MHPSS interventions?

To address the research questions, we:

- conducted comprehensive searches of electronic databases and websites, and contacted experts in the field (the initial database search was conducted in October–November 2015 and website searches, hand searching and citation checking were completed by June 2016)
- included studies reporting on the implementation or receipt of MHPSS programmes and outcome evaluations of MHPSS interventions carried out in LMICs, published in English from 1980 onwards
- coded and described key characteristics of process and outcome evaluations
- synthesized the evidence to answer the review questions (questions 1–3)
- identified gaps in the existing research base (question 4).

0.1 WHAT ARE THE BARRIERS TO, AND FACILITATORS OF, IMPLEMENTING AND RECEIVING MHPSS INTERVENTIONS DELIVERED TO POPULATIONS AFFECTED BY HUMANITARIAN EMERGENCIES?

Studies evaluating the delivery and receipt of MHPSS programmes were highly contextual. Mapping programmes against the Inter-Agency Standing Committee’s layered system of complementary MHPSS supports (the ‘intervention pyramid’ – IASC, 2007: 11–12^b), the evidence base included tier four specialized services in post-conflict settings and immediately after an earthquake and tier three programmes focused on the psychological and social impact of the Rwandan genocide. Meanwhile, programmes primarily targeting children were more likely to be delivered at tier two. See Figure 0.1 for more details of all of the different types of programme included in the qualitative synthesis of process evaluations.

^a The Humanitarian Evidence Programme is a partnership between Oxfam GB and the Feinstein International Center at the Friedman School of Nutrition Science and Policy, Tufts University. It is funded by the United Kingdom (UK) government’s Department for International Development (DFID) through the Humanitarian Innovation and Evidence Programme.

^b IASC (2007). *IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings*. Geneva: IASC.

Figure 0.1: Characteristics of studies included in the qualitative synthesis of process evaluations

IASC tier	Disaster setting	Intervention
Tier 4: Specialized services	Post-conflict: Civil war	Primary mental health and community outreach service for adults and children in Northern Uganda Primary mental healthcare: psychiatric hospitals and community mental health services for former child soldiers in Sierra Leone
	Immediate response: Natural disaster	Various models of specialized MHPSS programmes for adults affected by the 2010 earthquake in Haiti
Tier 3: Focused, non-specialized support	Post-conflict: Genocide	Psychosocial trauma recovery programme for children and care-givers in Rwanda
		Community counselling groups for adult women in Rwanda
		The Healing of Life Wounds programme for adults in Rwanda
Tier 2: Community and family supports	Ongoing conflict	Qaderoon' (We Are Capable) social skills building programme for refugee children (11–14 years old) in Palestine
	Post-conflict: Civil war	Children and war rehabilitation psychological and social programme for former male child soldiers in Mozambique
		Creative arts project with Mayan women in Guatemala
	Post-natural disaster: Tsunami Earthquakes	Sri Lanka: post-tsunami after-school programme for students
		Sport and play programme for traumatized children and youth (6–18 years old) after the 2003 earthquake in Iran School-based psycho-educational programme for children and parents after the 1999 earthquake in Turkey
Tier 1: Basic services and security	Post-conflict: Civil war	Village health worker clinic integrating health delivery with other community development initiatives for the community in Burundi

Key findings from the thematic synthesis of MHPSS programmes

We included 13 process evaluations in the review. Ten studies were judged to be of either high or medium reliability or usefulness,^c providing an overall sound evidence base. Three studies were of low reliability, two provided medium useful findings, and one was low on both criteria. The summary of key findings from the thematic synthesis is presented in Figure 0.2.

Figure 0.2: Summary of key findings

Themes		No. of studies	Quality	
			Reliability	Usefulness
Theme 1: Engagement with local communities and government agencies	Enable community mobilization and sensitization	n=3	1 high 1 medium 1 low	2 high 1 medium
	Develop effective local community and government partnerships	n=2	1 high 1 medium	1 high 1 medium
	Establish good relationships with parents to support uptake of MHPSS programmes	n=4	1 high 2 low	2 medium 1 low
Theme 2: Sufficient number of trained MHPSS programme providers	Address challenge of recruiting and retaining providers	n=3	1 high 2 low	2 medium 1 low
	Ensure providers are trained to deliver MHPSS programmes	n=4	1 high 3 low	3 medium 1 low
Theme 3: Experience of programme activities	Increase meaningful and enjoyable engagement of programme activities	n=3	2 high 1 medium	2 high 1 medium
	Ensure cultural relevance of activities	n=2	2 medium	2 high
Theme 4: Benefits of group-based programmes	Provide a group-based resource and source of support	n=4	2 high 2 medium	3 high 1 medium
	Provide a safe space to tell stories	n=2	2 medium	2 high
Theme 5: Quality and nature of relationships with programme providers	Build trusting and supportive relationships	n=2	2 medium	2 high
	Develop personal qualities so providers can act as role models	n=3	3 medium	3 high

^c Reliability was judged according to whether steps had been taken to increase rigour in methods of sampling and data collection/analysis and the extent to which the study findings were grounded in the data. Usefulness was judged according to whether the study privileged the perspectives of participants and on the breadth and depth of findings to answer the review question.

Theme 1: Community engagement was a key mechanism to support the successful implementation and uptake of MHPSS programmes in humanitarian settings. For example, mental health sensitization and mobilization strategies and the need to develop effective partnerships with local communities, government and non-governmental organizations (NGOs) were seen as pivotal in increasing programme accessibility and reach. Establishing good relationships with parents may also be important when there is a need to communicate the value of children and young people (CYP) participating in MHPSS programmes.

Theme 2: Sufficient numbers of trained MHPSS providers were essential in ensuring that a range of MHPSS programmes were delivered as planned; however, this could be challenging in resource-limited settings where there can be a lack of incentives to work in the mental health sector.

Theme 3: Experience of programme activities from the perspectives of recipients suggests that MHPSS programmes need to be socially and culturally meaningful to local populations to ensure that they are appealing and to enhance their ability to achieve their intended aims.

Theme 4: Benefits of group-based programmes included providing an opportunity to connect with people from similar circumstances and backgrounds and to share stories, helping to promote greater social cohesion and reducing social isolation.

Theme 5: Building trusting and supporting relationships was important to recipients and helped to maximize their engagement and increase the impact of programmes. Providers who could relate by bridging differences, being nurturing and acting as role models were highly valued.

0.2 WHAT ARE THE EFFECTS OF MHPSS INTERVENTIONS DELIVERED TO POPULATIONS AFFECTED BY HUMANITARIAN EMERGENCIES?

0.2a Overview of MHPSS programmes for children and young people (CYP)

Trial evaluations for CYP were likely to use cognitive behavioural techniques or to employ other psychotherapy modalities such as narrative exposure or interpersonal grief-focused therapy. Interventions were delivered primarily in whole-classroom or other school-based settings, for a maximum duration of three months.

Figure 0.3: Overview of MHPSS programmes delivered to children and young people

Type of programme:

- Psychotherapy: cognitive behavioural therapy (CBT, n=13)
- Narrative Exposure Therapy (NET, n=5)
- Other psychotherapy modalities (n=5)
- Psychosocial programmes (n=6)

Population: Mostly mixed. Three studies also evaluated gender-specific MHPSS programmes.

Format: Delivered in group formats and implemented in school/classroom settings.

Length/intensity: Between four and 15 sessions, for one or two hours, for a period of 1–3 months.

Key findings on the effectiveness of MHPSS programmes for CYP

We included 26 randomized controlled trial (RCT) studies (eight low, 13 medium and five high risk of bias studies) in the in-depth review and quantitative analysis. The findings from the synthesis were as follows:

Strong evidence

- **MHPSS** programmes are effective in reducing functional impairment but have little or no impact on anxiety.

Moderate evidence

- **MHPSS** programmes probably slightly reduce symptoms of post-traumatic stress disorder (PTSD), psychological distress and conduct problems.
- **MHPSS** programmes may have no impact on depression or prosocial behaviours.
- **Trauma-focused cognitive behavioural therapy (TF-CBT)** programmes are effective in reducing PTSD symptoms, conduct problems and emotional problems.
- **Classroom/school-based intervention (CBI-CBT)** programmes may have little or no impact on anxiety.
- **Narrative Exposure Therapy (NET)** can improve symptoms of functional impairment.
- **NET** probably has little impact on PTSD symptoms.
- **Psychosocial interventions** may lead to an increased level of depression symptoms and may slightly decrease prosocial behaviours.
- **Psychosocial interventions** probably make no improvement to functional impairment.

Limited evidence

- **MHPSS** programmes may reduce emotional problems, slightly reduce somatic complaints and marginally increase hope.
- **MHPSS** programmes may slightly decrease social support perceived by CYP.
- **TF-CBT** programmes may improve prosocial behaviours.
- **CBI-CBT** programmes appear to be effective in reducing depression, functional impairment and psychological distress and in slightly improving hope, but might have little or no impact on PTSD symptoms, conduct problems or prosocial behaviours.
- **NET** may have a negative impact on depression, or may slightly increase anxiety and somatic complaints, and probably has little impact on school performance.
- **Psychosocial interventions** may reduce PTSD symptoms, emotional problems and conduct problems.

Narrative synthesis suggests that:

- **CBT** may have no impact on social support (two medium risk of bias studies).
- **NET** (one low risk of bias study) may have a negative trend on anxiety and somatic complaints, and no impact on school performance.
- **Psychotherapy programmes show a positive trend** (from four studies, one medium and three high risk of bias: mind and body skills group, counselling and a school-based trauma-grief intervention) in reducing PTSD symptoms.
- **Psychosocial interventions** may improve social support (low risk of bias study) and have no impact on psychological distress (low risk of bias study).
- **Psychosocial interventions** may increase anxiety symptoms (low risk of bias study).

Figure 0.4: Summary of findings of the impact of MHPSS programmes on CYP

Impact of MHPSS	Pooled effect size; or stated otherwise	Size and quality of evidence and consistency (n = number of participants)	Overall strength of evidence
1. Impact of all MHPSS programmes			
1. PTSD	-0.46 (-0.69, -0.24)	21 studies; n=3,615; 16 high- or medium-quality studies; inconsistent	Moderate
2. Depression	-0.06 (-0.27, 0.14)	14 studies; n=3,516; 10 high- or medium-quality studies; inconsistent	Moderate
3. Conduct problems	-0.45 (-0.81, -0.09)	8 studies; n=1,918; 7 high- or medium-quality studies; inconsistent	Moderate
4. Functional impairment	-0.24 (-0.39, -0.09)	8 studies; n=1,574; 7 high- or medium-quality studies; consistent	Strong
5. Prosocial behaviours	0.09 (-0.16, 0.34)	8 studies; n=1,997; 7 high- or medium-quality studies; inconsistent	Moderate
6. Psychological distress	-0.24 (-0.52, 0.03)	8 studies; n=1,908; 6 high- or medium-quality studies; inconsistent	Moderate
7. Anxiety	0.02 (-0.11, 0.14)	6 studies; n=1,886; 5 high- or medium-quality studies; consistent	Strong
8. Emotional problems	-1.02 (-1.5, -0.53)	5 studies; n=955; 4 high- or medium-quality studies; inconsistent	Limited
9. Hope	0.45 (0.19, 0.71)	5 studies; n=1,703; 3 high- or medium-quality studies; inconsistent	Limited
10. Social support	-0.41 (-0.88, 0.07)	2 studies n=416; 2 high- or medium-quality studies; inconsistent	Limited
11. Somatic complaints	-0.36 (-1.27, 0.55)	2 studies; n=197; 1 high-quality study	Limited
Coping, grief, suicide, guilt, stigmatization, resilience	Insufficient		
2. Impact of cognitive behavioural therapy (CBT)			
2.1 Impact of trauma-focused CBT (TF-CBT)			
1. PTSD	-2.21 (-2.7, -1.72)	3 studies; n=152; 3 high- or medium-quality studies; consistent	Moderate
2. Conduct problems	-1.2 (-1.58, -0.81)	3 studies; n=152; 3 high- or medium-quality studies; consistent	Moderate
3. Prosocial behaviours	0.63 (-0.55, 1.82)	3 studies; n=152; 3 high- or medium-quality studies; inconsistent	Limited
4. Emotional problems	-1.76 (-2.3, -1.22)	3 studies; n=152; 3 high- or medium-quality studies; consistent	Moderate
Psychological distress	Insufficient		
2.2 Impact of classroom/school-based intervention CBT (CBI-CBT)			
1. PTSD	-0.198 (-0.50, 0.11)	6 studies; n=2,102; 4 high- or medium-quality studies; inconsistent	Limited
2. Depression	-0.26 (-0.45, -0.07)	6 studies; n=2,102; 4 high- or medium-quality studies; inconsistent	Limited
3. Functional impairment	-0.27 (-0.47, -0.08)	5 studies; n=1,458; 4 medium-quality studies; inconsistent	Limited
4. Hope	0.45 (0.19, 0.71)	5 studies; n=1,703; 3 medium-quality studies; inconsistent	Limited
5. Conduct problems	-0.17 (-0.61, 0.28)	4 studies; n=1,607; 3 medium-quality studies; inconsistent	Limited
6. Anxiety	-0.04 (-0.15, 0.07)	4 studies; n=1,607; 3 medium-quality studies; consistent	Moderate
7. Prosocial behaviours	0.08 (-0.16, 0.31)	3 studies; n=1,204; 2 medium-quality studies; inconsistent	Limited
8. Psychological distress	-0.24 (-0.51, 0.04)	3 studies; n=1,204; 2 medium-quality studies; inconsistent	Limited

Impact of MHPSS	Pooled effect size; or stated otherwise	Size and quality of evidence and consistency (n = number of participants)	Overall strength of evidence
Coping, social support, somatic complaints, emotional problems	Insufficient		
2.3 Impact of Teaching Recovery Techniques CBT (TRT-CBT)			
1. PTSD	-0.35 (-0.74, 0.04)	3 studies; n=558; 2 high- or medium-quality studies; consistent	Moderate
Depression, psychological distress, prosocial behaviours, resilience	Insufficient		
3. Impact of Narrative Exposure Therapy (NET)			
1. PTSD	-0.11 (-0.37, 0.15)	4 studies; n=287; 4 high- or medium-quality studies; consistent	Moderate
2. Depression	0.66 (-0.54, 1.86)	2 studies; n=209; 2 high- or medium-quality studies; inconsistent	Limited
3. Functional impairment	-0.52 (-1.02, -0.03)	2 studies; n=116; 2 high- or medium-quality studies; consistent	Moderate
4. Anxiety	Not pooled effect size: 0.20 (-0.15, 0.56)	1 study; n=124; 1 high-quality study	Limited
5. Somatic complaints	Not pooled effect size: 0.16 (-0.55, 0.87)	1 study; n=31; 1 high-quality study	Limited
6. School performance	No impact on school grade (p<0.19)	1 study; n=47; 1 high-quality study	Limited
Grief, guilt, suicide, stigmatization	Insufficient		
4. Impact of psychosocial interventions			
1. PTSD	-0.67 (-1.39, 0.04)	4 studies; n=381; 4 high- and medium-quality studies; Inconsistent	Limited
2. Depression	0.27 (0.07, 0.46)	4 studies; n=631; 4 high- and medium-quality studies; consistent	Moderate
3. Emotional problems	-0.98 (-2.82, 0.86)	2 studies; n=209; 2 high-quality studies; inconsistent	Limited
4. Conduct problems	-0.45 (-1.76, 0.86)	2 studies; n=209; 2 high-quality studies; inconsistent	Limited
5. Functional impairment	-0.01 (-0.31, 0.29)	2 studies; n=399; 2 medium-quality studies; consistent	Moderate
6. Prosocial behaviours	-0.27 (-0.55, 0.02)	2 studies; n=209; 2 low risk of bias studies; consistent	Moderate
7. Anxiety	Trend in favour of the control group	1 study; n=145; 1 high-quality study	Limited
8. Psychological distress	No impact	1 study; n=87; 1 high-quality study	Limited
9. Physical health	Mixed	2 studies; n=232; 2 high-quality studies	Limited
10. Social support	Positive trend in favour of the intervention group compared with the control group	1 study; n=87; 1 high-quality study	Limited
Suicide, guilt and stigmatization	Insufficient		

- There is evidence to suggest that programme intensity is associated with the effect of MHPSS programmes for CYP on PTSD. Also, there is evidence that the follow-up period is associated with the effect of MHPSS programmes on depression for CYP.
- We observed no clear pattern from a small number of studies to confirm that characteristics of participants, exposure to traumatic events or family and social supports are factors influencing the impact of MHPSS programmes on CYP.

0.2b Overview of MHPSS programmes for adults

Studies evaluating MHPSS programmes for adults using randomized controlled methods were most likely to involve brief, focused psychotherapies delivered in 1:1 sessions in both clinical and non-clinical settings, for a maximum period of three months.

Figure 0.5: Overview of MHPSS programmes for adults

Type of programme:

- Psychotherapy: (CBT, n=6)
- Narrative Exposure Therapy: (NET, n=7)
- Other psychotherapy modalities: (n=9)

Population: Mostly mixed, with fewer than one-fifth of the studies evaluating MHPSS designed for women; one included men only.

Format: Delivered in individual formats in clinics, refugee camps and community/home settings.

Length/intensity: On average programmes lasted 4–13 sessions, for one or two hours in each session, and delivered over a period of two weeks to three months.

Results on the effectiveness of MHPSS programmes for adults

The findings from 20 RCTs (eight low, two medium and 10 high risk of bias studies) were included in the quantitative synthesis. The findings from the synthesis were as follows:

Moderate evidence

- **MHPSS programmes** probably reduce PTSD, depression, anger and self-reported sexual violence.
- **MHPSS programmes** may have no impact on social support.
- **NET** is effective in reducing depression and anxiety symptoms.
- **NET** may have little or no impact on social support.

Limited evidence

- **MHPSS** programmes may lead to improvements in symptoms of anxiety, common mental health problems and fear/avoidance. In addition, MHPSS programmes may slightly reduce grief and emotional problems.
- **CBT** is effective in reducing PTSD and depression, and may slightly reduce grief.
- **NET** may also reduce PTSD and common mental health problems, and may slightly improve coping.
- **NET** may slightly increase emotional problems.

Findings for the narrative synthesis suggest:

- a positive trend in favour of **other psychotherapy interventions** in reducing PTSD symptoms (eye movement desensitization and reprocessing (EMDR) and interpersonal psychotherapy (IPT)); depression (EMDR, counselling, IPT, Thought Field Therapy (TFT)); anger (TFT and IPT); anxiety symptoms (TFT and IPT); fear and avoidance (TFT); partner violence (IPT); and common mental health problems (counselling).

Figure 0.6: Summary of findings on MHPSS programmes for adults

Impact of MHPSS	Pooled effect size; (95% CI); or stated otherwise	Size and quality of evidence and consistency (n = number of participants)	Overall strength of evidence
1. Impact of all MHPSS programmes			
1. PTSD	-0.75 (-0.997, -0.5)	7 studies; n=1,924; 8 medium- or high-quality studies; inconsistent	Moderate
2. Depression	-1.18 (-1.65, -0.71)	12 studies; n=841; 6 medium- or high-quality studies; inconsistent	Moderate
3. Anxiety	-1.41 (-2.21, -0.61)	6 studies; n=630; 3 high-quality studies; inconsistent	Limited
5. Emotional problems	-0.25 (-0.796, 0.29)	5 studies; n=653; 3 high-quality studies; inconsistent	Limited
6. Common mental health problems	-0.88 (-1.45, -0.30)	5 studies; n=420; 3 high-quality studies; inconsistent	Limited
7. Fear and avoidance	-0.73 (-1.01, -0.45)	4 studies n=254; 1 high-quality study	Limited
8. Anger	-0.80 (-1.13, -0.47)	3 studies; n=197; 2 medium-quality studies; consistent	Moderate
9. Social support	0.08 (-0.49, 0.64)	2 studies; n=52; 2 high-quality studies; consistent	Moderate
10. Partner violence	0.44 (-0.97, 0.09)	2 studies; n=71; 2 medium-quality studies; consistent	Moderate
11. Grief	-0.23 (-0.63, 0.16)	2 studies; n=147; 1 high-quality study	Limited
Functional impairment, conduct problems and somatic complaints	Insufficient		
2. Impact of CBT			
1. PTSD	-0.74 (-1.04, -0.43)	6 studies; n=989; 1 high-quality study; inconsistent	Limited
2. Depression	-0.54 (-1.07, -0.01)	4 studies; n=465; 1 high-quality study; inconsistent	Limited
3. Grief	-0.23 (-0.63, 0.16);	2 studies; n=147; 1 high-quality study; consistent	Limited
Functional impairment, fear and avoidance, emotional problems, anxiety, conduct problems, common mental health problems	Insufficient		
3. Impact of NET			
1. PTSD	-1.24 (-1.99, -0.489)	7 studies; n=596; 4 high-quality studies; inconsistent	Limited
2. Depression	-1.19 (-1.72, -0.66)	3 studies; n=70; 2 high-quality studies; consistent	Moderate
3. Common mental health problems	-1.27 (-2.31, -0.23)	4 studies; n=301; 3 high-quality studies; inconsistent	Moderate
4. Anxiety	-1.31 (-1.94, -0.68)	2 studies; n=52; two high-quality studies; consistent	Moderate
5. Social support	0.08 (-0.49, 0.64)	2 studies; n=52; two high-quality studies; consistent	Moderate
6. Coping	0.31 (-0.53, 1.16)	1 study; n=22; 1 high-quality study	Limited
7. Emotional problems	0.48 (-0.32, 1.28)	1 study; n=4; 1 high-quality study	Limited
Somatic complaints	Insufficient		

0.3 WHAT ARE THE KEY FEATURES OF EFFECTIVE MHPSS INTERVENTIONS AND HOW CAN THEY BE SUCCESSFULLY DEVELOPED AND IMPLEMENTED?

To address the review question, we brought together the six hypotheses generated from the synthesis of process evaluations (Question 1) and outcome evaluations (Question 2). We ran a meta-regression for two key outcomes (PTSD and depression) and subsequently we explored any gaps in the analysis. Each hypothesis thus showed that programmes may be more effective if they address the following implementation issues.

Hypothesis 1: Community engagement – steps are taken to engage with the community and/or family members

- Thirteen programmes for CYP and three for adults engaged with the community as part of programme delivery.
- Findings from the meta-regression found no significant association for PTSD or depression for either population group.

Hypothesis 2: Government partnership – programmes are delivered in partnership with governments and/or local agencies

- The MHPSS programmes in nine RCTs cited brief examples of informal government involvement; four of these programmes were delivered to children and five to adults.
- As with Hypothesis 1, no significant association for PTSD or depression was found for either CYP or adults.

Hypothesis 3: Trained providers – the challenge of recruiting and retaining trained providers is overcome

- MHPSS programmes were delivered by trained providers in 26 cases for children and 19 for adults.
- No significant association in reducing PTSD or depression was found for adults. However, a significant association was found between having trained providers and the effect of PTSD in programmes for CYP ($p=0.026$).
- Further explorative examination of statistically successful MHPSS programmes in reducing PTSD in CYP supported this association, revealing that (with the exception of one) all MHPSS programmes effective in reducing PTSD were delivered by trained providers.
- For depression, all successful MHPSS programmes that reported a significant impact of MHPSS in reducing depression were delivered by trained providers.

Hypothesis 4: Socially and culturally meaningful MHPSS – programme activities are socially and/or culturally meaningful

- Seventeen MHPSS programmes for CYP and 11 for adults aimed to be socially and culturally meaningful.
- We found a significant association with this aspect of programming for MHPSS programmes for CYP in depression only ($p=0.031$). This finding was supported by explorative analysis of successful MHPSS programmes for CYP, finding that all MHPSS programmes that reported a significant impact in reducing depression were adapted to be sensitive to local cultures and social contexts.
- Two studies that did not clearly report if MHPSS programmes for children had been adapted to local contexts showed a significant unintended effect of MHPSS on depression.
- No further statistical associations were found for PTSD in CYP or for either outcome in adults.

Hypothesis 5: Group-based programmes – opportunities are provided for people to interact as a group

- Twenty-six programmes delivered to CYP were group-based, while only three programmes were delivered in a group format to adults.
- Despite positive appraisal of the group experience in process evaluations, no significant association for PTSD or depression was found.

Hypothesis 6: Establish good relationships – programme providers build trusting and supportive relationships with programme recipients

- Establishing trusting and supportive relationships between programme providers and recipients was addressed in 11 programmes delivered to children compared with two for adults.
- For adults, no significant association was found for PTSD or depression.
- For children, a significant association was found for PTSD ($p=0.003$), but not for depression. Exploration of MHPSS programmes successful in reducing PTSD and depression in CYP also revealed a non-statistical negative trend across four studies that did not emphasize the importance of establishing relationships between programmes providers and recipients.

0.4

WHAT ARE THE GAPS IN RESEARCH EVIDENCE FOR SUPPORTING DELIVERY AND ACHIEVING THE INTENDED OUTCOMES OF MHPSS INTERVENTIONS?

Overall, there is a rapidly growing evidence base evaluating a broad range of MHPSS programmes for children and adults in LMICs. By comparing the hypotheses emerging from the process evaluation synthesis of providers' and participants' views against the trials evaluating MHPSS programmes (Question 3), and exploring the extent to which the trials addressed these hypotheses, a number of gaps become apparent.

For example:

- Very few of the trials evaluating adult MHPSS programmes sought to mobilize or sensitize local communities about the impact of humanitarian crises on MHPSS.
- The need to work in collaboration with government and local NGOs was either met (and not reported) or did not appear to be a barrier to implementation.
- Many programmes targeting children decided to extend their reach by delivering to groups and providing opportunities for peer support, but this was not apparent in programmes for adults.
- Although providing a significant association in the meta-regression, another gap was the extent to which programmes took steps to build supportive relationships with recipients – a phenomenon that was present, but thinly reported, across all trials.

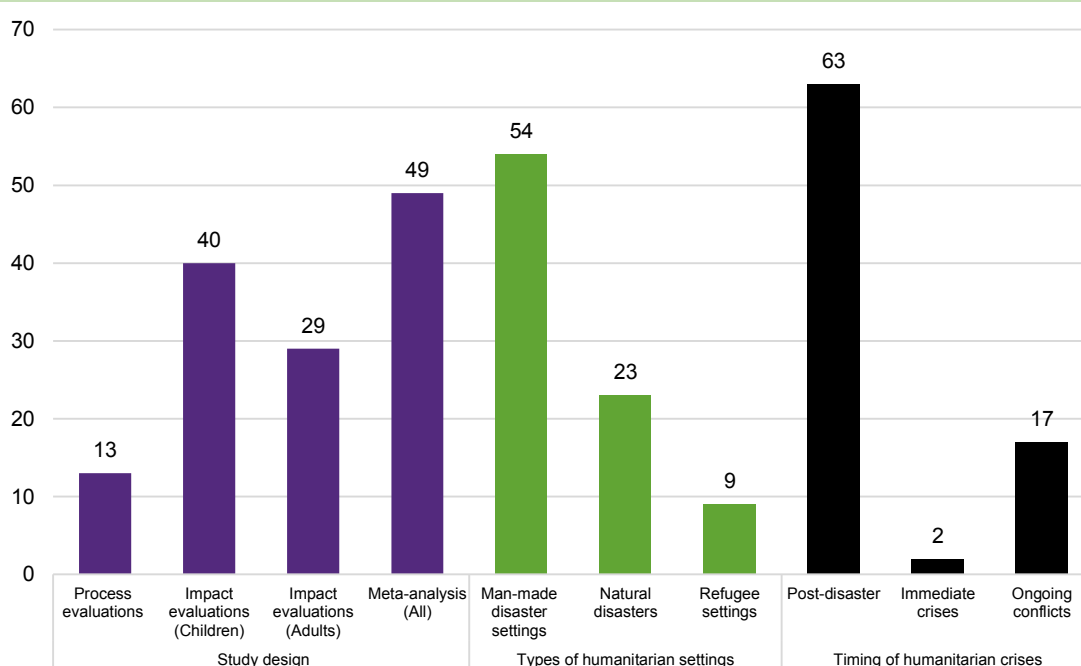
In addition, within this evidence base there are some notable gaps. Firstly, there is a tendency to focus on post-conflict settings, with far fewer studies conducted in the context of natural disasters. Secondly, there remains a lack of studies evaluating the impact of MHPSS programmes designed to provide basic services and security (tier one in the IASC pyramid). Thirdly, there also remains a gap in research on cost-effectiveness and long-term follow-up studies exploring the possibilities and implications of implementing MHPSS programmes in resource-constrained settings. In addition, although trials provided some evidence on characteristics of participants that might moderate programme effects, similar insights from people's views were lacking in process evaluations. There is also a lack of evidence on younger (≤ 10 years old) or ageing populations (≥ 55), a common finding across social evaluations. Further, despite the relatively high volume of trials, there was limited crossover with the process evaluations. For example, we did not identify any mixed-methods evaluations and very few process evaluations investigating similar types of MHPSS programmes.

Overview of evidence included in the review

Included studies

A total of 82 distinct research studies were included in the review, and 18 additional kin reports of the same study.^d Of the 82 studies, 13 evaluated the process of implementation or receipt of MHPSS programmes and 69 evaluated the impact of MHPSS programmes either with children (n=40) or with adults (n=29). We included 29 RCTs in the impact synthesis on children and 20 RCTs on adults. The majority of studies were conducted in man-made disaster settings (n=54), such as civil wars, including refugee settings with children and adults. Twenty-three studies were delivered in natural disaster settings. Evaluations were overwhelmingly conducted in post-disaster settings (n=63). Two studies evaluating MHPSS programmes responding to immediate crises were conducted in the context of natural disasters. Programmes delivered during humanitarian emergencies were in ongoing conflict settings (n=17), many of which were in the Middle East (e.g. Egypt, Syria, Palestine).

Figure 0.7: Overview of studies included in the review



Further considerations for developing the evidence base on MHPSS programmes

- Could include generating evidence on: basic services and security programmes, cost-effectiveness, MHPSS programmes in ongoing conflict and natural disaster settings, and gender- and age-specific evaluations.
- Could consider adopting consistent approaches to measuring mental health and psychosocial outcomes across settings. Long-term follow-ups for impact and process evaluations could also be considered and incorporated into study design to inform the sustainability and maintenance of benefits, or to detect harmful consequences.
- Could consider measuring other psychosocial outcomes such as resilience, coping and social support and other mental health presentations such as substance misuse or suicidal ideation.

^d 'Kin studies' are additional publications of the same study which may report only part or certain aspects of the main study (e.g. a pilot study, preliminary findings and so on).

1 BACKGROUND

This review synthesizes evidence on the effectiveness and implementation of mental health and psychological support (MHPSS) programmes targeting populations affected by humanitarian emergencies. It is informed by a scoping exercise of review-level evidence and guided by an advisory group. The advisory group, consisting of topic- and policy-relevant experts, was set up in November 2015. Full details of the advisory group members can be found in Appendix 1.2.

1.1 THE IMPACT OF HUMANITARIAN EMERGENCIES ON MENTAL HEALTH AND PSYCHOSOCIAL WELL-BEING

The incidence of events leading to humanitarian emergencies has increased four-fold in the past 25 years.¹ In 2014 alone, 140.7 million people were affected by natural disasters¹ and 59.5 million were displaced by violence and conflict.² The number of people affected by humanitarian emergencies is expected to increase, making it an international policy concern³ and a priority for research evidence.⁴ In addition to the physical, environmental and financial costs, humanitarian emergencies can have a direct impact on the psychosocial well-being and mental health of both children⁵ and adults.^{6, 7}

Although the majority of people affected by humanitarian crises maintain good psychological health and do not develop mental health problems, a common set of reported symptoms cited in the research literature following natural or man-made disasters, in both adults and children, is post-traumatic stress disorder (PTSD).^{8–10} Recent meta-analyses have also identified a relationship between exposure to different types of disaster- and conflict-related events and mental disorders and other psychological symptoms, including anxiety,¹¹ depression¹² and psychological distress.¹³ Although severe mental health presentations (e.g. psychosis) are less commonly reported in the literature and their presence is often attributable to pre-existing mental health conditions, access to MHPSS during or after a humanitarian crisis may still be required.¹⁴

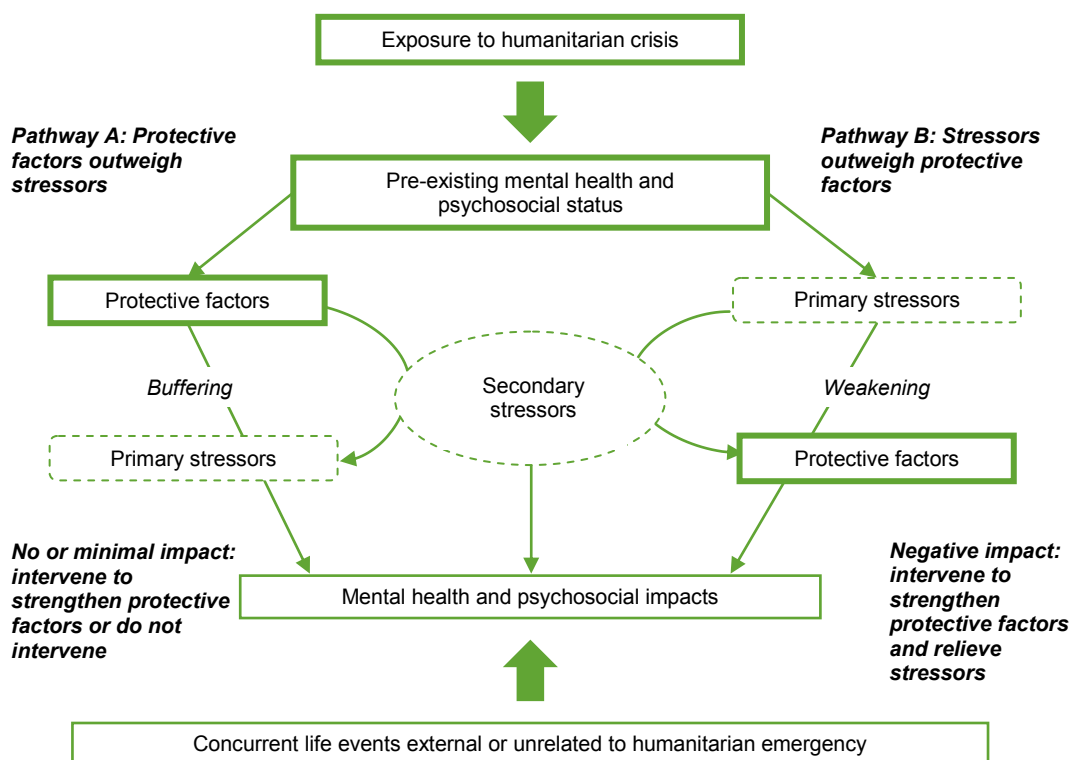
The psychosocial impact of humanitarian emergencies at individual, family and community levels can be sufficiently serious to limit people's ability to function and to cope with everyday life. Communities, often in a state of social flux with limited access to resources, may also find themselves with reduced capacity to respond to the social support needs generated by the emergency.¹⁵

The possible pathways from a humanitarian emergency to impact on mental health and psychosocial well-being are outlined in Figure 1.1. These pathways take into consideration the relationship between: 1) the negative and disruptive impacts directly arising from a humanitarian emergency, conceptualized here as '**primary stressors**' (e.g. witnessing violence, death or destruction); 2) the role of '**secondary stressors**' (e.g. economic and material losses), which are often by-products of humanitarian emergencies or pre-existing conditions contributing to or exacerbating humanitarian crises; and 3) contextual and individual protective factors that potentially mediate the effects of exposure to humanitarian emergencies. **Protective factors** acting as a buffer to alleviate the impact of stressors that can lead to adverse mental health and psychosocial outcomes may include the type, severity and duration of the emergency, the availability of resources at a national or local level, the political stability of the country and the socio-demographic and individual attributes of a person (Pathway A).

In many instances stressors are not buffered or outweighed by the presence of protective factors,¹⁶ which may have been reduced as a result of exposure to a humanitarian emergency, leading to a need to intervene to relieve stressors and strengthen protective factors (Pathway B). In addition, pre-existing mental health and psychosocial presentations, concurrent life events unrelated to humanitarian emergencies and/or limited humanitarian resources can further compound stressors or have a direct impact on the mental health and psychosocial needs of people affected by emergencies, also generating a need for MHPSS programmes. Further, the ongoing impact of humanitarian crises, such as unresolved issues of protection, safety or access to economic resources, may also inhibit individual and

collective opportunities for self-reliance and social group cohesiveness, which further impacts mental health and psychosocial well-being.¹⁷

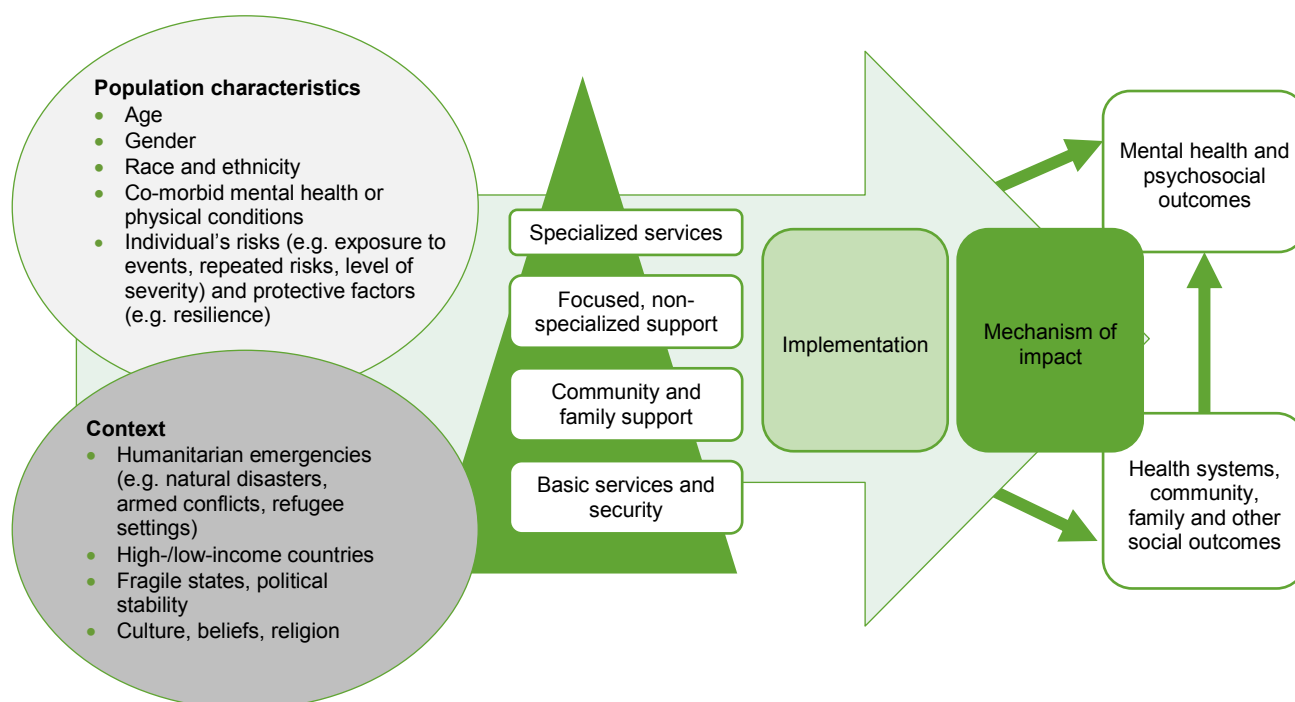
Figure 1.1: Possible pathways in response to humanitarian events



Source: Adapted from Johns Hopkins Bloomberg School of Public Health and the International Federation of Red Cross and Red Crescent Societies (2007); and Lock et al. (2012).

1.2 INTERVENTIONS TO SUPPORT THE MENTAL AND PSYCHOSOCIAL SUPPORT NEEDS OF PEOPLE AFFECTED BY HUMANITARIAN EMERGENCIES

Addressing the mental and psychosocial support needs of people affected by humanitarian disasters is increasingly seen as a critical component in any humanitarian aid response, both during and after an emergency.¹⁸ The scope and aims of mental health and psychosocial interventions targeting people affected by emergencies can range from individualized clinical-based approaches (e.g. psychosocial counselling, psychotherapy) through family, community and school-level programmes to economic, livelihoods and social development initiatives.¹⁹ The breadth of interventions that constitute MHPSS programmes is reflected in Figure 1.2. Here, we adopt the definition of MHPSS programmes as ‘any type of local or outside support that aims to protect or promote psychosocial well-being’²⁰ (p. 1) or to prevent or treat mental health issues. This definition is widely used in the field of humanitarian emergencies to describe and capture a wide range of strategies and approaches designed to address mental health and psychosocial problems of affected populations in disaster and conflict environments.²¹

Figure 1.2: Population characteristics, context, types of MHPSS intervention and outcomes

Adapted from IASC (2007: 12) and drawing on moderator analysis in systematic reviews.

Given the ambitious nature and wide variety of MHPSS programmes, their methods of intervention and potential outcomes, there is no single theory of change that can be applied for all possible types of MHPSS programme. However, drawing on the IASC intervention pyramid, which depicts a 'layered system of complementary supports'²⁰ (p. 11), and learning from existing systematic reviews, we have sought to highlight in a simplified way the types of population characteristics, contextual and implementation factors and the combinations of these factors which may influence intervention effectiveness to guide this review (Figure 1.2).

Some MHPSS interventions may attempt to alleviate mental health and psychological impacts by targeting particular presentations such as somatic or non-somatic panic attacks or flashbacks, or they may focus more broadly on reducing depressive, PTSD or anxiety-related symptoms.²² Programmes may also seek to strengthen protective factors for those affected by humanitarian emergencies by focusing on the resilience process or by enhancing variables such as increasing feelings of empowerment, sensitive care-giving, social connectedness and other individual, family, community, economic and social variables.²³ Improving this broad range of outcomes by strengthening protective factors and addressing primary and secondary stressors may be achieved by supporting people to process their experiences, such as by reframing them narratively or via cognitive processing; by facilitating greater social participation through contact with their families and/or the community; or by supporting people to access educational, employment, legal or other social welfare services, when available or appropriate.²⁴

There is variation in the extent to which MHPSS programmes conceptualize the impact of humanitarian emergencies solely through a psychopathological lens²⁵ or a particular trauma model, or engage with wider social and cultural norms that might be underlying or shaping the expression of individual and community responses.^{26, 27} Humanitarian crises often occur in non-Western, low-resource settings where Western strategies and approaches may not be feasible or applicable,²⁸ and therefore MHPSS programmes may need to be developed or adapted to be sensitive to the local context and culture. This might include modifying the content and delivery of interventions, and in the case of impact evaluations developing measures that are socio-culturally valid.²⁹ In other cases, the focus of MHPSS may be less on the Westernized concept of 'vulnerability' in order to concentrate on individual agency or on the family, community and societal levels,^{30, 31} a trend also reflected in broader psychosocial and mental health service delivery.^{32, 33}

A range of contextual factors can either support or inhibit the implementation of MHPSS programmes aimed at children and adults in emergency settings. These include security, access to resources to meet basic needs, the capacity of humanitarian services providing for basic needs in a dignified way, availability of social supports, access to national or local resources, the availability of trained lay or professional providers, organizational support and greater coordination with community partners.³⁴ Contextual factors can also include the need for greater integration of local MHPSS services²² with broader social systems within which populations affected by humanitarian emergencies access and engage with MHPSS programmes.

Humanitarian workers and service providers are often cited as key components in understanding what contributes to the successful delivery of programmes, both in relation to understanding the barriers they face during implementation and to how provider characteristics (e.g. age, gender, ethnicity) influence uptake and continued engagement with services. This is particularly relevant in the context of humanitarian emergencies, where programmes need to consider engaging at all levels: with individuals, families and communities. For example, it may be important that psychological support provided by MHPSS programmes focusing on gender-based violence (GBV) and targeting women is delivered by women; at the organizational level such programmes may be managed by community leaders of either gender.³⁵

Organizations may need additional financial and material resources to enable the delivery of MHPSS services.³⁶ For example, there may be an urgent need to recruit and train staff, provide psychosocial education materials and mobilize communities relatively quickly. Additional resources and skills may also be required: for example, to conduct needs assessments and ongoing monitoring, and to provide opportunities for populations affected by humanitarian emergencies to participate in programme planning to ensure that programmes stay within the IASC guidelines of ensuring that they 'do no harm' (p. 35).²⁰

Furthermore, mechanisms to support liaison with local partners may be crucial when attempting to support people to engage with services and achieve outcomes in areas such as legal status, welfare or education. The dynamic interplay of context and the shaping of implementation factors can inform the extent to which people can meaningfully access MHPSS programmes and can lead to improvement in outcomes – key concerns in this review.

1.3 RATIONALE FOR THE CURRENT SYSTEMATIC REVIEW

This systematic review builds on existing research efforts, which to date have focused on establishing a relationship between exposure to humanitarian emergencies and mental health and psychosocial outcomes or on investigating the effectiveness of MHPSS programmes on outcomes for children and adults. As part of the protocol development outlining the conceptual and methodological approach for this systematic review, we conducted a scoping exercise that identified existing systematic reviews in the field. See the box below on 'Systematic reviews of the effectiveness of MHPSS interventions in humanitarian emergencies' for an overview and a full list of systematic reviews presented in the published protocol.³⁷

Systematic reviews of the effectiveness of MHPSS interventions in humanitarian emergencies: a scoping exercise

The scoping review identified 15 systematic reviews relevant to MHPSS programmes in humanitarian emergencies. Four of the 15 reviews focused on children and young people (Barry et al., 2013; Betancort et al., 2013; Tyrer et al., 2014; Newman et al., 2014). Newman et al. (2014) aimed to examine psychological interventions designed for children in both man-made and natural disasters, while Betancort et al. (2013) examined intervention studies delivered to children affected by war. Barry et al. (2013) focused more broadly on mental health promotion interventions for children and young people in low- and middle-income countries, but identified a set of MHPSS programmes in humanitarian emergencies. Tyrer et al. (2014) focused specifically on school- and community-based interventions designed for refugees and asylum-seeking children.

Three systematic reviews (Patic et al., 2011; Clumlish et al., 2010; Gwozdziwucz et al., 2013) focused on psychological treatment interventions delivered to adult refugees and/or asylum seekers. One review, by Asgary (2013), examined prevention and management strategies for gender-based violence in refugees.

Five systematic reviews aimed to systematically examine evidence of MHPSS in settings of armed conflict and political violence: one reviewed studies of community-based mental health service interventions aimed at refugees in conflict areas (William and Thompson, 2011); one focused on psychosocial interventions in ongoing violence (de Jong, 2014); two examined evidence of interventions for women (Dossa et al., 2012; Tol et al., 2013); and one focused on torture survivors (Patel et al., 2014).

One systematic review examined evidence of psychosocial care interventions designed for chemical, biological, radiological and nuclear events (Gouweloos et al., 2014). Tol et al. (2011) examined more broadly research evidence on the effectiveness of MHPSS interventions on mental health outcomes for both adults and young people.

Despite this considerable amount of research activity, together with the development of international and European best practice guidelines on the delivery of MHPSS services^{20, 38, 39} and a growing call to link research to the practice of MHPSS,³⁹ there is a lack of review-level evidence on the views of providers or recipients on the factors contributing to the implementation and delivery of MHPSS programmes,⁴⁰ and of identification of culturally relevant MHPSS interventions and what is deemed to be most effective, in what circumstances and for whom.⁴¹

Moreover, there is a preponderance of reviews measuring health-related rather than social outcomes, and a lack of critically appraised evidence on the extent to which MHPSS interventions may cause unintended consequences, particularly when interventions are implemented unnecessarily or are not adapted to ensure that they are contextually appropriate.^{42, 43} Similarly, the scoping exercise carried out as part of the current review protocol failed to identify any systematic reviews that synthesize evidence from process evaluations or studies of people's experiences of engaging in MHPSS programmes during or after exposure to a humanitarian emergency (see Appendix 2). An examination of outcomes beyond psychological ill health and a synthesis of the views of participants and providers are essential to fill this gap in the evidence base.

In this systematic review, we have aimed to synthesize evidence and explore the relationship between MHPSS programmes, outcomes, implementation and contextual factors. In doing so, we sought to provide important and contextually relevant evidence to support the current and future work of key stakeholders, such as policy makers and practitioners responsible for commissioning and delivering MHPSS services in humanitarian emergency settings. Synthesizing the evidence on the effectiveness of MHPSS and examining how those effects may vary according to implementation and contextual factors, such as different settings or characteristics of participants, not only supports assessment and greater understanding of the potential of MHPSS programmes to have a positive impact, but can support the identification of likely moderators to those impacts, or potential unintended consequences.

1.4 REVIEW AIMS

The aim of this review was to systematically search for, appraise the quality of and synthesize evidence on MHPSS programmes delivered to populations affected by humanitarian emergencies, with a view to addressing the following research questions:

- 1 What are the barriers to, and facilitators of, implementing and receiving mental health and psychosocial support interventions delivered to populations affected by humanitarian emergencies?

- 2 What are the effects of mental health and psychosocial support interventions delivered to populations affected by humanitarian emergencies?
- 3 What are the key features of effective MHPSS interventions and how can they be successfully developed and implemented?
- 4 What are the gaps in research evidence for supporting delivery and achieving the intended outcomes of MHPSS interventions?

2 METHODS

This review adheres to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidance⁴⁴ reported in Appendix 1.1. Where necessary, it has been adapted to accommodate the mixed-methods approach taken in this review.

2.1 TYPE OF REVIEW

We conducted a **two-stage systematic review process** (see Figures 2.1 and 2.2). The first stage consisted of a scoping exercise carried out in October–November 2015. The aim of the scoping exercise was to identify existing systematic reviews and reviews undertaken in the field of MHPSS in humanitarian emergencies, as part of the protocol development (as described in Bangpan et al., 2016³⁷). By drawing on the review-level evidence, the scoping exercise enabled us to make informed decisions on the final scope of the systematic review, such as focusing on MHPSS interventions delivered in low- and lower-middle-income countries (LMICs), but retaining a broad focus on the types of MHPSS interventions and populations to synthesize, compared with previous systematic reviews. This stage also contributed to the development of a more sensitive search strategy through familiarization with the research topic and terms used.

The development of this review also involved consulting with the Humanitarian Evidence Programme (HEP) team at Oxfam on the scope and conceptual framework of the review. Feedback received from the Oxfam programme team and peer reviewers has been incorporated into the final report to ensure that it meets key stakeholder requirements, and is sufficiently focused to address the review questions.

Figure 2.1: Project stages

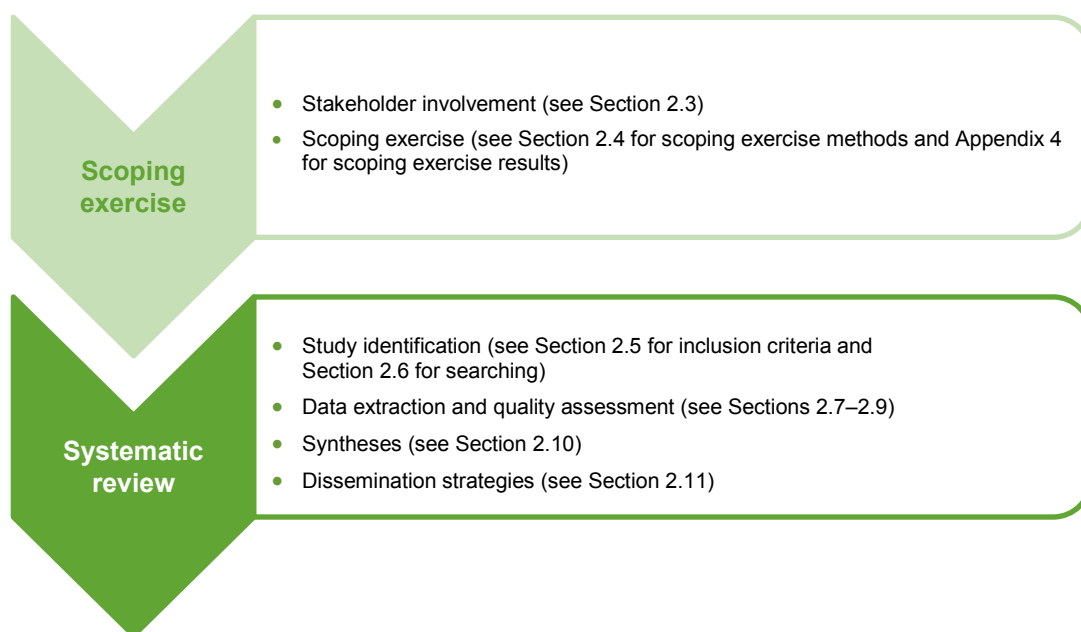
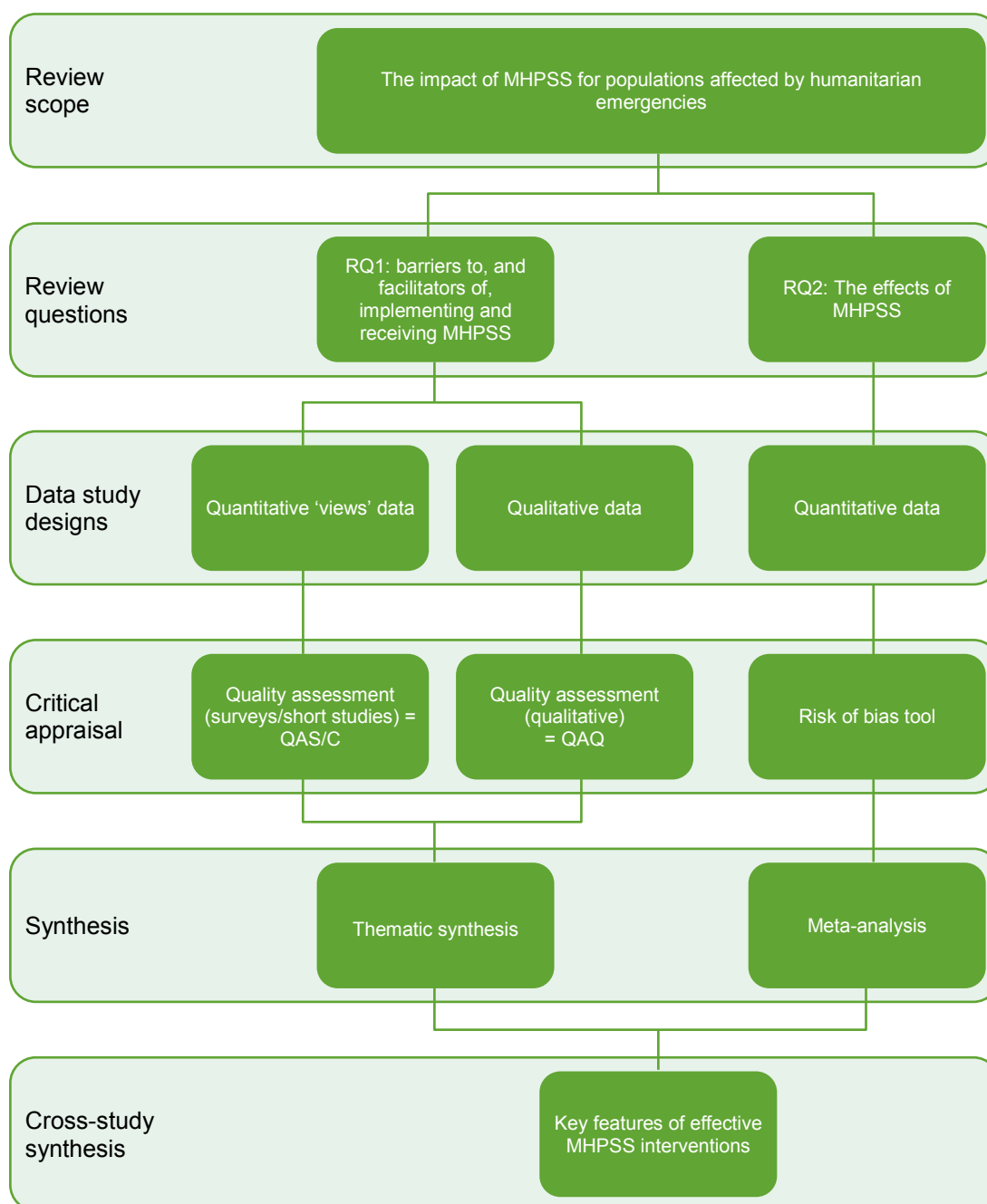


Figure 2.2: Key stages of the systematic review: an overview

2.2 GOVERNANCE AND ETHICS REVIEW

The principal investigator (PI) was Mukdarut Bangpan and the Co-PI was Kelly Dickson, both research officers at the Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre), Social Science Research Unit, Department of Social Science, University College London (UCL) Institute of Education. They were jointly responsible for the management and delivery of the review. The research consultants (Anna Chiumento, Lambert Felix) formed part of the review team and worked closely with the PI and Co-PI. The review team were responsible for ensuring that the systematic review met the requirements of the funders and key stakeholders. The systematic review was registered at the EPPI-Centre and follows internationally recognized standards and procedures for conducting systematic reviews.⁴⁵ The protocol was registered on the PROSPERO database of

systematic reviews.^e All review outputs have been subject to a formal peer review and feedback process, adhering to predetermined financial payment milestones corresponding to key stages in the review. As this systematic review collected information freely available in the public domain, and did not collect any new data from participants, the potential for risk of harm to individuals or others affected by the research was minimal. Therefore, there was no official requirement to obtain ethical approval. We followed the UCL research ethics framework, and complied with the Economic and Social Research Council (ESRC) Research Ethics Framework to ensure that all potential ethical considerations were identified and addressed.

2.3 STAKEHOLDER INVOLVEMENT

Involving stakeholders can support the research process by ensuring that the scope and findings of the review are relevant and accessible, and reach appropriate audiences.⁴⁶ As part of the scoping exercise, we contacted a range of possible stakeholders and invited them to join an advisory group (see Appendix 1.2). Their role was to provide policy and practice perspectives to ensure that the review remained contextually relevant, and to advise on its scope and identify any relevant research (particularly unpublished reports not easily available in the public domain). The advisory group was invited to provide feedback, via email, at three key points in the review process: (1) on the draft protocol; (2) during the review, commenting on emerging findings; and (3) on the final review products to inform the outputs and to support strategies for dissemination.

2.4 STAGE ONE: SCOPING EXERCISE (OCTOBER–NOVEMBER 2015)

Identification and characterization of relevant reviews and systematic reviews in the scoping exercise

As part of the scoping exercise, we searched three main bibliographic databases – Medline, Cochrane Database of Systematic Reviews and Web of Science – to identify potentially relevant systematic reviews or reviews on MHPSS in humanitarian emergencies. A combination of three key concepts – ‘systematic review’ AND ‘MHPSS interventions’ AND ‘humanitarian’ – was employed to identify relevant citations (e.g. ‘literature review’ AND ‘psychosocial’ AND ‘humanitarian’). This search of bibliographic databases was supplemented by further suggestions of key literature in the field from topic experts and the advisory group.

Where this data was available, all included reviews and systematic reviews were coded according to the following dimensions: i) population (e.g. children, refugees, older people); ii) types of humanitarian emergency; iii) geographical location; and where applicable iv) types of MHPSS intervention; and v) outcome reported. The codes were applied to full-text reports by the review authors (KD, MB). The results of the scoping exercise are reported in the published protocol.³⁷

^e http://www.crd.york.ac.uk/PROSPERO/display_record.asp?ID=CRD42016033578

2.5 STAGE TWO: SYSTEMATIC REVIEW

Criteria for considering studies for this review

Settings

Website searches, hand searching and citation checking were completed by June 2016. We included primary studies conducted in the context of humanitarian emergencies in LMICs.^f For this review, 'humanitarian emergencies' refers to natural and/or man-made disasters, including both slow-onset and sudden crises. These included, but were not limited to: earthquakes, volcanoes, rock falls, avalanches, landslides, storms, tornadoes, typhoons, cyclones, hurricanes, floods, extreme temperatures, wildfires, droughts, epidemics, wars, terrorist attacks, industrial accidents, pollution, political violence and armed conflict.

Interventions

We included programmes that sought to provide MHPSS programmes delivered in the context of humanitarian emergencies or for populations affected by humanitarian emergencies. This included, but was not limited to: psychological interventions such as cognitive, analytical or narrative exposure; various types of experiential therapies; and/or social support interventions, which may include educational or community-based activities. These interventions may be single- or multi-component programmes and may be delivered at the individual, school, healthcare, family, community and/or national levels. We anticipated and included multi-component MHPSS programmes. These varied according to the extent to which they developed contextually unique interventions, particularly those delivering programmes in an emergency setting, with some but not all following an a priori/adapted programme manual with guidelines on implementation to ensure programme fidelity. Thus, to guide the review, MHPSS programmes were broadly defined as interventions which seek to 'protect or promote psychosocial well-being and/or prevent or treat mental disorders'²⁰ (p. 11), but which fall outside the remit of treatment programmes that are solely based on medication and pharmacology.

During the synthesis process, we grouped the analytical domains of MHPSS programmes. Please see Section 2.10, 'Synthesis of evidence', for further details.

Population

For effectiveness studies of MHPSS, we were interested in populations affected by humanitarian emergencies, including both adults and young people in LMICs. We excluded effectiveness studies if the majority of participants were military personnel or people working in the context of humanitarian emergencies. For studies evaluating process, we were interested in providers' views on delivering and implementing MHPSS interventions, and recipients' views on engaging and participating in MHPSS.

Study design

We included the following study designs:

To answer the review question on characteristics or contextual factors acting as **barriers to, and facilitators of, implementing and receiving MHPSS interventions**, we included:

- studies whose primary focus may or may not have been on the perception of impact, but also reported quantitative and/or qualitative data on intervention implementation, engaging in or causal pathways of MHPSS programmes
- studies that sought stakeholders' perspectives (e.g. programme providers, recipients of MHPSS programmes or their families) that may report exclusively evaluations of the 'process' of interventions, or report the process evaluation data alongside outcome evaluation data, including qualitative data on the perception of impact.

^f Country income groups classified by the World Bank:

<https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups> (accessed March 2016)

To answer the question on **the effectiveness of MHPSS programmes**, we included: evaluation studies employing prospective experimental and quasi-experimental studies including randomized controlled trials (RCTs) and non-randomized controlled trials with control groups. Comparison groups could be those with no intervention, on a waiting list, other active interventions or usual care.

Outcomes and types of data

Process synthesis: No exclusions were made based on the content of data provided on the process of delivering or receiving MHPSS programmes. Types of data included participants' perspectives captured by open-ended questions (e.g. interviews) or closed questions (e.g. surveys). We aimed to capture people's experiences by reporting direct quotes by participants; author descriptions, either in narrative or numerical form; or authors' conclusions.

Outcome synthesis: No exclusions were made by outcome. To address the effectiveness of MHPSS programmes, we included, but were not limited to: PTSD, other anxiety disorders, mood disorders, psychological well-being and other physical health and social outcomes (e.g. family support, school attainment, employment), as reported in the studies.

Date and language

We included studies published in or after 1980 as a cut-off date when the humanitarian community began increasingly to engage in MHPSS services, including provision to populations affected by conflicts in Western and non-Western contexts.^{47–49} Although we included only studies published in English in the synthesis stage, for the purposes of transparency we aimed to identify non-English studies of relevance. A list of the three non-English publications identified during the search stage is provided in the references section.

2.6 SEARCHING

We developed a preliminary search strategy and identified sources during the scoping exercise stage that were finalized in the second stage of the review. The search strategy built on previous systematic reviews in the field (for examples, see ^{26, 33, 35, 39, 50, 51}).

Sources

Key informants

We contacted advisory group members and a network of our review team's topic expert (AC) to identify relevant unpublished literature. This was particularly important for identifying 'grey literature' that is often not in the public domain.

Electronic databases

The following 12 bibliographic databases, across disciplines, were searched: Medline, ERIC, PsycINFO, Econlit, Cochrane Library, IDEAS, IBSS, Sociological Abstracts, Social Sciences Citation Index (SSCI), CINAHL, Embase, Scopus and ASSIA.

Specialist databases and grey literature were also searched: Global Health Library, Health Management Information Consortium (HMIC), POPLINE, British Library for Development Studies, DFID (<http://r4d.dfid.gov.uk/>), International Initiative for Impact Evaluation (3ie), ELDIS, greyit.org, Google Scholar, PROSPERO, WHO International Clinical Trials Registry Platform (ICTRP), ISCTRN and ClinicalTrials.gov.

Websites

- The World Bank: <http://www.worldbank.org/>
- The Overseas Development Institute (ODI), including the Humanitarian Policy Group: <http://www.odi.org/programmes/humanitarian-policy-group> (HPG) and Humanitarian Practice Network: <http://odihpn.org/> (HPN)
- Institute of Development Studies: <http://www.ids.ac.uk/>
- International Development Research Centre: <http://www.idrc.ca/EN/Pages/default.aspx>
- Active Learning Network for Accountability and Performance in Humanitarian Action (ALNAP): <http://www.alnap.org/>
- Emergency Nutrition Network (Field Exchange): <http://www.enonline.net/>
- Evidence Aid: <http://www.evidenceaid.org/>
- Feinstein International Center, Tufts University: <http://fic.tufts.edu/>
- Enhanced Learning and Research for Humanitarian Assistance: <http://www.elrha.org/>
- International Association of Professionals in Humanitarian Assistance and Protection: <https://phap.org/>
- Humanitarian Accountability Partnership: <http://www.hapinternational.org/> (now CHS Alliance)
- Network on Humanitarian Action: <http://nohanet.org/>
- Harvard Humanitarian Initiative: <http://hhi.harvard.edu/>
- Refugee Studies Centre, University of Oxford: <http://www.rsc.ox.ac.uk/>
- European Commission Humanitarian Aid and Civil Protection Department (ECHO): <http://ec.europa.eu/echo/>
- USAID Development Experience Clearinghouse (and related USAID sub-websites): <https://dec.usaid.gov/dec/home/Default.aspx>
- ReliefWeb: <http://reliefweb.int/>
- Oxfam Policy and Practice: <http://policy-practice.oxfam.org.uk/>
- Mental Health and Psychosocial Support Network: <http://mhpss.net/>
- UNHCR: <http://www.unhcr.org/cgi-bin/texis/vtx/home>
- UNICEF: <http://www.unicef.org.uk/>
- Asian Development Bank: <http://www.adb.org/about/main>
- African Development Bank: <http://www.afdb.org/en/>
- Inter-American Development Bank: <http://www.iadb.org/en/inter-american-development-bank,2837.html>
- United Nations Office for the Coordination of Humanitarian Affairs (OCHA): <http://www.unocha.org/hina>
- International Committee of the Red Cross (ICRC): <https://www.icrc.org/en>
- Office of U.S. Foreign Disaster Assistance (OFDA), USAID: <https://www.usaid.gov/who-we-are/organization/bureaus/bureau-democracy-conflict-and-humanitarian-assistance/office-us>

Citation searching

We scanned citations in the reference sections of reviews and systematic reviews identified during the scoping exercise, and of studies that were subsequently included in the review, for inclusion and synthesis.

Search strategy

Key search terms were determined by the review questions and the inclusion criteria, and were developed iteratively and piloted against papers already identified in the scoping exercise. Search strings were developed for each database, using combinations of the main key terms and their synonyms, which denoted key aspects of the review. The search used the Boolean operator 'OR' to link each key aspect to its synonyms; then, all key aspects were combined using 'AND' to identify relevant literature. Three key concepts were included in the search strings, including humanitarian, mental health and psychosocial intervention, and study design: for example, (humanitarian OR war OR conflict OR earthquake) **AND** (mental health OR psychosocial) **AND** (quantitative or effectiveness).

A table of the key search terms used and examples of their use in specific searches can be found in Appendix 1.4. We also present examples of search strategy used for each database in Appendix 1.4.

2.7 SELECTION OF STUDIES AND QUALITY ASSURANCE

Search results were imported into the systematic review software, EPPI-Reviewer 4.⁵² We piloted the inclusion criteria by comparing the decisions of two reviewers (KD and MB) using an inclusion worksheet with guidance notes. Differences were resolved through discussion. Each reference was screened on the basis of titles and abstracts. Full reports were obtained for the references judged as meeting the inclusion criteria or where there was insufficient information from the title and abstract to assess relevance.

2.8 DATA EXTRACTION AND MANAGEMENT

The reviewers extracted data from the included studies using tools developed specifically for this review. The data extraction tools were piloted by two reviewers (MB and KD) on a set of studies in the review to consider whether any revisions or additional guidance were needed. Pairs of reviewers extracted and coded studies. After coding, any disagreements were resolved through discussion between these pairs.

The following information was extracted from all studies:

- **Bibliographic details:** publication details, date and type of publication
- **Study characteristics:** study aims and objectives, geographical location, type of humanitarian emergency
- **Population:** participant characteristics e.g. age, gender, other characteristics such as refugees, asylum seekers, as specified by the study
- **Intervention characteristics:** types of MHPSS programme (e.g. NET, CBT), target population, focus of intervention (relieving stressors, strengthening protective factors), programme components, theory of change or logic model used, description of providers, programme timing, programme intensity, ecological context.

The following information was extracted from process evaluations:

- **Study methods:** details of research participants (e.g. programme providers or recipients), recruitment and sampling methods, sample size and methods of data collection and analysis
- **Implementation data:** e.g. acceptability, adaptation, core programme, incentive, fidelity, coverage, context.

The following additional information was extracted from trials:

- **Study design:** unit of allocation, actual sample, type of control group, data collection and analysis, assessment of bias e.g. selection, detection, attrition and selective reporting
- **Outcome measures:** all relevant outcome measures and findings, including clinical mental health outcomes, psychosocial outcomes, physical health outcomes and/or social outcomes
- **Findings:** baseline and follow-up response rates, effect sizes, any breakdown by socio-demographics of the sample.

2.9 ASSESSMENT OF QUALITY

Reliability and usefulness in process evaluations

Studies of programme providers' and recipients' perspectives were assessed using EPPI-Centre tools for qualitative studies, such as those previously used in the systematic reviews of barriers to and facilitators of engaging in health promotion programmes,⁵³ including reviews with a mental health focus.⁵⁴ Quality assessments of studies using qualitative methods addressed their rigour according to the following methodological criterion: 1) sampling; 2) data collection; 3) data analysis; 4) the extent to which the study findings are grounded in the data (reliability criteria 1–4); 5) whether the study privileges the perspectives of participants; and 6) the breadth and depth of findings (usefulness criteria 5–6, see Appendix 5).

Based on the answers to these questions, an overall judgement of study quality was made according to two key dimensions. First, a weight of high, medium or low was assigned according to the **reliability** of the study and was judged according to criteria 1–4 above. Second, a weight of high, medium or low was assigned according to the **usefulness** of the findings in answering the review question on contexts and barriers to implementation and receipt of MHPSS programmes. This was judged using criteria 5–6.

To be judged as 'high' quality on methodological reliability, studies needed to have taken steps to ensure rigour in at least three of the first four criteria. Studies were judged as 'medium' when scoring on only 2–3 criteria and 'low' when scoring on only one or none. To achieve a rating of high on usefulness in answering the review questions, studies needed to achieve depth and breadth in their findings and use methods that enabled participants to voice their views on implementing or engaging in programmes. Studies rated as medium on usefulness only met either one of these criteria, and studies rated low were judged to have met neither (see Appendix 1.6).

Assessment of risk of bias in trials

Two review authors (MB, LF) independently assessed the risk of bias of trials using the criteria outlined in the *Cochrane Handbook for Systematic Reviews of Interventions*,⁵⁵ according to the following domains:

- random sequence generation
- allocation concealment
- blinding of participants and personnel, and of outcome assessment
- incomplete outcome data
- selective outcome reporting
- other bias.

We judged each potential source of bias as high, low or unclear and provided details from the study to support our judgements, included in the 'risk of bias' table. We resolved any disagreements by discussion, consulting with a third author (KD) when required. We summarized the risk of bias judgments across different studies for each of the domains listed (see risk of bias tool in Appendix 1.6).

2.10 SYNTHESIS OF EVIDENCE

Synthesis process and decisions

The synthesis was undertaken by all review authors. The first author (MB) led on the two effectiveness syntheses, and the second author (KD) led the process and cross-study syntheses. Joint decisions about key aspects of the synthesis were made across each to support transparency and consistency in reporting, where possible. This included decisions about disaggregating studies according to population group, grouping studies by type of MHPSS programmes and IASC intervention pyramid tiers, and the use of critical appraisal in the reporting of findings.

Population

Overall there were a sufficient number of trials and sufficient conceptual clarity in those trials about their approach to targeting and measuring outcomes for either children or adults to warrant a separate synthesis for each (Sections 5 and 6). However, with far fewer process evaluations and less conceptual clarity about whom programmes were targeting and why, splitting studies by type of programme recipient would have potentially lost important thematic threads that cross over population groups. Therefore, studies were reported together in the process evaluation (Section 4) but signposted in the text accordingly.

MHPSS programmes

Grouping studies by type of programme is a key step in most syntheses of evidence and particularly in reviews of more than one intervention type.⁵⁶ In this review, most studies evaluated multi-component MHPSS programmes to address complex presentations and issues in the field, and thus did not always fit neatly under broad programmatic umbrella terms. In some cases, studies provided scant descriptions of the intervention and/or relied on prior understanding of a named intervention. To address these issues, an iterative programme grouping process was undertaken. This entailed review authors engaging with the author descriptions of programmes provided in the study, matching those descriptions against review-specific programme grouping definitions devised by a review author (KD), and discussing and refining these definitions as a team to reach agreement and understanding, before re-reading and re-applying the definitions to studies. This took place until all study groupings were agreed between review authors. A similar process was applied to grouping studies using the IASC pyramid with the definitions provided. This approach led to the following finalized definitions for inclusion in an MHPSS programme group:

Cognitive behavioural therapy (CBT). To be included, MHPSS programmes needed to:

- provide face-to-face, individual or group talking therapy (i.e. not online or via media or other materials)
- explore and make an explicit link between specific thoughts, emotions, somatic and non-somatic feelings and behaviours *and/or*
- seek to positively change a person's thinking ('cognitive') to elicit change in what they do ('behavioural').

This programme group encompassed trauma-focused CBT and also extended to a rapidly growing heterogeneous group of programmes drawing on selective elements of CBT approaches, such as trans-diagnostic therapies, or therapies focused on schema, cognitive processing or behavioural activation only.

Narrative Exposure Therapy (NET). To be included, MHPSS programmes needed to:

- facilitate exposure to specific or non-specific reminders, cues or memories related to exposure to a traumatic event *and*
- support a person to reconstruct a consistent and/or coherent narrative about their traumatic experience, either verbally or through writing, to aid symptom reduction.

MHPSS programmes in this group made assumptions that fragmentation and distortion of memories and cognitions are associated with exposure to a traumatic event, directly impacting psychological symptoms and the possibility of symptom resolution. This approach assumes that there is a need to relive and reconstruct that experience in the present in order to resolve these distortions to overcome difficult psychological symptoms.

Other therapies. To be included in this group, programmes needed to:

- provide face-to-face talk or body psychotherapy *and*
- address the intrapsychic (i.e. internal world of the individual) and/or interpersonal impact of humanitarian crises to support improved overall psychological functioning and coping skills.

MHPSS programmes in this group took a range of different therapeutic approaches to address broader psychological concerns, such as questions of meaning (e.g. existential therapy), social connectedness and depression (interpersonal therapy), and sought to work on both a verbal and non-verbal level (e.g. yoga, eye movement desensitization and reprocessing (EMDR)).

Psychosocial programmes. To be included, MHPSS programmes needed to:

- support individuals, families and communities by developing and building on existing coping mechanisms to manage the impact of humanitarian crises *and/or*
- focus on understanding people's experience of humanitarian crises within broader social dimensions to facilitate individual and community resilience strategies to mitigate that impact.

This group of interventions encompassed a broad range of programme components beyond 'talking therapy', such as peer-to-peer support or creative and recreational activities. Programme components were conceptualized as key routes to enable people to build resilient life trajectories, by strengthening social and mental competencies to support individuals to more effectively manage and adapt to the adversity of humanitarian crises.

Psycho-education. To be included in this group, programmes needed to:

- solely provide education on the impact of exposure to humanitarian crises *and/or*
- seek to empower people by promoting awareness and manage the impact of that exposure via educational materials and tools.

When deciding the synthesis framework for the outcome evaluations, the approach taken to grouping interventions meant that MHPSS programmes with different names could be aggregated together (e.g. 'writing for recovery' and NET). It also meant that studies under one group might include different components (e.g. CBT with or without mindfulness). When applying the IASC tier definitions, review authors found it challenging to 'match' the description of the intervention provided in the studies against the definitions provided in the IASC document. To address this challenge, a third reviewer was consulted to ensure consistency in grouping and to come to an agreement. Some studies remained ambiguous, and the process of grouping against the IASC tiers was deemed the most subjective part of the process, and therefore the tiers were used only to map and describe the outcome evaluations but not to inform the meta-analysis or narrative synthesis. Similar to population groupings, the small number of studies informing the process synthesis did not warrant grouping by programme type. Instead, we decided to aggregate studies according to themes and signpost according to type of MHPSS programme and IASC tier grouping within those themes.

Use of quality assessment

An important decision in systematic reviews is whether to generate an overall summary statement of quality and exclude poor-quality studies in the synthesis or use quality judgements to further investigate the findings.⁵⁷ Review authors (MB, KD) explored these options and the ramifications for each synthesis. For the process synthesis, we decided to develop criteria to judge evaluations as high, medium or low in terms of their reliability and/or usefulness and included low-quality studies, but ensured that none of the themes generated in the process synthesis were represented solely by studies judged as poor quality, on either

dimension. For the effectiveness synthesis, we decided that none of the trials judged as high risk of bias on any dimension (e.g. sequence allocation) would be excluded in the review. We performed a sensitivity analysis to explore the impact of including high risk of bias studies in the meta-analysis. We also used the risk of bias assessment as a dimension to determine the overall strength of evidence given to the findings in the meta-analysis (see 'Summary of evidence' section on p. 36).

Further details of the methods informing each synthesis are provided in the relevant sections.

Thematic synthesis of views of programme providers and recipients

Qualitative data contained in process evaluations was analyzed using thematic synthesis methods (Section 4). The synthesis aimed to:

- identify any characteristics of participants and context acting as potential barriers to, or facilitators of, implementation and engagement in programmes or
- identify any characteristics or components of the interventions, participants or providers perceived as contributing to implementation, engagement or outcomes
- Contribute to our understanding of any theory of change described in research on MHPSS programmes.

The data contained in studies, in the form of participants' quotes, authors' descriptions and/or authors' conclusions, was extracted and coded by two reviewers (KD, MB). They read and re-read the data contained within studies to ascertain if they were relevant to answering the review questions. They applied line-by-line codes to capture and interpret the meaning of data, and organized the coding of that data into themes and higher-order themes. They met to discuss their individual codings before agreeing a final set of themes. During this process, data was moved across and within themes and some smaller themes were collapsed into higher-order themes. A process of interpretation also led to discussion on whether there was sufficient data to inform a sub-theme, and the identification of negative case examples. To facilitate the narrative thematic synthesis of the findings, evidence tables were prepared. These contained the methodological quality of each study; contextual details of the programmes and humanitarian settings examined; details about the population; and the final set of themes. Further revision and refinement of the themes also emerged during several iterations of writing the thematic synthesis. This took place as immersion in the data informed individual sub-themes, and where placing them alongside other studies highlighted further understanding and subjective, contextual meaning.

Synthesis of quantitative outcome data

Measures of treatment effect

For dichotomous data, when available, we reported the results of relevant outcomes as a risk ratio (RR)^g with a 95 percent confidence interval (CI). For continuous data, we reported mean at baselines and post-intervention measures or standardized mean differences (SMDs)^h and their standard deviation (SD) if no common scales were used. We computed the missing SD from other data such as t-statistics, standard error, p-value or confidence interval using the Cochrane spreadsheet.

When studies reported only 'change-from-baseline' scores (pre- to post-assessment), we derived the post-intervention mean score by adding or subtracting this from the baseline score. When the SD of the final mean scores was not directly reported, we computed from other reported data including CI or imputed the missing SD using the SD of 'baseline' scores reported in each study.

^g The risk ratio (or relative risk) is the ratio of the risk of an event in the two groups (risk of an event in the intervention group/risk of an event in the control group). No effect is denoted by 1 or 100 percent; positive effect by <1 or <100 percent; and negative impact by >1 or >100 percent (see *Cochrane Handbook* for further details).

^h SMD is calculated and used when the included studies employ different outcome measures/scales, so a common scale can be combined in the meta-analysis (see *Cochrane Handbook* for further details).

We included and used outcome measures at the longest follow-ups when there were multiple time point assessments.

Unit of analysis issues

We used individual data as the unit of analysis in the meta-analysis. We checked whether the outcome data had been adjusted for intra-cluster correlation (ICC); in the case that studies did not report ICC, we used the ICC data based on other included studies.

Dealing with missing data

Information on drop-outs and attrition rates was extracted, and it was assessed whether intention-to-treat analysis had been performed. We contacted the authors of included studies either to obtain further information on missing data or to confirm the data that we had computed. We performed a sensitivity analysis to explore the impact of studies with high risk of bias included in the meta-analysis.

Data synthesis

Synthesis of quantitative outcome data: Firstly, we produced a narrative account of the effectiveness of interventions, providing detailed information about the characteristics of included studies (e.g. type of humanitarian emergency, type of intervention in a specific setting or context) and outcomes measured. Meta-analysis was performed with 26 randomized controlled trials (RCTs) for children and young people (CYP) (Section 5) and 20 RCTs for adults (Section 6) across outcomes when there were at least two intervention studies for each type of MHPSS programme that employed comparable designs and reported conceptually similar outcome measures. We used SMDs to calculate the pooled effect size, as the outcomes in this review were measured using different scales.

We used a random effects model to run the meta-analysis. Under a random effects model, it is hypothesized that the true effect size may vary from study to study. The results are summarized in forest plots with a 95 percent CI.

Sub-group analysis and investigation of heterogeneity

We assessed the extent of heterogeneity amongst the studies using the chi-squared test, with a p-value greater than 0.10 indicating significant heterogeneity. The I^2 statistic was used to quantify the magnitude of statistical heterogeneity.

The impact findings were discussed according to participant characteristics, including age group, gender and types of MHPSS intervention. Where the meta-analysis suggested a substantial amount of heterogeneity (I^2 greater than 50 percent), we performed a meta-regression. However, in order to undertake meta-regression, a minimum of 10 studies was required;⁵⁸ therefore we carried out the meta-regression in two outcomes: PTSD and depression.¹ We used the following variables in our meta-regression analysis:

- 1 Intervention – CBT, Narrative Exposure Therapy (NET), psychotherapy (others) or psychosocial intervention
- 2 Comparison – no intervention, active, usual care, wait-list
- 3 Intensity^j – low (<400 minutes), moderate (400–1,000 minutes), high (>1,000 minutes)
- 4 Follow-up – short (post ≤3 months), medium (>3–≤12 months), long (more than 12 months)
- 5 Humanitarian emergency type – man-made (e.g. war), natural (e.g. tsunami), both man-made and natural
- 6 Summary risk of bias – low, moderate, high.

ⁱ Throughout Sections 5, 6 and 7, 'PTSD' and 'depression' refer to PTSD and depression symptoms, unless stated otherwise.

^j Intensity is the product of duration in minutes and the frequency, which is essentially the total duration of the contact time that a participant receives in terms of therapy or treatment with the deliverer over the intervention period.

We ran the meta-regression using the 'metareg' command in STATA version 16. The STATA output is presented in Appendices 3, 4 and 5.

Sensitivity analysis

We performed a sensitivity analysis to test the impact of including studies judged as being at high risk of bias in the meta-analysis. To do this, we performed the meta-analysis of all RCTs, then excluded those judged as overall high risk of bias.

Summary of evidence

Qualitative evidence on implementation and receipt of MHPSS programmes

Methods for assessing the overall body of qualitative evidence which do not draw on principles of aggregation and consistency but on dimensions epistemologically appropriate for judging qualitative evidence have yet to be fully developed, and thus are not applied in this review. In their absence, and to aid transparency of reporting to inform policy and practice, we have included details of the number and quality (e.g. reliability and usefulness) of studies informing each theme in a summary table of evidence (Figure 0.2). It should be noted that summary findings with more studies or fewer studies do not change the overall strength of the evidence, but can provide an indication of the extent and depth of evidence informing this summary finding, as it stands according to the literature eligible for inclusion in this review.

Quantitative evidence on the effectiveness of MHPSS programmes

Methods for evaluating the overall strength of evidence were adapted from the approach described in DFID's *How to Note*,⁵⁹ the *Cochrane Handbook for Systematic Reviews of Interventions*^{60, 61} and in previous work assessing the strength of evidence to inform public health policy.⁶²

The strength of the overall summary of evidence was informed by an assessment of the extent to which the overall findings are trustworthy in answering the review questions and by considering three main dimensions of that body of evidence:

a) **Quality** e.g. whether the quality of evidence is adequate for drawing overall conclusions, based on risk of bias in trials. We summarized the risk of bias as following:

- To be rated as **low**, both selection bias (random sequence) and attrition bias were rated as low risk of bias AND there was no other high risk of bias in other domains.
- To be rated as **moderate**, selection bias OR attrition bias were judged to be unclear OR both selection bias and attrition bias were judged to be low risk of bias, but one or more other domains were judged to be high risk of bias.
- To be rated as **high**, selection bias OR attrition bias were judged to be high risk of bias.

b) **Size** e.g. whether the quantity of evidence is sufficient for drawing overall conclusions, based on a minimum number of studies.

c) **Consistency** e.g. the degree of similarity in the effect sizes across the included studies. Overall, we considered a body of evidence to be inconsistent when heterogeneity was high (e.g. I^2 greater than 50 percent) and/or there was a low degree of overlap in CIs in individual studies.

Using these criteria, we developed an approach for assessing the strength of the evidence summary for each outcome to use in this review. Further details of this assessment framework are outlined in Figure 2.3 below.

Figure 2.3: The summary of evidence assessment framework

Categories of evidence	Criteria	Rationale
Strong+++	a) At least five studies with low or moderate overall risk of bias AND b) Findings from evidence available are considered to be consistent	Findings are reliable based on a large number of good-quality studies. Overall, the conclusions are drawn from credible and reliable evidence.
Moderate++	a) At least five studies with low or moderate risk of bias but inconsistent in their findings OR b) two to four studies with low or moderate risk of bias and the findings from evidence available are considered to be consistent	Findings are based on more than one good-quality study. Overall, the conclusions are drawn from credible and reliable evidence, but there are some deficiencies.
Limited+	a) Two to four studies with low or moderate risk of bias and the findings from evidence available are considered to be inconsistent OR c) A single study with low risk of bias	Findings are reliable but unconfirmed. Consistency of the findings across a body of evidence cannot be determined.
Insufficient-	a) A single study with medium or high risk of bias OR b) Evidence only available from high risk of bias studies	Overall conclusions cannot be drawn.

Cross-study synthesis

The value of drawing on a broad range of evidence to inform policy and practice has led to key developments in methods for integrating and combining synthesis findings of different study designs. The cross-study synthesis (CSS) of outcome and process evaluation studies is one such approach.^{63, 64} The CSS began by drawing up a matrix that juxtaposes the characteristics of MHPSS programmes and the views of both participants and providers on factors that might influence their effectiveness (Section 7). The following questions were used to interrogate the data and to guide the cross-study synthesis:

- Which characteristics of MHPSS programmes correspond with themes/hypotheses emerging from qualitative synthesis?
- Do these themes suggest why and how the intervention does or does not work?
- Which themes derived from qualitative synthesis have yet to be addressed by MHPSS studies included in this review?

Attempts to answer these questions were written up narratively and by performing a meta-regression on studies for two outcomes: PTSD and depression. The meta-regression took the same approach as described for the investigation of heterogeneity and is described in more detail in Section 7. It was conducted using the 'metareg' command in STATA version 16.

2.11 REVIEW OUTPUTS AND DISSEMINATION

We aimed to produce academic and policy-relevant review products critically appraising the evidence base on the implementation and effectiveness of MHPSS programmes targeting people affected by humanitarian emergencies. By synthesizing evidence on the intended and unintended impact of MHPSS programmes and the extent to which these are moderated by context and the socio-demographics of participants, we sought to provide a more comprehensive view of the factors potentially contributing to accessibility and acceptability of MHPSS programmes, for different populations, in different humanitarian aid settings.

We have produced three key outputs: 1) the protocol outlining the key stages in the review and the findings from the scoping exercise; 2) a 'technical' systematic review report which contains a 'plain language' executive summary and the full review (the present document); and 3) peer-review journal articles. Online platforms include publishing the protocol and technical report on the Oxfam and EPPI-Centre websites and submitting articles to open access peer-reviewed academic journals and to the UCL open access institutional repository. We will also disseminate the findings via conferences and seminars, and promote the review through relevant academic and stakeholder networks.

3 RESULTS: FLOW OF STUDIES INCLUDED IN THE REVIEW

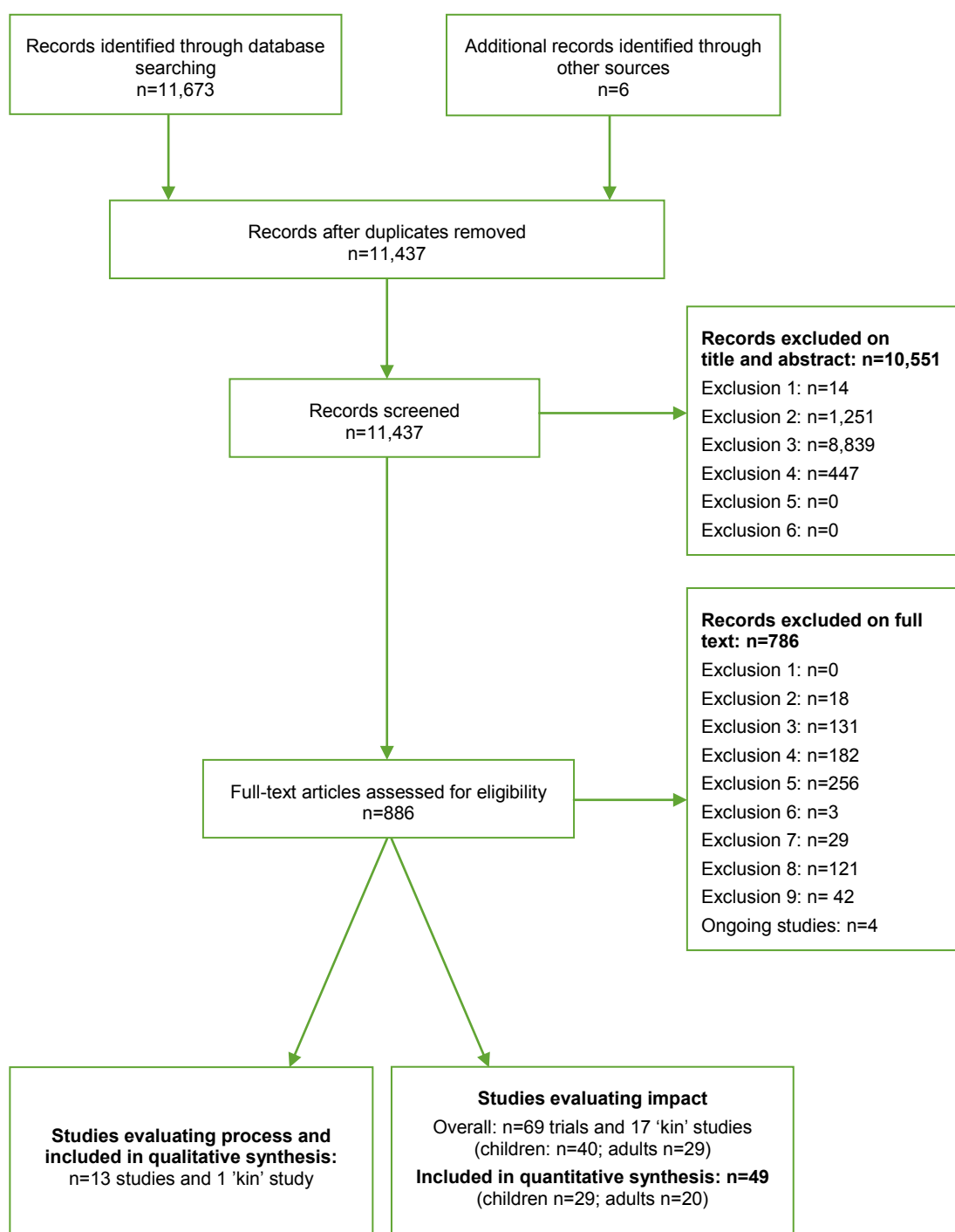
This section reports the results of our systematic search and screening process.

3.1 SEARCH RESULTS

A total of 11,679 references were generated from the searches, only 2 percent (n=242) of which were removed as duplicates. Ninety-two percent of the remaining 11,437 references were excluded on title and abstract (n=10,551), mostly because they were not evaluating a mental health or psychosocial programme (exclusion criterion 3; see Figure 3.1). We obtained and re-screened the full-text reports of all potential 886 citations remaining. We excluded a further 786 citations at this stage of the screening process, including citations on topic but reporting a primary study conducted in high-income countries (exclusion 8) or a systematic review (exclusion 9). We also identified four ongoing studies and three studies not written in English (see references for further details). Figure 3.1 summarizes this flow of studies through the review.

A total of 82 distinct research studies were included in the review, with a further 18 research studies contributing more than one study report to our set of included reports (linked studies). Of the total 82 studies included, 13 evaluated the process of implementation or receipt of MHPSS programmes (see Section 4) and 69 evaluated the impact of MHPSS programmes on children, n=40 (Section 5) or adults, n=29 (Section 6).

Although the evidence base of the 82 included studies spans a date range from 1998 (n=1) to 2015, the largest concentration of studies was published after 2010 (n=54), and even more recently between 2014 and 2015 (n=21). The focus of studies was much less on programmes addressing the impact of natural disasters (n=23) than on conflict and war (n=59). A breakdown of the characteristics of studies is presented at the start of each review synthesis (Sections 4–6) to provide further contextual detail when answering the review questions.

Figure 3.1: Flow of studies through the review

Exclusion criteria: 1) **date:** not published after 1980; 2) **participants:** investigating populations who are a) military personnel or b) those working in HM contexts; 3) **intervention:** not delivering MHPSS interventions in the context of humanitarian emergencies or for populations affected by humanitarian emergencies; 4) **study design:** not conducting a process evaluation or an outcome evaluation using quasi/experimental designs with control groups; 5) **reporting data:** not collecting and reporting data on the process of delivering or receiving MHPSS interventions or outcome data on the impact of an MHPSS intervention; 6) **language:** not written in English. Further exclusion criteria were applied to full texts that met criteria 1–6 but were 7) a non-systematic review; 8) conducted in a high-income country; or 9) a systematic review included in a separate meta-review.

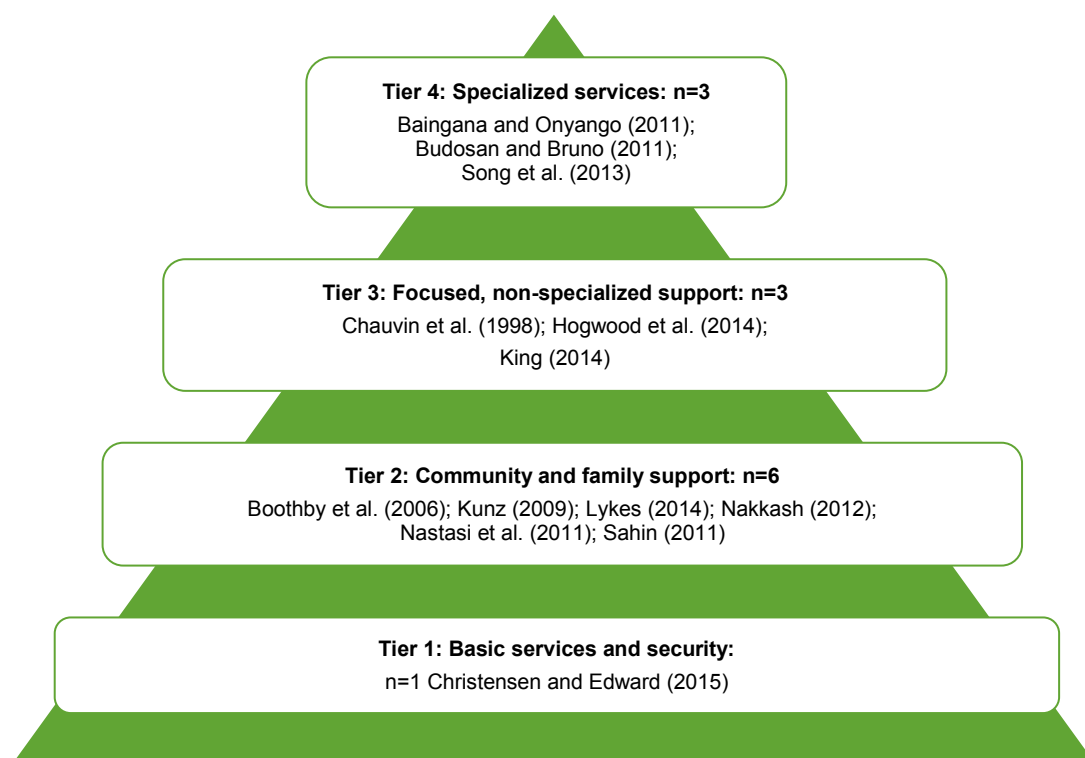
4 RESULTS: BARRIERS TO, AND FACILITATORS OF, IMPLEMENTING AND RECEIVING MHPSS PROGRAMMES

This section presents a thematic synthesis of 13 studies^{65–77} evaluating the implementation and receipt of MHPSS programmes. It also reports on the quality of studies informing the synthesis, before using the synthesis findings to generate hypotheses about what approaches to programme delivery might influence or moderate the effectiveness of MHPSS programmes for children and young people and for adults. A brief descriptive overview of the types of MHPSS programme evaluated is presented first to provide context for the review findings (see also Appendix 2, Table 2.1 for more details).

4.1 OVERVIEW OF THE TYPES OF PROGRAMME INCLUDED IN THE PROCESS SYNTHESIS

The majority of the 13 studies evaluated MHPSS programmes in response to the effects of civil wars, in post-man-made disaster settings in LMICs (n=9: Bosnia, n=1; Burundi, n=1; Guatemala, n=1; Mozambique, n=1; Northern Uganda, n=1; Occupied Palestinian Territory (OPT), n=1; Rwanda, n=2; Sierra Leone, n=1). Fewer studies evaluated programmes addressing the impact of exposure to natural disasters (n=4). These included the period immediately after the earthquake in Haiti (n=1), and at later time points after the earthquakes in Iran (n=1) and Turkey (n=1) and the tsunami in Sri Lanka (n=1).

Figure 4.1: IASC programme types



Mapped against the IASC pyramid (Figure 4.1), just under half (n=6) of the 13 studies were tier two community-based initiatives seeking to strengthen family and peer supports in post-conflict (n=5) or conflict (n=1) settings. Evaluations of tier two programmes were in the majority delivered to children (n=4), compared with children and adults (n=1) or adults only (n=1). In most cases programmes were designed to facilitate social skills and support people's capacity to re-engage with their families or communities in proactive ways. Of the seven remaining studies, six were split between tier three focused, non-specialized support (n=3) and tier four specialized services (n=3). The tier three, non-focused, specialized support services were all delivered in post-genocide Rwanda to address trauma in adults via counselling support groups (n=2) or psychosocial trauma recovery programmes for children (n=1). The three tier four specialized services evaluated the delivery of primary mental healthcare services in post-civil war settings (n=2) or immediately after a natural disaster (n=1; earthquake) for adults and children. The remaining study evaluated a tier one community-based general primary healthcare service which included livelihood programmes to address basic security needs and mental health and psychosocial programme components.

4.2 QUALITY ASSESSMENT OF PROCESS EVALUATIONS

Overall weight of evidence

Judgements about study quality were based on assessment of the reliability and usefulness of the findings in answering the review questions (see Figure 4.2). These judgements were made based on the individual criteria outlined in the methods section (Section 2) and described in more detail below. Overall, study quality was a combination of high or medium reliability and usefulness (n=10), with only three studies judged as being of low reliability. Of the five studies judged to be of high reliability, two were also judged to be highly useful^{69, 77} and three were judged as providing medium useful findings.^{74–76} All five studies judged to be of medium reliability were judged as highly useful.^{66, 70–73} Two of the three studies judged to be of low reliability also contributed findings judged to be of medium usefulness,^{65, 67} the remaining study was judged as low on both criteria.⁶⁸

Figure 4.2: Reliability and usefulness of findings

Study	Reliability			Usefulness		
	High	Medium	Low	High	Medium	Low
Baingana and Onyango (2011)			✓		✓	
Boothby et al. (2006)		✓		✓		
Budosan and Bruno (2011)			✓		✓	
Chauvin et al. (1998)			✓			✓
Christensen and Edward (2015)	✓			✓		
Hogwood et al. (2014)		✓		✓		
King (2014)		✓		✓		
Kunz (2009)		✓		✓		
Lykes (2014)		✓		✓		
Nakkash (2012)	✓				✓	
Nastasi et al. (2011)	✓				✓	
Sahin (2011)	✓				✓	
Song et al. (2013)	✓			✓		

Reliability of findings

Criterion one: sampling

Convenience sampling was the approach favoured by the majority of studies, whereby the views of all programme implementers and/or recipients were elicited. Just under half of the studies (n=6) were judged to have taken steps to ensure rigour in their sampling process by detailing their recruitment strategies. In the remaining seven studies there was a lack of explicit reference to how the samples were selected, and in some cases they failed to report the number of participants.

Criterion 2: Data collection

All studies took steps to ensure rigour in their methods of data collection.^{65–77} Studies provided thorough descriptions of their data collection processes, including ethical practice around obtaining consent and steps taken to ensure confidentiality. Some studies also broadened the range of data they collected by using more than one method, such as conducting both in-depth interviews and focus groups, or visiting field sites.

Criterion 3: Data analysis

Eight studies provided some indication of the steps they took to increase analytical rigour,^{69–71, 73–77} such as how they conducted analysis (e.g. thematic analysis, grounded theory) to generate their findings, and in some cases how they increased validity and reliability in the analysis. Methods of analysis were reported minimally or not at all in the remaining five studies.^{65–68, 72}

Criterion 4: Grounded in/supported by data

A total of 10 studies presented findings that were fairly or well grounded in the data:^{66, 69–77} i.e. they clearly reported participants' views, in the form of quotes or questionnaire answers, separately from authors' narrative descriptions of data to show how they arrived at their findings. Only three studies relied solely on authors' descriptions or observations.^{65, 67, 68}

Usefulness of findings

Criterion 5: Breadth and depth

The majority of studies (n=11) provided either depth or breadth in their findings to answer the review question.^{65–67, 69–75, 77} Although in some cases the focus of studies was broader than reporting on process, studies provided findings on a range of contextual factors relevant to delivering or engaging in MHPSS programmes, while some reported on one or two in-depth. Only two studies were judged as being limited in both breadth and depth.^{68, 76}

Criterion 6: Perspectives

The final quality criterion assessed the extent to which the study privileged the perspectives and experiences of people providing or engaging in MHPSS programmes. Studies were judged as 'yes' when the views of participants were given considerable weight or equal weight to authors' reflections and/or directly informed the study conclusions and implications. This applied to eight studies.^{66, 69–73, 76, 77}

4.3

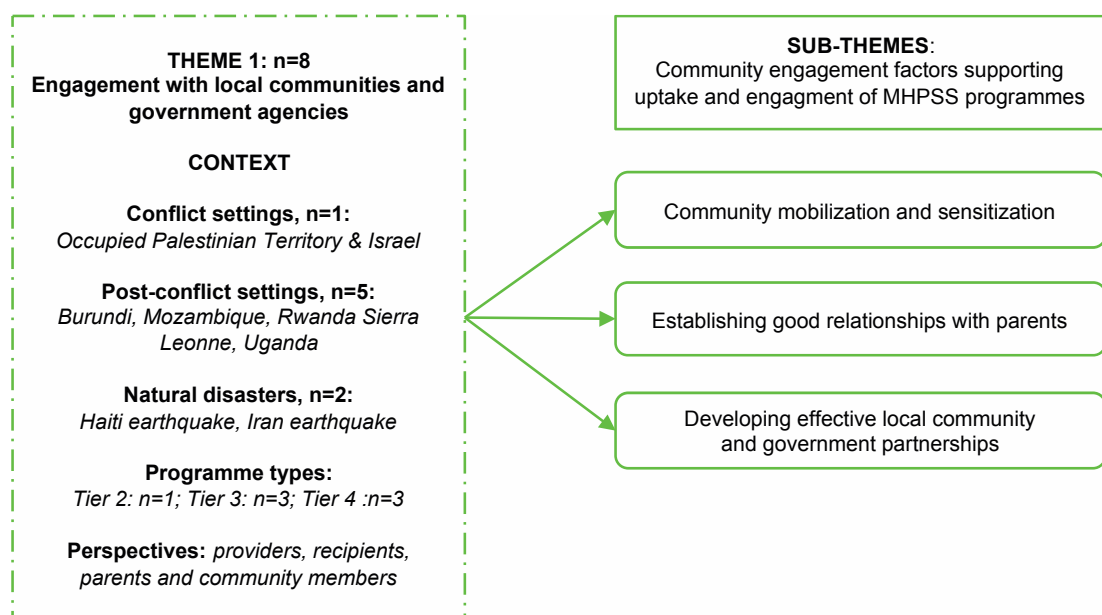
THEMATIC SYNTHESIS OF PROCESS EVALUATIONS

The synthesis explores factors influencing implementation and engagement in MHPSS programmes for people affected by humanitarian crisis. The findings are organized according to the themes that emerged from participants' data and authors' descriptions of findings presented in studies.

Theme 1: Engagement with local communities and government agencies

A major theme across eight studies,^{65–69, 72, 74, 77} of variable quality, was the importance of formal and informal engagement with local communities and government agencies to support the implementation and coordination of MHPSS programmes in humanitarian settings. The contextual nature of the evidence informing the sub-themes is diverse, drawing on the views of both programme recipients and providers engaged in tier one to tier four services for adults and children in mostly post-conflict but also post-earthquake settings. The three key sub-themes outlining community engagement mechanisms supporting the delivery of MHPSS interventions are presented in Figure 4.3.

Figure 4.3: Community engagement factors supporting uptake and engagement



Community mobilization and sensitization

Sensitizing and mobilizing communities about the potential impact of humanitarian crises on individuals and families were seen as key programme activities in the delivery and receipt of MHPSS programmes. This sub-theme was identified in four studies, two of which were judged to be highly useful and of high⁶⁹ or medium reliability.⁶⁶ One lower-quality study also provided medium useful findings,⁶⁵ while one study was judged as being of low reliability and usefulness⁶⁸ but provided supporting data. Programmes identified the need to increase knowledge about the traumatic effects of extended periods of exposure to violence and conflict on psychosocial outcomes. For example, Boothby et al. (2006) found that to mitigate the impact of child soldiering experiences on young boys in Mozambique, tier two programme rehabilitation activities needed not only to focus on psychological recovery but also on the reintegration of former child soldiers (FCSs) into their home communities. This was achieved via 'community sensitisation campaigns' focused on increasing 'community acceptance' of FCSs. They targeted public services such as 'local military, police, teachers and community leaders' to encourage 'collective responsibility' to 'support the reintegration of FCS' (all quotes p. 97). During focus group meetings, community members recalled:

We listened to the advice of the people that came from Maputo. We have accepted these boys and they live with us now. There is no difference. (p. 98)

They are our sons; what they did they were forced to do, so we cannot blame them for such bad things. (p. 98)

Interviews with FCSs also revealed that in all but two cases Lhanguene boys experienced reacceptance into their communities. For example, although one boy did not feel fully reintegrated because he was 'poor', feeling he 'had nothing to give to people when they ask or need things' and another required the support of his family to stop accusations of 'having killed their relatives' (p. 98), the majority of boys received a positive reception, stating that 'people came to speak' with them, and they felt 'welcomed and 'respected' (p. 98).

Similarly, an evaluation of a tier one integrated village health clinic offering a range of services by Christensen and Edwards (2015) found that efforts to mobilize the community in post-conflict Burundi instilled a previously missing 'sense of purpose' (p. 48). One person reflected that her father became 'involved with projects' rather than 'spending time drinking banana beer' (p. 48). Local people were also reported as making a wider 'link between the sense of individual self-worth and community-minded actions', describing the initiative as promoting 'love between the community' as people 'are brought together in co-ops. Protestants and Catholics are working together' (p. 46).

Increasing access to tier four community-based primary mental healthcare in post-conflict Northern Uganda was the focus of the low reliability but medium useful study by Baingana and Onyango (2011). They determined that community mobilization and sensitization had been 'effectively carried out' in the region, leading to 'exceeding targets' of 120 to closer to 200 patients engaging with mental health clinics. They identified the involvement of village health teams as critical to the success of their outreach efforts. They concluded that in countries such as Uganda, which do 'not have a strong social support system', even small initiatives such as village health teams (with up to 12 members) can attempt to 'take on some of the social work roles required' (p. 300). The low-quality study by Chauvin et al. (1998) supported these findings. Reporting on a tier three psychosocial trauma recovery programme in Rwanda, which sought to address the psychological and social needs of war-traumatized children, the authors advocated strengthening community mobilization and sensitization activities in future programme implementation stages. Suggested activities included a 'mass media campaign using the radio and pamphlets' to increase public awareness of the impact of genocide, combined with 'health mobilizers' working in the community. They also highlighted the importance of liaising with 'community level social agents' (e.g. schools, health centres, community and religious leaders), arguing that it 'is the most effective and sustainable way to reach beneficiaries' (p. 390).

Establishing good relationships with parents to support uptake of MHPSS

Establishing the engagement and trust of parents could be a challenge but was seen as essential in ensuring uptake of services targeting children and young people, a sub-theme identified in two studies evaluating tier two community and family support programmes in a post-conflict and post-disaster setting. Difficulties were reported in communicating to parents the value of children engaging in MHPSS programmes. For example, the OPT-based study by Nakkash (2012), judged to be of high reliability and medium usefulness, found that although children were 'eager to attend' a weekly social skills building programme, parents were often a 'barrier' (p. 602), either because they did not 'know when sessions were being held' or they placed greater value on their children's education, rather than on recreational activities to support positive development. Programme implementers took a number of steps to address this issue, including communicating with school principals to ensure that they did not schedule exams on a Saturday, the day after the programme took place, and incorporating English reading sessions to 'increase the perceived educational value of the program' (all quotes p. 602).

Developing good channels of communication with parents was also highly valued in the sports-based youth programme delivered to children in post-earthquake Iran. The programme, evaluated by Kunz (2009), was judged as providing highly useful findings of medium reliability. The authors reported that sports coaches filled an important role for some parents struggling to understand the psychosocial impact of the earthquake on their children. Coaches were cited as acting 'as mediators' to bridge any misunderstandings, for example by explaining to parents that 'weaker school performance' may be a result of the 'mental suffering the children had undergone during the earthquake or to their current living conditions' (p. 1,154). Efforts made by coaches advocating for sustained participation in sports activities, as this 'could help' young people 'feel better and perform better at school' (p. 1,154), were met favourably by parents, who noticed the benefit and satisfaction that

children experienced from continued engagement. Recruiting community members was also perceived as 'a major advantage' in supporting the facilitation of this trust and respect, as being local to the community meant that coaches were seen as having a shared common experience, enabling them to understand each individual family's circumstances. Furthermore, 'they could visit each other easily, outside the project activities'. The authors concluded that it 'was this personal closeness that allowed the coaches to act as legitimate mediators' (p. 1,155).

Developing effective local community and government partnerships

In addition to engaging with community members and families was the need to overcome challenges in improving coordination and developing effective partnerships with local community and government agencies to receive support for programme implementation. This sub-theme was reported in four studies^{65, 67, 68, 77} of variable quality, evaluating four tier four specialized services and one tier three focused, non-specialized support service.

The study by Song et al. (2013), of a tier four primary mental health initiative targeting former child soldiers in Sierra Leone and judged to be of high reliability and usefulness, reported that the delivery of effective care was hampered by a lack of coordination and communication between providers, local organizations and the government, limiting the opportunities for mutual support and sharing of learning and resources. One programme provider stated:

It is very difficult to know what people are doing that works and doesn't. There should be a website listing of mental health resources in Sierra Leone. Also, a mental health network could avoid duplication, ensure governance, and make a standard of care.
(p. 619)

Some providers made unsuccessful attempts to liaise directly with the Ministry of Health. One participant recalled:

The Ministry of Health never visited. I've offered and would like to work together. The three sectors should come together: Ministry of Social Work, Education and Health.
(p. 619)

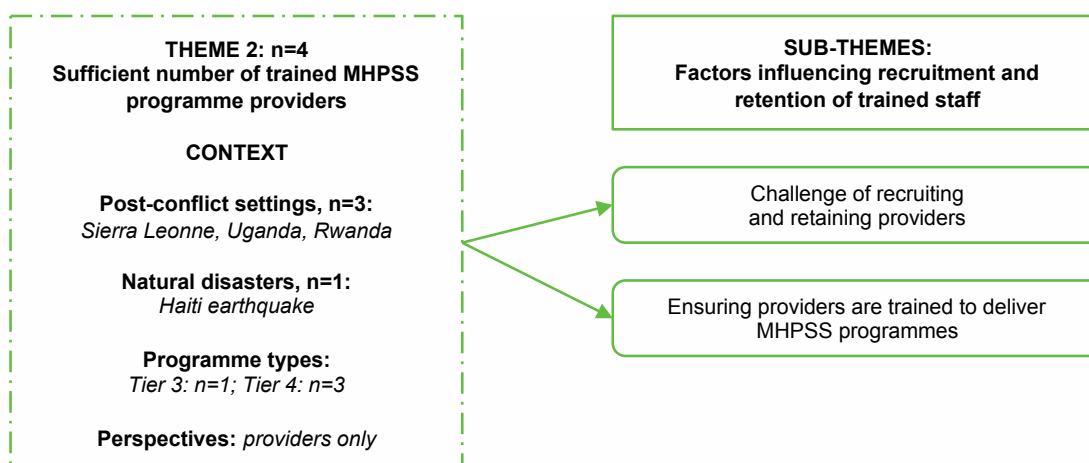
Programme providers in this study attributed the reluctance of their government health department to engage with and collaborate on a strategy for the coordinated delivery of mental health for affected populations to 'stigma' around mental health problems and the government's lack of knowledge and skills on 'and how to address' them (p. 619). An international development aid organization faced similar challenges with the lack of mental health prioritization when attempting to implement a coordinated strategy for the provision of tier four integrated MHPSS services immediately after the 2010 Haiti earthquake.⁶⁷ This evaluation by Budosan and Bruno (2011), judged to be of low reliability but providing medium useful findings, found that collaboration attempts with local NGO partners in Haiti proved difficult as their focus was on the 'development of their own human and material resources' rather than delivery of MHPSS services (p. 233). The lack of 'active cooperation from formal governmental health authorities' (p. 233) also limited their ability to deliver a 'strategy within the government sector and coordinate efforts with the government' (p. 233).

Two further studies of low reliability supported these findings,^{65, 68} and highlighted the need to strengthen coordination at local and national levels. For example, the 'smooth operation of all activities' involved in the delivery of a tier four primary mental health and community outreach service in Northern Uganda was cited as relying heavily on 'quarterly coordination and joint planning' meetings between the local NGO partners (TPO-Uganda) and the government⁶⁵ (p. 299). Chauvin et al. (1998) also found that, to continue supporting the high number of traumatized children and families in Rwanda, it was critical that the working relationship between the National Trauma Centre and the local hospital, which appeared to 'function well', should be 'further promoted'. They further argued that if programmes, such as the psychosocial trauma recovery initiative targeting children and their care-givers in Rwanda, are to continue to be effective, 'mental health has to be integrated into a primary health care policy' (p. 390).

Theme 2: Sufficient number of trained MHPSS programme providers

Ensuring that programmes were delivered as intended by a sufficient number of trained MHPSS providers was a key theme in four studies of variable reliability and usefulness.^{65, 67, 68, 77} Studies also reported on the importance of acquiring and retaining staff in resource-limited settings as a key concern when delivering MHPSS programmes to people affected by humanitarian crises. Evidence was drawn from studies eliciting the views of programme providers delivering three tier four specialized services and one tier three focused, non-specialized support service. An outline of the sub-themes is presented in Figure 4.4.

Figure 4.4: Factors influencing recruitment and retention of trained staff



Challenge of recruiting and retaining providers

The need to ensure that programmes were adequately staffed was identified as a priority for MHPSS programme providers in three studies.^{65, 68, 77} The highly reliable and useful study by Song et al. (2013) highlighted the difficulties that primary mental health services have in low-income countries, such as Sierra Leone, where they struggled to recruit 'medical students into psychiatry' (p. 619). The authors highlighted primary disincentives, such as salaries 'as low as \$80 per month, few ancillary mental health staff in the country, and a deep-rooted stigma against mental illness' (p. 620). These factors limited attempts to support the mental health needs of former child soldiers in the region. In the study by Baingana and Onyango (2011), of low reliability and medium usefulness, the authors were relatively optimistic that even with a small number of full-time staff (n=8) they could 'facilitate district health workers to establish and run mental health clinics' in post-conflict Northern Uganda, but their efforts were hampered by 'an attrition of government health workers trained by the project' (p. 298). Issues with staff retention meant a loss of knowledge and skills in being able to 'recognise, assess, and manage mental illness' (p. 298), with potential new staff requiring mental health capacity training. Chauvin et al. (1998) in a study judged to be of low quality, also confirmed that the 'the number of trauma advisors need to be increased to establish continuity and sustainability on the district level' (p. 390) if they were to ensure delivery of a tier three Rwandan-based psychosocial trauma programme for families.

Ensuring providers are sufficiently trained to deliver programmes

Even when services were more adequately staffed, there were concerns across the four studies^{65, 67, 68, 77} about the extent to which providers felt sufficiently skilled to deliver and address the mental health needs of the local population. The highly reliable and useful study by Song et al. (2013) reported that there was a 'lack of trained staff able to provide effective mental health and psychosocial work' (p. 619) to assist in the rehabilitation efforts seeking to support FCSs in Sierra Leone. They found that, subsequent to the identification of psychiatric symptoms in FCSs, there was not only a lack of primary mental health services to refer to, but of the two services available managers reported 'needing more apprenticeships' and practitioners were 'insecure about their ability' (p. 619) and did not feel equipped to address mental health issues. One practitioner stated: 'I'm trying to do my best, but I don't know how to do mental health work' (p. 620).

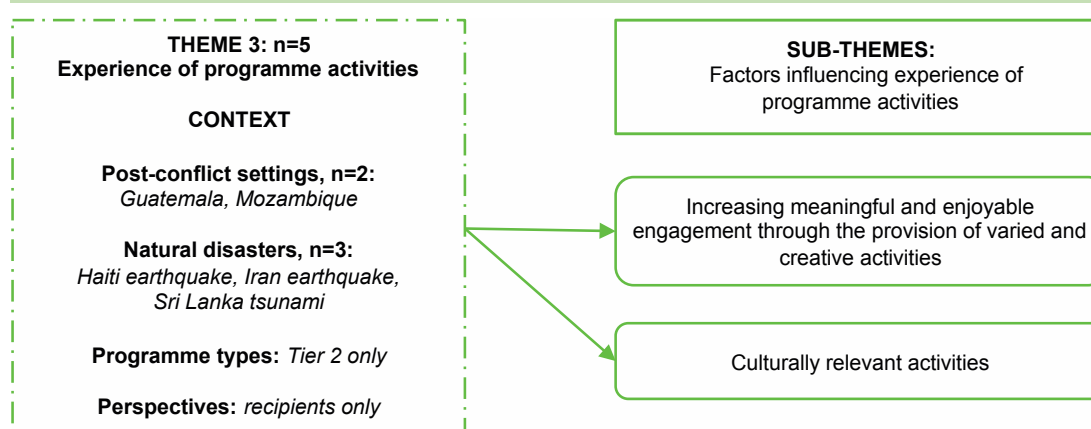
Three studies, judged to be of low reliability but of variable usefulness, supported these findings. For example, when attempting to deliver clinical care to adults immediately after the 2010 Haiti earthquake, the evaluation by Budosan and Bruno (2011), of medium usefulness, found that the majority of primary healthcare practitioners felt that they 'lacked the knowledge and skills' (p. 230) to assist patients presenting with mental health problems. Practitioners were particularly concerned about the reliance on prescribing medication (e.g. diazepam), while the opportunity to provide 'any psychotherapeutic techniques' was viewed as 'practically non-existent' (p. 230).

Similarly, in their evaluation of the primary mental health and community outreach services capacity to address the mental health and psychosocial needs of people affected by the civil war in Uganda, Baingana and Onyango (2011) found that although there were 12 members in each village health team, 'only one was trained' and thus it proved difficult to cover all outreach activities (p. 298). They went on to explain that, due to a lack of trained staff, the services were unable to deliver programme components 'specifically targeted at children, including those in school', and were consequently missing 'the largest segment of the population in Uganda' (p. 298). The authors argued for the need to develop training materials for more than one village health team at a time and for those materials to also include how to support communities to develop their own 'patients support groups and livelihood activities', including how mental health 'sensitisation and mobilisation is carried out' (p. 300). Lastly, the low-quality study by Chauvin (1998), evaluating a tier three psychosocial trauma recovery programme, found that although a two-day training course included 'sensitising' staff to support traumatized children exposed to the Rwandan genocide, the capacity-building efforts focused primarily 'on the human resources facet specifically for front line groups' and was therefore insufficient. The authors reported that, overall, training led to staff who seemed 'committed but are few and are in need of much more substantial training', in particular 'related to counselling' (p. 389).

Theme 3: Experience of programme activities

A key theme across five studies^{66, 72, 73, 75, 76} was recipients' diverging experiences of engaging in creative and culturally relevant programme activities. Programme recipients in all five studies, rated as either high or medium on reliability and usefulness, provided views on the programme content of tier two programmes, which sought to strengthen community and family supports. The sub-themes are outlined in Figure 4.5.

Figure 4.5: Factors influencing experience of programme activities



Increasing meaningful and enjoyable engagement through the provision of varied and creative activities

The first sub-theme identified across three studies^{73, 75, 76} was the extent to which engagement in MHPSS programmes was more enjoyable or meaningful to recipients when they included a range of activities, including creative or other forms of play. Sahin's (2011) highly reliable evaluation providing medium useful findings, evaluating a psycho-education programme on the impact of natural disasters for children and adults after the Marmara earthquake, indicated that for parents increasing the number of issues covered and made

available for group discussion increased the perceived benefits, as 'parents found the seminars more helpful' (p. 45). For children, the perceived benefits increased when 'the number and variety of activities' (p. 46) included in the presentation material was higher. The study by Nastasi et al. (2011) also provided highly reliable and medium useful findings on a post-tsunami after-school psychosocial programme. The Sri Lankan-based initiative delivered a psychological well-being curriculum comprised of creative activities in individual and group formats. Data from student evaluation forms revealed that, although they valued the opportunity for group interaction, there were mixed findings with regard to the programme content, with some young people 'indicating enjoyment of writing, drawing, working together, and questioning, while others indicated dislike' (p. 527) for the same activities.

In the highly useful and medium reliable study by Kunz (2009) of a sports-based psychosocial intervention in post-earthquake Iran, a 'primary source of motivation' expected by programme providers when children engage in sport and play together was to have fun. However, 96 percent of the young people sampled 'looked forward' to participating in the sports and play activities because they were 'very important' to them, compared with just over half (54 percent) of young people who were not in agreement with the statement: 'The main thing is to have fun' (p. 1,151). The author concluded that possibly, given young people's current circumstances, 'being able to engage in sport and play has a more serious importance than "just" doing it for enjoyment'. One of the girls' volleyball coaches concurred:

As they are telling me now, this centre has become their second home and they are much dependent on coming to the class. They are saying that they are gaining peace and relaxation here. (p. 1,151)

The medium reliable and highly useful study by Lykes (2014) sought to evaluate 'creativity as an intervention strategy' (p. 30) for Mayan women living in post-conflict Guatemala. It found that across the workshops women found that the inclusion of activities such as drawing and drama enabled them to engage more meaningfully in the healing process. The collective drawings were seen as a 'resource' generated by the group to connect 'so that they wouldn't feel so much fear, so that they could begin to feel free' (p. 36). Further, the women spoke about the value of embodying their experiences via performances. This approach helped them bypass words to express emotional effects, such as 'sadness, negative memories, suffering that we have lived through', as well as 'making them connect to being a child' and 'enjoying things' (p. 38).

Culturally relevant activities

A further sub-theme, identified in two highly useful and medium reliable studies, was the importance of culturally relevant activities to support engagement and increase programme impact. Interviews with FCSs in the study by Boothby et al. (2006) found that participation in traditional cleansing ceremonies 'helped them return to civilian life' and were 'vital for rebuilding' trust between the boys and their communities as a key outcome of the programme (p. 96). These ceremonies were described as 'a door to pass through the house' and were seen as 'a critical step towards psychological recovery'. The boys reported:

When something special happens, like in this case my return home, it is necessary to give thanks to the ancestors. (p. 96)

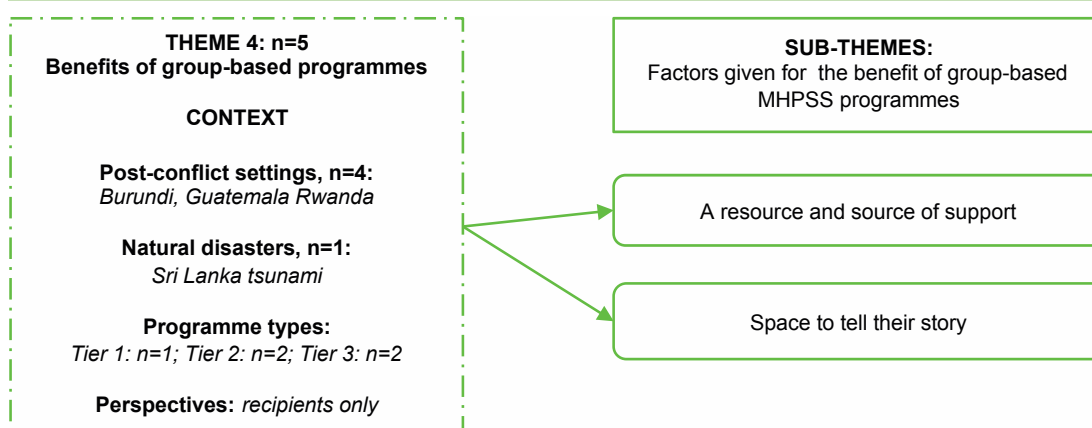
It was helpful because it removed the evil that I was bringing with me. I was able to forget easily all the evils that I had, even though I still dream about it. (p. 97)

Similarly, Lykes (2014) reported that to ensure programme effectiveness and support deeper forms of engagement, programme activities needed to be in alignment with the 'cultural and educational' position of their target population, Mayan women negatively impacted by exposure to armed conflict. They argued that by developing a creative-based workshop that 'interfaces with Mayan beliefs and practices', they were more likely to enable 'indigenous meaning making' that helped facilitate 'the active participation of rural, non-formally educated, Mayan women in a wide range of processes that contributed to their personal transformation' (p. 38).

Theme 4: Benefits of group-based programmes

The benefits of group-based MHPSS programmes were cited across five studies. Programme recipients spoke about the benefits of the group as a resource and a source of support. For some women the group provided a safe space for them to 'tell their story'. The evidence was drawn from studies judged to be of medium reliability and high usefulness (n=3) or highly reliable and of high (n=1) or medium (n=1) usefulness. Programmes spanned tier one to tier three programmes. The sub-themes are outlined in Figure 4.6.

Figure 4.6: Factors given for benefit of group-based MHPSS programmes



A resource and source of support

A sub-theme in four of the five studies was the importance of the group as a resource and a source of support.^{69, 70, 73, 75} The highly reliable study of a tier one village health-worker clinic integrating health delivery with other community development initiatives (e.g. food security, music/cultural programmes) in post-civil war Burundi was evaluated by Christensen and Edward (2015). Community members in the study valued 'being drawn together as a group by enjoyable things' (p. 40). One focus group member remarked:

When we go to study together [with electricity] at night or play music together, this promotes love. There is a framework to play together, laugh together... it helps us be united. (p. 40)

The role of group-based programmes in promoting social cohesion and 'reducing social isolation', by connecting with others in a similar situation, was also reported by women participants in a tier three counselling support group for mothers exposed to traumatic events during the Rwandan genocide.⁷⁰ The study, judged to be of medium reliability and high usefulness, found that women 'attributed their improved relationship with their children to the support and knowledge provided by the group' (Hogwood, 2014: 401). The author concluded that by developing positive social connections with peers, women were able to 'rebuild their resources', leading to 'improvements in their family relationships' (Ibid.), a primary aim of the programme.

Two studies evaluating tier two community and family support interventions also reported favourable experiences of participants engaged in group-based activities. In Nastasi et al.'s (2011) evaluation of a post-tsunami after-school programme delivered to young people in Sri Lanka, the data revealed that 'the opportunity for group interaction' was met positively and corresponded with 'high levels of engagement' by students in grades seven and nine (all quotes, p. 527). Feedback report forms also suggested 'enjoyment of group activities' as these provided a forum for young people to 'work together and to share information and gain support from peers' (p. 527). Lykes (2014) also found that Mayan women in post-conflict Guatemala who were engaged in collective drawing activities valued 'the many opportunities of doing things together' (p. 36). This was in contrast to the loneliness dominating their lives before participating in the creative workshops.

Safe space to tell their story

Two studies evaluating tier three programmes for women in post-genocide Rwanda provided evidence on the challenging but rewarding experience of sharing their personal stories with others. In the Healing of Life Wounds programme, which ran workshops, King (2014), in a medium reliable and highly useful study, found that many of the women appreciated the confidentiality of the group as a separate and 'safe space' from the wider community, where they could begin to process their emotions. One woman who had never shared her experience found:

When we formed that small group, I had hope. I told myself that after we have all discussed the guiding rules, there are at least people, even if I cannot know what is in their heart, at least I can trust them and share my story as it is so that I can find a way to deal with the sorrow and sadness of my heart. So that these feelings can get out of me and allow my heart to feel calm and stable. (p. 422)

The author reported that forming trust in the group was a gradual process that evolved over time as more women volunteered their experiences and felt heard and listened to with respect and empathy. One participant revealed:

When a person is courageous to tell his/her story... saying, 'these are my problems', you listen... Then, when I started to tell my story, they said 'Ohhh, poor you, you really had problems!' I felt that they received it, consoled me and made it theirs. (p. 422)

The author also noted:

The space for sharing was formed by the guiding principles of confidentiality and respect that participants had established at the beginning of the workshops. (p. 422)

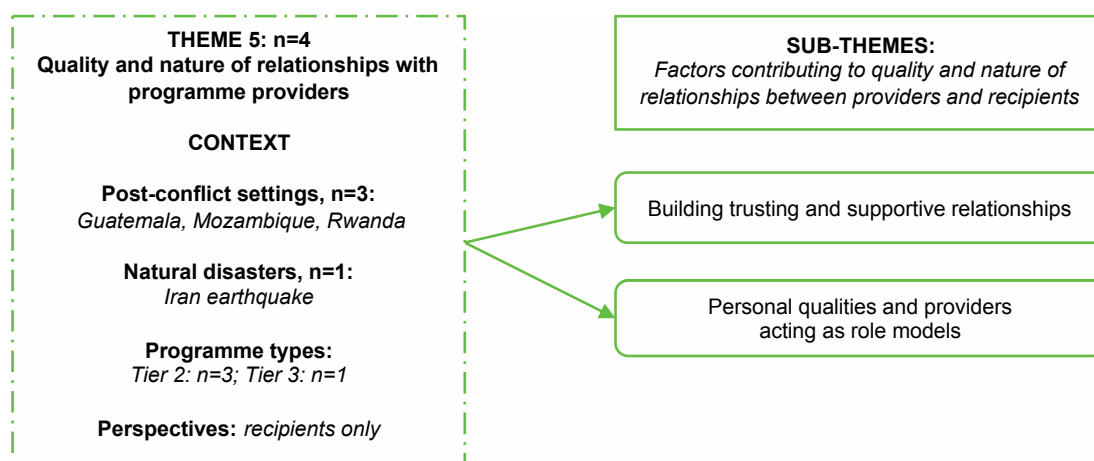
In her study of community counselling groups for Rwandan mothers, Hogwood (2014) reported that, although some group members found it difficult to talk about their traumatic experiences, ultimately realizing that they were not alone helped them to find their voice. One participant was quoted as saying:

I always thought that I was the only one suffering from having a child that was born out of rape, but after our group discussion, I got to know that it is no longer my concern as an individual but our concern as a group. Sharing our experiences gave me more hope and strength. (p. 400)

The significance of the group was poignantly illustrated by the women; one discovered a 'confidence to tell my child about his birth', while another woman said, 'the groups helped take the shame away from the fact I gave birth to a child from rape and helped me accept my child' (Hogwood 2014, p. 400).

Theme 5: Quality and nature of relationships with programme providers

A key theme across four studies^{66, 71–73} was the quality and nature of relationships between providers and recipients, and their role in maximizing engagement and increasing the impact of programmes. Studies were judged to be of medium reliability and high or medium usefulness. Evidence was drawn from both adult and child participants engaged in tier two community and family support programmes (n=3) or tier three focused, non-specialized support services (n=1). The sub-themes are outlined in Figure 4.7.

Figure 4.7: Factors contributing to the quality and nature of relationships with providers

Building trusting and supportive relationships

The importance of building trusting and supporting relationships was a sub-theme emerging from two studies. In the post-earthquake city of Bam, Kunz (2009) evaluated a sports programme for young Iranian people aimed at improving their psychosocial well-being. This study, judged to be of medium reliability but highly useful, found that once ‘a trusted relationship’ between the sports coaches and young people was established, it was likely to be ‘an indicator for positive development’ (p. 1,153). This finding was supported by a participant survey where young people agreed very much with the survey statements: ‘My coach is like a friend to me’ (99 percent) and ‘I usually share my private problems with my coach’ (74 percent). The authors concluded that, overall, young people trusted their coach with ‘their personal or familial problems, their fears and sorrows’ (all quotes p. 1,156), increasing their overall satisfaction with the programme.

Similarly, the trust and support received by facilitators in a creative arts project for Mayan women in post-conflict Guatemala was reflected on positively in the study by Lykes (2014). Women spoke about ‘coming out of our fear’ as a direct result of the facilitators working with them. The importance of a safe and supportive relationship to process traumatic experiences of violence was present across all the creative projects evaluated. The healing environment facilitated by programme providers was most explicit in the drawings by Mayan women in Project Two, who no longer felt ‘enclosed’ in their own home.

Personal qualities and providers acting as role models

In addition to the importance of building trusting and supportive relationships, programme recipients in three studies also reflected on the individual qualities and attributes of programme providers, citing them as key factors in supporting them to participate and benefit from MHPSS programmes. For example, in the study by King (2014), adult survivors of the Rwandan genocide spoke emphatically about the professional qualities of the primary facilitator. They described him as someone who was ‘calm, humble, attentive and compassionate’, with the ability to ‘handle crises; welcome opposing views without taking sides; be flexible and disclose his own personal challenges despite his social status and age’ (p. 423). These skills were seen as pivotal in facilitating and bringing together Tutsis and Hutus to engage in the Healing of Life Wounds dialogue and reconciliation programme. One participant recalled:

One thing that helped me a lot was the way Muzehe [the facilitator] was able to gather and manage a group formed by survivors and non-survivors and get them to talk to one another, share their stories and feelings. (p. 423)

The medium-quality study by Boothby et al. (2006) reported similar findings on FCSs engaged in the Mozambique-based Children and War Rehabilitation psychological and social programme. Young people in this study appreciated the care-givers’ concern for their

‘well-being, including appropriate discipline, and consistent modelling of good behaviour’ (p. 99). They credited these qualities with helping ‘them to recover their own sense of caring for other human beings’ (p. 99). One participant explained:

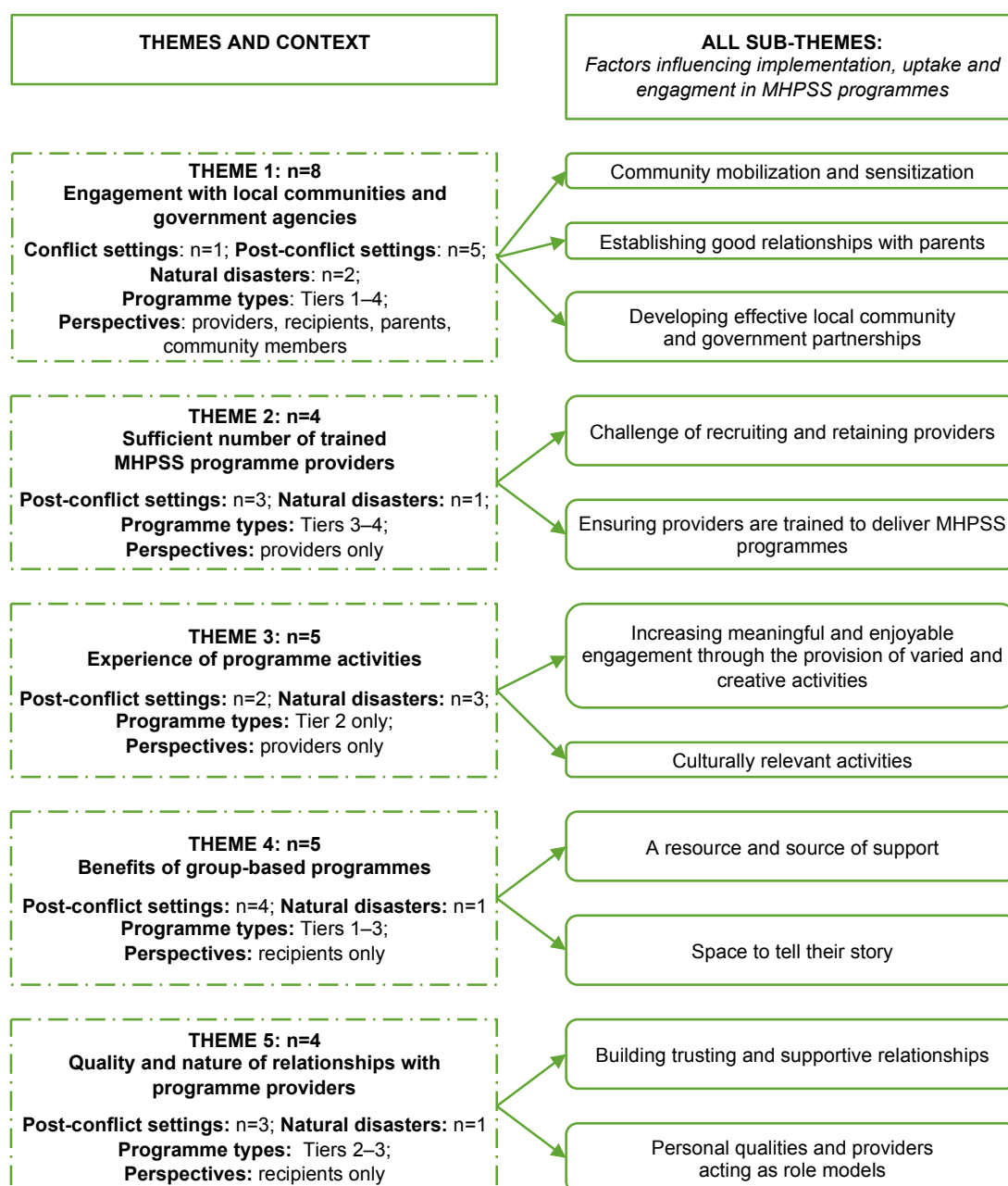
I overcame the things I lived in the war because I admired how the (Lhanguene) director and others at the centre lived, and I wanted to be like them. (Boothby et al., 2006: 99)

The authors also report that ‘this same modelling was later achieved through community-based apprenticeships’ (Ibid.). The tier two programme included local apprenticeships with older boys, strengthening their links with the local community. The authors reported that this gave FCSs ‘important role models and sets of skills to make money, helping them to ease the transition to civilian life and leave behind destructive behaviour patterns’ (Ibid.). The young people in the psychosocial sports programme in post-earthquake Bam in Iran also valued the coaches’ qualities of ‘understanding and caring about people’ over their being ‘good in sports’ (Kunz, 2009: 1,153). The establishment of a supportive relationship based on these qualities enabled coaches to also ‘serve as role models for the children’ and provided them ‘with guidance and orientation’ (p. 1,154).

Summary of synthesis of process evaluations

A number of themes emerged from the process synthesis.

Figure 4.8: Summary of key themes



Community engagement was a key mechanism to support the successful implementation and uptake of MHPSS programmes in humanitarian settings. For example, mental health sensitization and mobilization strategies, and the need to develop effective partnerships with local communities and governments, were seen as pivotal in increasing overall programme accessibility and reach. Establishing good relationships with parents may also be required when there is a need to communicate the value of the continued participation of children and young people in MHPSS programmes. Sufficient numbers of trained providers were essential in ensuring that programmes were delivered as planned, but could be challenging in resource-limited settings where there was a lack of incentives to work in the mental health sector.

Another key theme was the importance of designing programmes that are socially and culturally meaningful to local populations to ensure that they are appealing and that they achieve their intended aims. Facilitating engagement with peers in group-based programmes was also seen as beneficial as this provided an opportunity to connect with people from similar circumstances and backgrounds, helping to promote greater social cohesion and reduce social isolation. A final theme concerned the importance of building trusting and supporting relationships between programme providers and recipients to maximize engagement and increase the impact of programmes. Providers who could relate by bridging differences and show nurturing qualities, and who could act as role models, were also highly valued.

Possible hypotheses arising from the synthesis of process evaluations

The findings from the process evaluations generate a number of potential hypotheses which can be used to further examine the evidence on the impact of MHPSS programmes for children and adults. For example, the themes presented above suggest that programmes may be more effective if they:

- 1 take steps to engage with the community and/or family members
- 2 deliver programmes in partnership with governments and/or local agencies
- 3 overcome the challenge of recruiting and retaining trained providers
- 4 design programme activities that are socially and/or culturally meaningful
- 5 provide opportunities for people to interact as a group
- 6 ensure that programme providers build trusting and supportive relationships with programme recipients.

5

EFFECTIVENESS OF MHPSS PROGRAMMES FOR CHILDREN AND YOUNG PEOPLE

This section presents the findings of the 40 outcome evaluations assessing the impact of MHPSS programmes on the mental health and psychosocial health of children and young people (CYP). We begin with an overview of the main study characteristics of MHPSS programmes and an assessment of quality, including risk of bias. This is followed by the results of the meta-analysis. We also narratively report effect size estimates of individual studies where they were not included in a meta-analysis. Finally, we present a sensitivity analysis and sub-group analysis.

5.1 CHARACTERISTICS OF MHPSS PROGRAMMES FOR CHILDREN AND YOUNG PEOPLE

Programme design and implementation characteristics for CYP

Of the 45 programmes evaluated in the 40 included trials,^{78–117} over half (n=24) took advantage of whole-school or classroom-based settings to deliver MHPSS programmes to CYP. A further 15 studies delivered programmes in community settings generally^{81, 96, 101, 103} (n=4) or in refugee camps^{82, 88, 95, 98, 114} (n=5), family homes^{83, 85, 87} (n=3), outdoor areas for story-telling and drawing,¹⁰⁸ at football games¹¹⁰ or in church.¹⁰⁴ A total of seven studies did not specify where the programmes were delivered.^{85, 87, 92, 93, 100, 111, 113} The majority were group-based, with only eight programmes delivering all or some of their intervention components individually to participants.^{83–85, 88, 89, 92, 111}

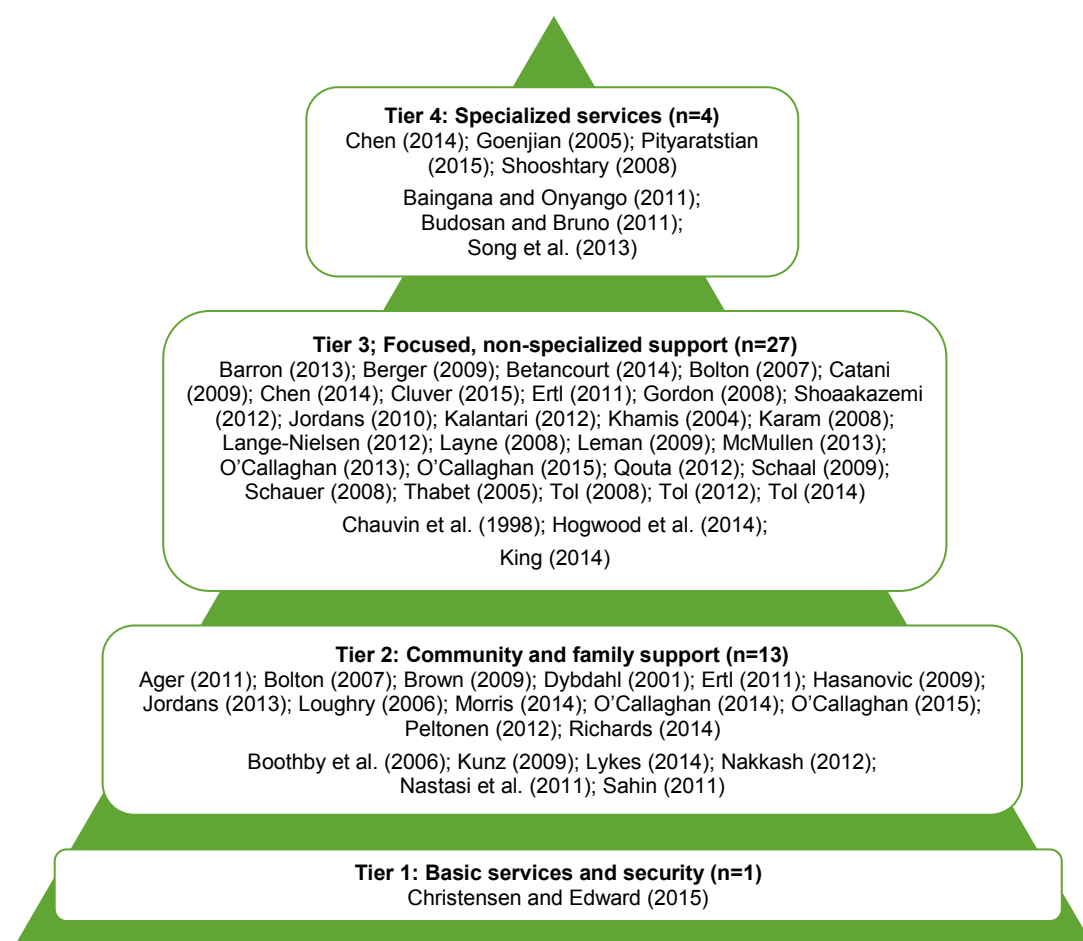
The MHPSS programmes identified in this review were designed to treat children and provide support and skills for them and their care-givers by using one or more different strategy or technique, including sessions to provide psycho-education and advice. Activities focused on opportunities to share experiences and/or to debate ideas between group members, gain life skills education and/or engage with teachers, schools, parents and the wider community. Social activities focused on child-centred activities such as games, drama, drawing, film, role-play and obtaining access to the Internet. Individual skills also focused on relaxation, breathing techniques and narrative writing exercises.

Programme delivery and implementation varied in terms of intensity and duration. Brief programme approaches were characterized by those delivered in single or double sessions,^{93, 100} while a further two short MHPSS programmes were completed within one week.^{95, 108} However, on average, MHPSS programmes were delivered in between four and 15 sessions (n=28), each lasting approximately 60–120 minutes (n=24) and delivered over a period of five to 12 weeks (n=20), with only three delivered in multiple sessions for approximately one school year or for more than one year.^{83, 99, 107}

Need assessment exercises and previous work experience in the field of study by authors and programme staff informed the adaptation and development of a) intervention strategies in nine programmes,^{82, 88, 100–102, 104, 106, 108, 109} b) intervention content of five programmes;^{85, 102, 103, 111, 114} and c) the development and selection of relevant outcome measures in two studies.^{83, 105} Moreover, when reported, eight MHPSS programmes were piloted to assess their applicability and acceptability for local contexts and cultures. For example, a school-based ERASE-Stress programme for children affected by the 2004 tsunami in Sri Lanka adapted an Israeli version to the local context by piloting it with small groups of Sri Lankan children and professionals.⁸⁰ In another study, during the piloting phase the wording and vocabulary of a CBT programme for children in Thailand affected by the 2004 tsunami were adapted to a local southern dialect.¹⁰⁸

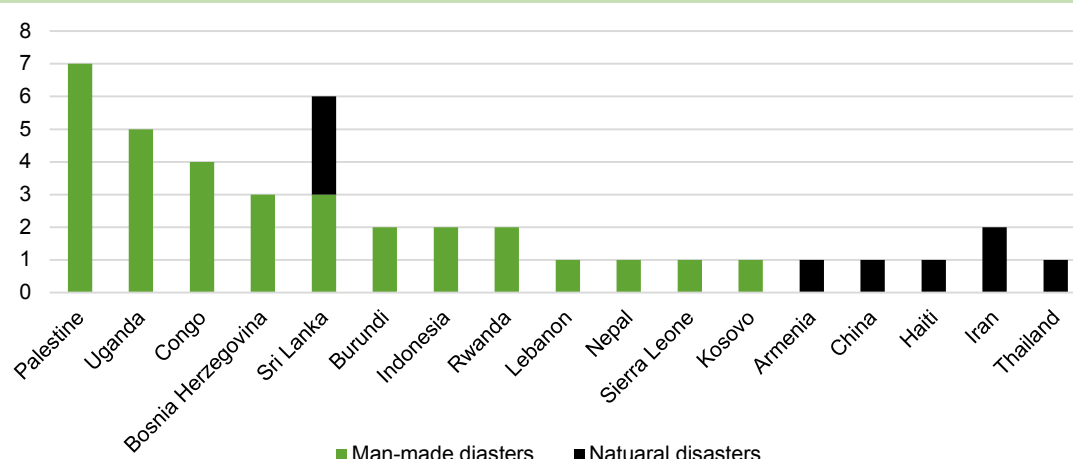
Evaluations targeting MHPSS programmes varied in their programme design and implementation. We further classified the studies according to their intervention goals, characteristics and implementation activities according to the IASC (2007) intervention pyramid³⁹ (see outline in Section 2). We identified 27 studies that assessed a wide range of MHPSS programmes delivered by trained, non-specialized staff. A further 13 studies assessed MHPSS programmes that aimed to strengthen community and family supports, and four evaluated MHPSS programmes delivered by health specialists. There was a lack of trials evaluating MHPSS programmes designed to address basic services and security (see Figure 5.1).

Figure 5.1: Studies evaluating MHPSS for children and young people (n=40)[†]



[†] Not mutually exclusive, as studies included more than one type of MHPSS programme.

The 40 trials were conducted in 17 LMICs. The majority of studies evaluated the impact of MHPSS programmes on CYP affected by armed conflicts across 12 countries: Palestine (n=7), Uganda (n=5), Democratic Republic of Congo (n=4), Bosnia and Herzegovina (n=3), Sri Lanka (n=3), Burundi (n=2), Indonesia (n=2), Rwanda (n=2), Lebanon (n=1), Nepal (n=1), Sierra Leone (n=1) and Kosovo (n=1). Nine studies evaluated the impact of MHPSS programmes on CYP affected by natural disasters (tsunami n=4; earthquake n=5) in six countries (see Figure 5.2).

Figure 5.2: Country and type of disaster (n=40)

All but three studies (two only girls,^{92, 106} one only boys¹⁰²) included both boys and girls in their research. Seven studies evaluated the impact of MHPSS programmes on refugees and internally displaced persons (IDPs), two on mothers and babies,^{87, 103} and two studies included children living in orphanages in Haiti⁸⁶ and Rwanda.¹¹¹ The majority of studies assessed interventions delivered in the aftermath of disasters, over periods ranging from within the first few weeks^{84, 97} to approximately 10 years or more.^{83, 90, 111} Ten studies investigated MHPSS programmes implemented during ongoing armed conflicts in Palestine, Congo and Sri Lanka.

Study design characteristics

Twenty-five studies were randomized controlled trials (RCTs);^{81, 82, 84–88, 90, 92, 94–96, 99, 102, 104–106, 108–110, 112, 115–118} one was a quasi-RCT;⁸⁰ and 14 were non-randomized comparison group studies.^{78, 79, 83, 89, 91, 93, 97, 100, 101, 103, 107, 111, 113, 114} Three studies employed a non-random comparison group parallel with randomized controlled group design.^{86, 105, 110} Of the 25 RCTs, six studies were clustered RCTs (cRCTs), assigning participants to groups by school^{112, 115–117} (n=4), class¹⁰⁹ (n=1) or local district⁹⁴ (n=1).

Control groups included wait-list controlled groups (n=23), treatment as usual (TAU) or active interventions (n=6).^{84, 87, 99, 103, 111, 112} Six studies had more than one intervention arm,^{82, 85, 86, 88, 105, 114} and 11 studies compared the effect of MHPSS programmes on CYP with those who received no intervention. One study¹¹⁰ randomly allocated boys into a competitive football league group or a wait-list comparison. At the same time, children who did not register to participate in the competition formed a non-randomized control group.

A wide range of treatment outcomes was used to assess impact. The most common outcomes reported across the studies were symptoms of post-traumatic stress disorder (PTSD) (n=30), depression (n=23) and psychological distress (n=12), conduct problems (n=11), prosocial behaviours (n=10) and functioning (n=9). Other treatment outcomes reported included harmful traumatic stress reactions (e.g. emotional problems and anxiety, somatic symptoms, grief, guilt, suicidal thoughts, stigmatization and marginalization); coping resources (e.g. social support, coping strategies, peer, family and social relationships, hopefulness and resilience); and physical and social well-being (see Figure 5.3). The effectiveness of MHPSS programmes was investigated according to all of these outcomes. As stated in Section 2, when there was insufficient data to undertake statistical meta-analysis, the findings were synthesized narratively.

Outcome measures were assessed immediately to three months after interventions were completed in 33 studies; at between four and 12 months in 11 studies; and at more than one year in four studies. We identified a variety of outcome measures and checklists used in the included studies. Nearly half of the studies clearly explained whether and how the standardized instruments were translated into local languages or piloted or adapted for use in the local setting.

Figure 5.3: Outcome measures reported in MHPSS studies for CYP studies (n=40)

Study/outcome measures	PTSD	Depression	Anxiety	Psychological distress	Emotional problems	Conduct problems	Functional impairment	Somatic symptoms	Grief	Suicide	Guilt	Prosocial behaviours	Coping	Hope	Resilience	Social support	Physical and social well-being
Psychotherapy – CBT																	
Betancourt (2014)	✓			✓	✓		✓					✓				✓	School performance and attendance
Berger (2009)	✓	✓					✓	✓						✓			
Chen (2014)	✓	✓													✓		
Jordans (2010)	✓	✓	✓	✓		✓	✓					✓		✓			
Khamis (2004)	✓	✓	✓	✓	✓	✓						✓	✓	✓			School performance
McMullen (2013)	✓			✓	✓	✓						✓					
O'Callaghan (2013)	✓				✓	✓						✓					
O'Callaghan (2015)	✓				✓	✓						✓					
Pityaratstian (2015)	✓																
Qouta (2012)	✓	✓		✓								✓					Well-being
Tol (2008)	✓	✓	✓			✓	✓							✓			
Tol (2012)	✓	✓	✓	✓		✓	✓					✓					
Tol (2014)	✓	✓					✓						✓	✓		✓	
Psychotherapy – NET																	
Catani (2009)	✓						✓	✓									
Ertl (2011)	✓	✓					✓			✓	✓						Stigmatization
Schauer (2008)	✓																School performance
Lange-Nielsen (2012)	✓	✓	✓														
Kalantari (2012)									✓								
Schaal (2009)*	✓								✓								
Bolton (2007)		✓	✓			✓	✓										
Chen (2014)	✓	✓													✓		
Hoaakazemi (2012)				✓													Physical health Social relationships
Gordon (2008)	✓																
Cluver (2015)	✓			✓													
Layne (2008)	✓	✓							✓								
Goenjian (2005)*	✓	✓															
Psychosocial interventions																	
Bolton (2007)		✓					✓										
Dybdahl (2001)	✓	✓		✓												✓	Well-being Physical health
Ertl (2011)	✓	✓					✓			✓	✓						Stigmatization

Study/outcome measures	PTSD	Depression	Anxiety	Psychological distress	Emotional problems	Conduct problems	Functional impairment	Somatic symptoms	Grief	Suicide	Guilt	Prosocial behaviours	Coping	Hope	Resilience	Social support	Physical and social well-being
O'Callaghan (2014)	✓				✓	✓						✓					
O'Callaghan (2015)	✓				✓	✓						✓					
Richards (2014)		✓	✓														Physical health
Brown (2009)*		✓							✓							✓	Marginalization
Hasanovic, (2009)*	✓																
Loughry (2006)*				✓	✓	✓								✓		✓	
Peltonen (2012)*	✓			✓		✓						✓					Peer and sibling relations
Ager (2011)*																	Well-being
Karam (2008)*	✓	✓	✓														
Thabet (2005)*	✓	✓															
Morris (2012)*																	Maternal mood and relationship
Psycho-education																	
Jordans (2013)*		✓				✓										✓	
Thabet (2005)*	✓	✓															

* Non-randomized controlled trials.

5.2 THE EFFECT OF MHPSS INTERVENTIONS FOR CYP

In this section, we present the quality of evidence and findings (in the meta-analysis or narrative synthesis of numerical data) from the 26 randomized controlled trials (RCTs) assessing the effectiveness of MHPSS; thus, the following sub-sections refer only to these 26 RCTs. Further details of key characteristics of the 26 RCTs are presented in Tables 3.1 and 3.2 in Appendix 3.

Risk of bias and quality of evidence

Selection bias

Random sequence generation

Eleven studies did not provide sufficient information and were rated as being of unclear risk of bias. Thirteen studies provided information on randomization sequences and were rated as low risk of bias^{82, 84, 87, 94, 96, 99, 104–106, 108, 110, 112, 118} and two studies were rated as high risk of bias.^{80, 86}

Allocation concealment

Seven studies suggested that the randomization process was concealed from research staff^{86, 102, 104–106, 110, 112} and were rated as low risk of bias. Nineteen studies did not provide information about the randomization allocation.

Blinding

Blinding of participants and personnel

Although it is not always possible to implement and it is difficult to assess quality, blinding the status of group allocation to participants and other key staff (e.g. persons who deliver or assess the trial's outcomes) can potentially yield more reliable findings. One study indicated that children, parents and research staff were blinded to the intervention allocation of the children participating in the study.¹⁰⁹ Six studies reported that participants were aware of their intervention assignment status.^{82, 85, 86, 92, 99, 108} Nineteen did not report on blinding and were rated as having an unclear risk of bias.

Blinding of outcome assessment

The majority of the studies reported that outcome assessors were blinded to the participants' treatment conditions^{80–82, 84, 87, 88, 102, 104–106, 108, 110, 116} (n = 13). Outcome assessors were not blinded to the participants' treatment groups in four studies.^{86, 94, 115, 117} Nine studies did not provide information on the blinding of outcome assessments.

Attrition bias

Internal validity can be compromised if the equivalence between groups and the randomization composition is altered due to attrition. Generalization may be limited when drop-outs differ from those who remain or complete a study, and results cannot be generalized based on an original sample of subjects. Attrition rates were reported or could be calculated from available data in all 26 of the studies. Twenty-two studies were judged to be low risk of bias. Four studies^{85, 86, 96, 99} had attrition rates of more than 20 percent and were rated as high risk of bias.

Selective reporting

Twenty-three studies were rated as low risk of bias. Three studies did not report data or findings of outcome measures specified in their methods.^{81, 86, 99} Figures 5.4 and 5.5 summarize the risk of bias for each study.

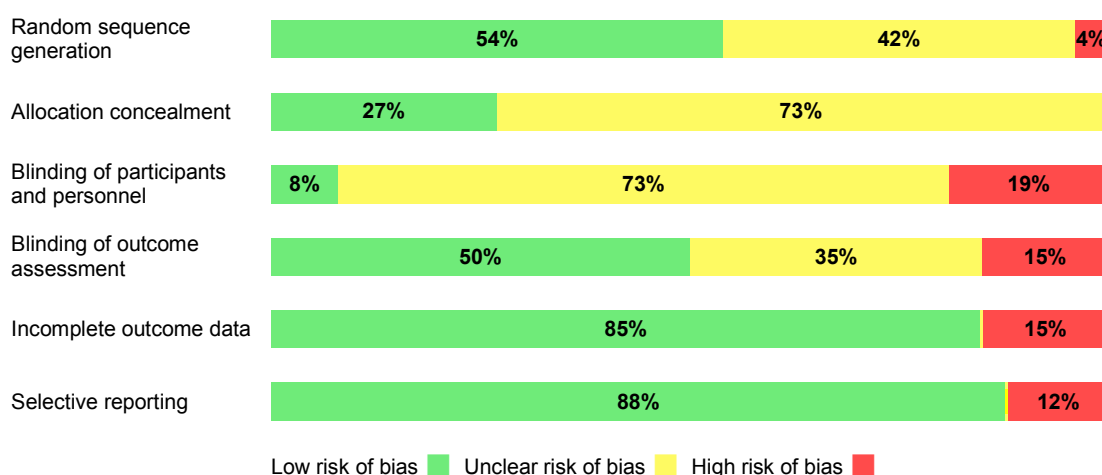
Figure 5.4: Risk of bias of MHPSS for CYP studies (n=26)

Study	Selection bias		Detection and performance bias		Attrition bias	Reporting bias
	Random sequence generation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessment	Incomplete outcome data	Selective reporting
Berger (2009)	-	?	?	+	+	+
Betancourt (2014)	?	?	?	+	+	-
Bolton (2007)	+	?	-	+	+	+
Catani (2009)	+	?	?	+	+	+
Chen (2014)	?	?	-	?	-	+
Cluver (2015)	+	+	+	-	-	-
Dybdahl (2001)	+	?	?	+	+	+
Ertl (2011)	?	?	?	+	+	+
Gordon (2008)	?	?	?	?	+	+
Hoaakazemi (2012)	?	?	-	?	+	+
Jordans (2010)	+	?	?	-	+	+
Kalantari (2012)	?	?	?	?	+	+
Khamis (2004)	+	?	?	?	-	+

Study	Selection bias		Detection and performance bias		Attrition bias	Reporting bias
	Random sequence generation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessment	Incomplete outcome data	Selective reporting
Lange-Nielsen (2012)	+	?	?	?	+	+
Layne (2008)	+	?	-	?	-	-
McMullen (2013)	?	+	?	+	+	+
O'Callaghan (2013)	+	+	?	+	+	+
O'Callaghan (2014)	+	+	?	+	+	+
O'Callaghan (2015)	+	+	?	+	+	+
Pityaratstian (2015)	+	?	-	+	+	+
Qouta (2012)	?	?	+	?	+	+
Richards (2014)	+	+	?	+	+	+
Schauer (2008)	+	+	?	?	+	+
Tol (2008)	?	?	?	-	+	+
Tol (2012)	?	?	?	+	+	+
Tol (2014)	?	?	?	-	+	+

+ Low risk of bias (■); - high risk of bias (■); ? unclear risk of bias (■).

Figure 5.5: Risk of bias of MHPSS for CYP studies



Overall effectiveness of MHPSS for CYP

Figure 5.6 presents findings from the meta-analysis by outcome measures (see Table 3.3, Appendix 3 for scales used in the studies).

The findings (from five high risk of bias, 13 medium risk of bias and eight low risk of bias studies) suggest that MHPSS programmes can slightly reduce functional impairment (+++) and may reduce emotional problems (+) in CYP. MHPSS programmes probably slightly reduce PTSD symptoms (++), psychological distress (++), conduct problems (++) and somatic complaints (+) and marginally increase hope (+). However, they may slightly decrease social support (+). We found that MHPSS programmes have no impact on anxiety (+++), depression symptoms (++) or prosocial behaviours (++) . We have insufficient evidence to draw a conclusion on their impact on coping, grief, suicide, guilt, stigmatization or resilience. Forest plots are presented in Figure 5.7 for PTSD and in Figure 5.8 for depression. Forest plots for all other outcomes are presented in Appendix 3, Section 3.4.

Figure 5.6: Pooled standardized mean difference (SMD) for mental health and psychosocial well-being outcomes, random effects model

Outcomes	Study design, number of studies and participants (n) and summary risk of bias	Findings and heterogeneity	Strength of evidence
PTSD	RCTs and a quasi-RCT (21 studies; n=3,615) 16 low or medium risk of bias studies	ES = -0.46*; 95% CI (-0.69, -0.24); Q = 206; df = 27; p = 0; I ² = 86.9%; tau-squared = 0.29	Moderate ++
Depression	RCTs (14 studies; n=3,516) 10 low or medium risk of bias studies	ES = -0.06; 95% CI (-0.27, 0.14); Q = 116; df = 19; p = 6.52E-16; I ² = 83.6%; tau-squared = 0.162	Moderate ++
Conduct problems	RCTs (8 studies; n=1,918) 7 low or medium risk of bias studies	ES = -0.45*; 95% CI (-0.81, -0.09); Q = 104; df = 10; p = 7.48E-18; I ² = 90.4%; tau-squared = 0.31	Moderate ++
Functional impairment	RCTs and a quasi-RCT (8 studies; n=1,574) 7 low or medium risk of bias of studies	ES = -0.24*; 95% CI (-0.39, -0.09); Q = 21.8; df = 13; p = 0.0588; I ² = 40.3%; tau-squared = 0.0279	Strong +++
Prosocial behaviours	RCTs (8 studies; n=1,997) 7 low or medium risk of bias	ES = 0.09; 95% CI (-0.16, 0.34); Q = 57; df = 10; p = 1.31E-8; I ² = 82.5%; tau-squared = 0.13	Moderate ++
Psychological distress	RCTs (8 studies; n= 908) 6 low or medium risk of bias studies	ES = -0.24; 95% CI (-0.52, 0.03); Q = 75.7; df = 10; p = 3.44E-12; I ² = 86.8%; tau-squared = 0.17	Moderate ++
Anxiety	RCTs (6 studies; n=1,886) 5 low or medium risk of bias studies	ES= 0.02; 95% CI (-0.11, 0.14); Q = 12.5; df = 7; p = 0.0851; I ² = 44%; tau-squared = 0.0131	Strong +++
Emotional problems	RCTs (5 studies; n=955) 4 low or medium risk of bias studies	ES= -1.02*; 95% CI (-1.5, -0.53); Q = 60.5; df = 6; p = 3.55E-11; I ² = 90.1%; tau-squared = 0.343	Limited +
Hope	RCTs and a quasi-RCT (5 studies; n=1703) 3 medium risk of bias studies	ES= 0.45 *, 95% CI (0.19, 0.71); Q = 28.8; df = 6; p = 6.7E-5; I ² = 79.2%; tau-squared = 0.0909	Limited +
Coping	RCTs (2 studies; n=973) One medium risk of bias study	ES = -0.23; 95% CI (-0.66, 0.19); Q = 9.3; df = 2; p = 0.00955; I ² = 78.5%; tau-squared = 0.108	Insufficient
Social support	2 RCTs (2 studies n=416) 2 low or medium risk of bias studies	ES= -0.41; 95% CI (-0.88, 0.07); Q = 7.95; df = 2; p = 0.0187; I ² = 74.9%; tau-squared = 0.133	Limited +
Somatic complaints	1 RCT and a quasi-RCT (2 studies; n=197) 1 low risk of bias study	ES= -0.36, 95% CI (-1.27, 0.55); Q = 5.31; df = 1; p = 0.0212; I ² = 81.2%; tau-squared = 0.354	Limited +
Grief	RCTs (2 studies; n=191) 1 medium risk of bias study	n/a	Insufficient
Suicide	1 medium risk of bias RCT (1 study; n=85)	n/a	Insufficient
Guilt	1 medium risk of bias RCT (1 study; n=85)	n/a	Insufficient
Stigmatization	1 medium risk of bias RCT (1 study; n=85)	n/a	Insufficient
Resilience	1 high risk of bias RCT (1 study; n=40)	n/a	Insufficient

*Statistical significance at 95 percent; CI = confidence interval; df = degree of freedom; ES = effect size; I² = I² statistic; n = no. of participants; n/a = not applicable; p = p-value; Q = Cochran's Q.
 Note: Negative sign of pooled SMD indicates positive impact of MHPSS, except for prosocial behaviour, social support, coping, resilience and hope.

Figure 5.7: Forest plot – pooled SMD of MHPSS studies reporting PTSD, random effects model (n=21)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 206$; $df = 27$; $p = 0$; $I^2 = 86.9\%$; tau-squared = 0.29

Random effects model: -0.463 (-0.689, -0.237)

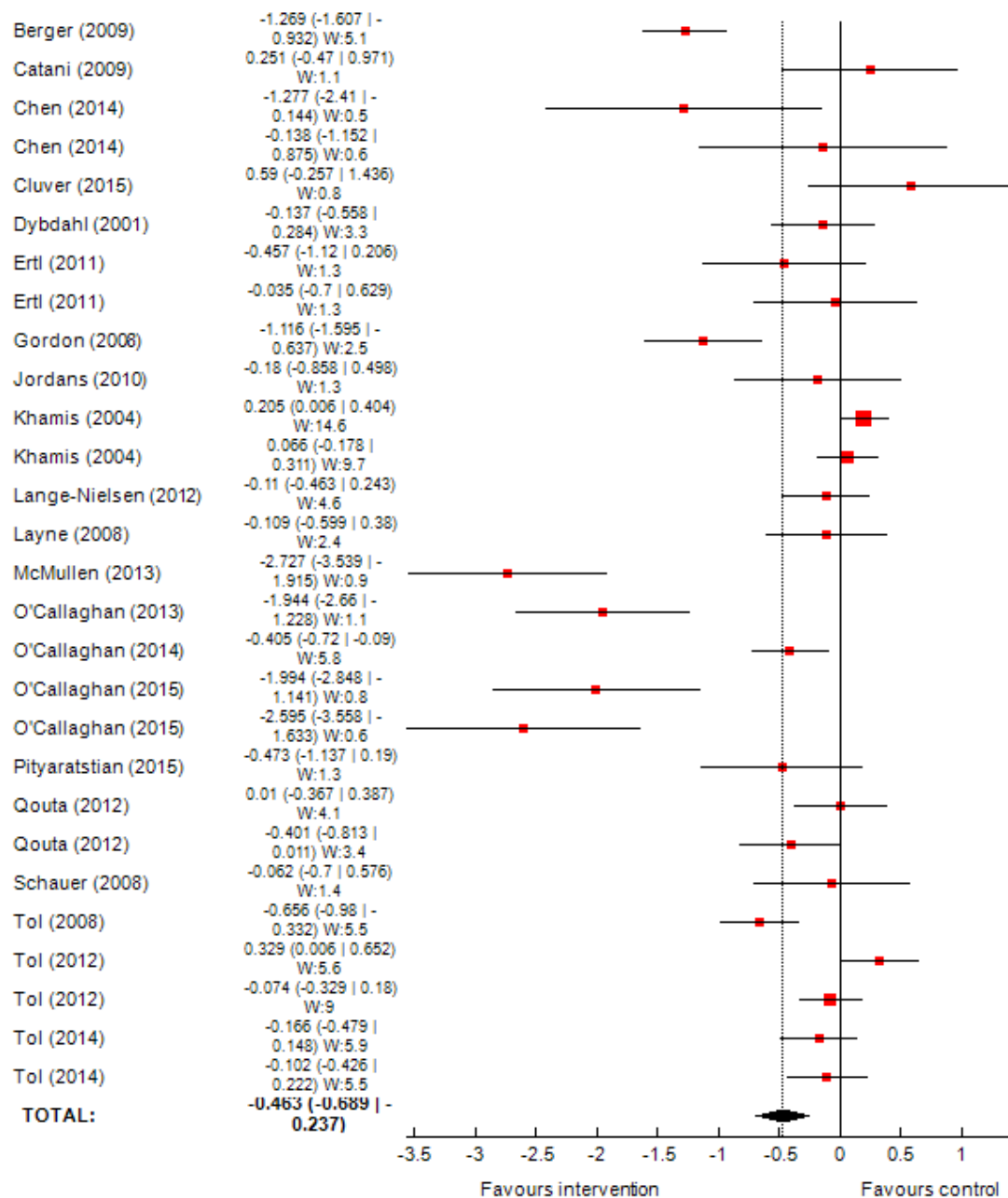
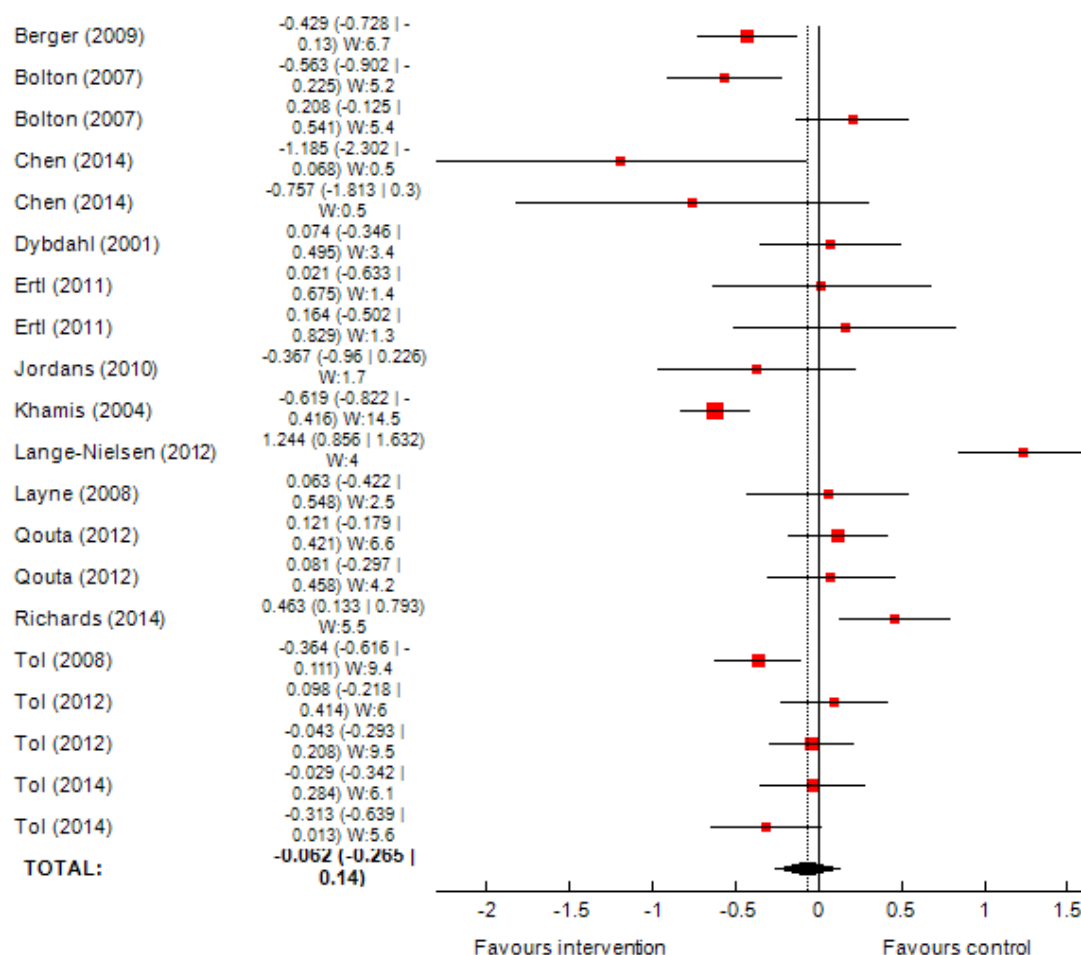


Figure 5.8: Forest plot – pooled SMD of MHPSS reporting depression, random effects model (n=14)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 116$; $df = 19$; $p = 6.52E-16$; $I^2 = 83.6\%$; tau-squared = 0.162

Random effects model: -0.06 (-0.27, 0.14)



Sensitivity analysis

We carried out a sensitivity analysis to assess what impact the inclusion of high risk of bias studies had on the meta-analysis of the findings from all MHPSS programmes for CYP. The findings from the meta-analysis when excluding high risk of bias studies showed a comparable magnitude. When excluding high risk of bias studies, the summary of evidence of two outcomes – anxiety and hope – changed to moderate (++) from strong and limited, respectively (see Table 3.8 in Appendix 3).

Sub-group analysis and investigation of heterogeneity

A test of heterogeneity was carried out to explore whether the differences in effect size estimates were greater than expected by chance. We found significant heterogeneity in all outcomes except anxiety and functional impairment (see Figure 5.6).

We performed a meta-regression for two outcomes, PTSD and depression, on key characteristics of studies, including types of MHPSS programme, types of comparison group, intensity, follow-up period, types of humanitarian crisis and summary risk of bias. The findings suggest that programme intensity (how many minutes were offered to participants) was significantly associated with effect sizes of PTSD ($p=0.043$). We also found that the follow-up period was significantly associated with effect sizes of depression ($p=0.049$). There

was no evidence, however, to suggest that effect size estimates of PTSD and depression were associated with any other characteristics of MHPSS studies.

We narratively summarized characteristics of participants as reported by the studies' authors to examine potential moderating effects on mental health and psychosocial outcomes.

Gender

Eight studies reported outcome measures by gender or explored the interaction of gender with intervention groups. Overall, the findings reported from these studies were mixed, with no clear pattern across types of intervention or outcome.

Bolton et al. (2007) found that interpersonal therapy for groups (IPT-G) was effective for girls, but not for boys, in improving depression symptom scores when compared with the control groups. The study found no significant differences by gender on any outcome of the impact of creative play. Jordans et al. (2010) suggested that a classroom-based intervention (CBI) was more effective for girls on prosocial behaviour than for boys. At the same time, the authors found that this type of intervention was more effective for boys than girls on psychological difficulties and aggression.

By contrast, the findings from two studies evaluating CBIs suggested adverse effects on young girls (5–12 years old). Tol et al. (2012) reported that young girls (mean age, both boys and girls = 11.03 years) who received a school-based intervention showed higher scores, indicating more severe PTSD trajectories than girls who were in the wait-list control group ($p=0.24$). Khamis et al. (2004) also reported higher scores on stressful symptoms for young girls (aged 6–11 years) who were in the intervention group than those in the wait-list control group ($MD = 5.78$, $t = 2.31$, $p<0.05$).

For boys, the findings from Richards et al. (2014) suggested an unintended effect of a sport-for-development intervention on depression ($ES = 0.67$, 95 percent CI (0.33, 1.00)) and anxiety-like symptoms ($ES = 0.25$, 95 percent CI (0.00, 0.49)) and found no significant effect of the intervention on girls. Khamis et al. (2004) reported that older boys (12–16 years) who received the classroom-based intervention reported higher stress scores than those who were in the wait-list group. However, Tol et al. (2012) reported more improvement over time in PTSD and anxiety in boys when compared with the wait-list group, but not in other outcomes.

Three studies^{80, 109, 115} reported no significant impact of interventions, or no observed interaction between gender on key outcome measures including PTSD, depression, psychosocial symptoms, hope or functional impairment in either boys or girls.

Age

Six studies assessing the impact of CBIs investigated the moderating effect of age on mental health outcomes.^{80, 94, 96, 115–117} The findings were mixed and no clear pattern was observed.

The findings from Jordans et al.'s (2010) analysis suggested significant effects of CBIs on older children in increasing hope. In contrast, Tol et al. (2014) suggested that younger age was associated with increased hope among participants in the CBI group (estimate = -0.06 , $SE = 0.025$, $p<0.05$).

Tol et al. (2012) performed a longitudinal trajectory analysis examining changes over time on primary and secondary outcomes. The study found that the CBI had a positive impact on younger children compared with older children in conduct problems ($p=0.019$) and prosocial behaviours ($p<0.05$), but not on any other outcomes. Khamis et al. (2004) concluded in their study that CBIs may need to be modified to meet specific needs for older males (15–16 years) and younger females (6–11 years), as their study found a negative intervention impact on harmful mental and psychosocial reactions, including an increase in perceived impact of difficulties and increased tendency for avoidance behaviours.

The analysis of two studies^{80, 117} suggested no significant interactions of age on any outcome measured in them.

Familial factors

Tol et al. (2014) suggested that family factors, including living in a larger household or with both parents, could have a moderating impact on the improvement of PTSD and depression symptoms or functional impairment in children receiving CBIs.

Diab et al. (2015) (linked to the Quata (2012) study) examined the influence of family relationships on young people's resilience and well-being, and found no significant association of mothers' acceptance or attachment with children's resilience and well-being.

Exposure to traumatic events

As outlined in Figure 1.1, current daily stressors (e.g. basic needs, domestic violence) and a number of exposures to traumatic events may influence the impact of MHPSS programmes on mental health and psychosocial outcomes. Tol (2012) indicated that children with low levels of current war-related daily stressors showed larger improvements in PTSD, anxiety and functional impairment than children in the wait-list control group. Another study by Tol (2014) suggested improvements in hope in children in the CBI group who had fewer exposures to traumatic events. There was no association of exposure to traumatic events with hope found in the wait-list control group.

On the other hand, the findings from two studies suggested that there were no significant associations with past exposures to violence (e.g. witnessing bomb blasts, murders or sexual violence) and PTSD,¹¹⁶ depression,¹¹⁶ functional impairment,¹¹⁶ prosocial behaviours¹⁰⁹ or well-being.¹⁰⁹

Social capital

Tol et al. (2014) found no moderating influence of social capital on PTSD, depression, hope or functioning.

Displacement status

Tol et al. (2014) found that children in the intervention group who lived in their original villages or on newly bought land showed a negative impact on hope and functional impairment, when compared with those in the wait-list group. The study found no interaction between treatment groups and displacement status for PTSD or depression.

Impact of MHPSS by type of programme

In the following sections, we present the effects of MHPSS programmes according to the key characteristics of the interventions evaluated (see Section 2 for the grouping process and decisions) and report them in the following order: a) cognitive behavioural therapy, b) Narrative Exposure Therapy, c) other therapies and d) psychosocial programmes.

We perform a statistical meta-analysis when there is sufficient data to do so (two or more studies). When the findings are not included in the meta-analysis, we report the findings narratively. Under each section, we also report the key characteristics of the studies included in the synthesis, with a summary risk of bias judged for each study.

Psychotherapy: cognitive behavioural therapy (CBT)

Thirteen studies^{80, 81, 85, 94, 96, 102, 105, 106, 108, 109, 115–117} assessed the impact of CBT. The findings from the meta-analysis suggested that CBT approaches might reduce PTSD (++) and emotional problems (+). CBT may slightly reduce depression (++) , conduct problems (++) , psychological distress (+) and functional impairment (+) and may slightly improve hope (+) in CYP. We found that CBT probably has little or no impact on prosocial behaviours (++) or anxiety (++) . However, we have insufficient evidence on the impact of CBT on coping, resilience, school performance, well-being and somatic complaints. The findings from the narrative synthesis suggest that CBT may have no impact on social support (see Figure 5.9). All forest plots of CBT studies for CYP are presented in Appendix 3, Section 3.3.

Figure 5.9: Pooled SMD of CBT for children and young people – random effects model

Outcomes	Study design, number of studies and participants (n) and summary risk of bias	Findings and heterogeneity	Strength of evidence
PTSD	RCTs and a quasi-RCT (12 studies; n=2,812) 9 low or medium risk of bias studies	ES = -0.56* 95% CI (-0.87, -0.25); Q = 161; df = 15; p = 0; I ² = 90.7%; tau-squared = 0.333	Moderate ++
Depression	RCTs and a quasi-RCT (8 studies; n=2,624) 5 low or medium risk of bias studies	ES = -0.21* (-0.39, -0.03); Q = 35.8; df = 10; p = 9.1E-5; I ² = 72.1%; tau-squared = 0.0645	Moderate ++
Conduct problems	RCTs (7 studies; n=1,759) 6 low or medium risk of bias studies	ES = -0.46*; 95% CI (-0.86, -0.06); Q = 89.6; df = 8; p = 5.57E-16; I ² = 91.1%; tau-squared = 0.319	Moderate ++
Prosocial behaviours	RCTs (7 studies; n=1,838) 6 low or medium risk of bias	ES = 0.16; 95% CI (-0.12, 0.44); Q = 51.4; df = 8; p = 2.25E-8; I ² = 84.4%; tau-squared = 0.139	Moderate ++
Psychological distress	RCTs (5 studies; n=1,736) 4 low or medium risk of bias studies	ES = -0.32*; 95% CI (-0.63, -0.01); Q = 65.7; df = 7; p = 1.11E-11; I ² = 89.3%; tau-squared = 0.169	Limited +
Functional impairment	RCTs and a quasi-RCT (5 studies; n=1,458) 4 medium risk of bias of studies	ES = -0.27*; 95% CI (-0.47, -0.08); Q = 14.3; df = 6; p = 0.0265; I ² = 58%; tau-squared = 0.039	Limited +
Hope	RCTs and a quasi-RCT (5 studies; n =1,703) 3 medium risk of bias studies	ES = 0.45*; 95% CI (0.19, 0.71); Q = 28.8; df = 6; p = 6.7E-5; I ² = 79.2%; tau-squared = 0.0909	Limited +
Emotional problems	RCTs (4 studies; n=716) 3 low or medium risk of bias studies	ES = -1.09*; 95% CI (-1.67, -0.50); Q = 42.7; df = 4; p = 1.17E-8; I ² = 90.6%; tau-squared = 0.363	Limited +
Anxiety	RCTs (3 studies; n=1,607) 3 medium risk of bias studies	ES = -0.04; 95% CI (-0.15, 0.07); Q = 6.86; df = 5; p = 0.231; I ² = 27.2%; tau-squared = 0.00536	Moderate ++
Coping	RCTs (2 studies; n=973) 1 medium risk of bias study	n/a	Insufficient
Resilience	RCT (1 study; n=40) 1 high risk of bias study	n/a	Insufficient
Well-being	RCT (1 study; n=482) 1 medium risk of bias study	n/a	Insufficient
School performance	RCTs (2 studies; n=1,080) 1 medium risk of bias study	n/a	Insufficient
Somatic complaints	Quasi-RCT (1 study; n=166) 1 high risk of bias study	n/a	Insufficient

*Statistical significance at 95 percent; CI = confidence interval; n =no. of participants; n/a = not applicable.

Note: Negative sign of pooled SMD indicates positive impact of MHPSS, except for prosocial behaviours, coping and resilience.

Narrative synthesis of CBT studies

In this section, we narratively summarize the findings from studies assessing the impact of CBT on mental health and psychosocial outcomes that were not included in the meta-analysis.

One study⁸⁵ reported an improvement (ES = 1.1; 95 percent CI (0.32, 1.89); high risk of bias) of **resilience** in children who participated in the intervention compared with those who received no intervention. Betancourt et al. (2014) (medium risk of bias) assessed **school performance** and **attendance** at eight months follow-up. The findings suggested that the children who participated in the Youth Readiness Intervention (YRI) were more likely to remain in school (OR = 8.88, 95 percent CI (3.29, 23.97), p<0.001), attend school (OR = 34.93, 95 percent CI (2.69, 454), p<0.01) and have better academic performance (β = -0.95,

CI (-1.81, -0.10), $p < 0.05$) than students in the control group. No intervention effects were found for **well-being**¹⁰⁹ (medium risk of bias study) or **social support**^{81, 115} (two medium risk of bias studies). One study found an improvement through CBT on **somatic complaints**⁸⁰ (SMD = -0.78, 95 percent CI (-1.14, -0.41); high risk of bias).

We further performed an exploratory analysis to assess the effectiveness of CBT by considering three different named programme designs/approaches: trauma-focused CBT (TF-CBT) (n=3), classroom-/school-based interventions (CBI-CBT) (n=6) and Teaching Recovery Techniques (TRT) (n=3).

The findings from the analysis suggested that TF-CBT probably reduces PTSD (++) , conduct problems (++) and emotional problems (++) in CYP. TF-CBT may also improve prosocial behaviours (+). We have insufficient evidence regarding the impact of TF-CBT on psychological distress outcomes (see Figure 5.10A, and Figure 11 for the forest plot of TF-CBT on PTSD).

Figure 5.10A: Pooled SMD of TF-CBT – SMD, random effects model

Outcomes	Study design, number of studies and participants (n) and summary risk of bias	Findings and heterogeneity	Strength of evidence
PTSD	RCTs (3 studies; n=152) 3 low or medium risk of bias studies	ES = -2.21*; 95% CI (-2.7, -1.72); Q = 2.33; df = 2; p = 0.311; I ² = 14.3%; tau-squared = 0.0272	Moderate ++
Conduct problems	RCTs (3 studies; n=152) 3 low or medium risk of bias studies	ES = -1.2*; 95% CI (-1.58, -0.81); Q = 0.453; df = 2; p = 2; I ² = 0%; tau-squared = 0	Moderate ++
Prosocial behaviours	RCTs (3 studies; n=152) 3 low or medium risk of bias studies	ES = 0.63; 95% CI (-0.55, 1.82); Q = 19.2; df = 2; p = 6.82E-5; I ² = 89.6%; tau-squared = 0.98	Limited +
Emotional problems	RCTs (3 studies; n=152) 3 low or medium risk of bias studies	ES = -1.76*; 95% CI (-2.3, -1.22); Q = 3.23; df = 2; p = 0.199; I ² = 38.1%; tau-squared = 0.0862	Moderate ++
Psychological distress	RCT (1 study; n= 50) 1 medium risk of bias study	n/a	Insufficient

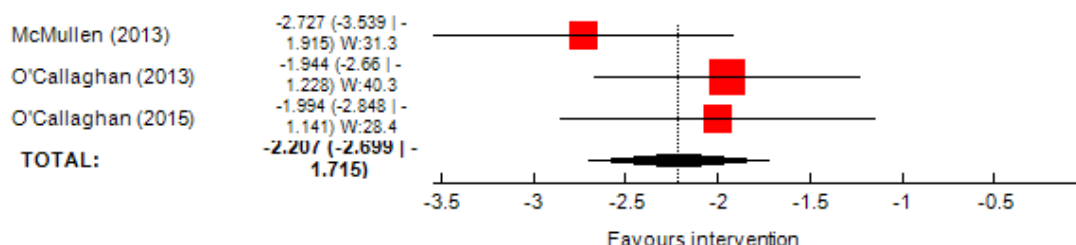
*Statistical significance at 95 percent; CI = confidence interval; n =no. of participants; n/a = not applicable.

Note: Negative sign of pooled SMD indicates positive impact of MHPSS, except for prosocial behaviours.

Figure 5.11: Forest plot – pooled SMD of TF-CBT reporting PTSD, random effects model (n=3)

Heterogeneity: Q = 2.33; df = 2; p = 0.311; I² = 14.3%; tau-squared = 0.0272

Random effects model: -2.21 (-2.7, -1.72)



For the CBI-CBT programmes, the findings suggest that this type of intervention may slightly reduce depression (+), functional impairment (+) and psychological distress (+) or may slightly improve hope (+) in CYP. The findings also suggest that there might be little impact of CBI on PTSD (+), anxiety (++) , conduct problems (+) or prosocial behaviours (+). We have insufficient evidence regarding the impact of CBI on social support, somatic complaints, coping and emotional problems (see Figure 5.10B, and Figure 5.12 for the forest plot of CBI on PTSD).

Figure 5.10B: Pooled SMD of CBI-CBT – SMD, random effects model, or stated otherwise

Outcomes	Study design, number of studies and participants (n) and summary risk of bias	Findings and heterogeneity	Strength of evidence
PTSD	RCTs and a quasi-RCT (6 studies; n=2,102) 4 low or medium risk of bias studies	ES = -0.198; 95% CI (-0.50, 0.11); Q = 75; df = 8; p = 4.83E-13; I ² = 89.3%; tau-squared = 0.19	Limited +
Depression	RCTs and a quasi-RCT (6 studies; n=2,102) 4 low or medium risk of bias studies	ES = -0.26*; 95% CI (-0.45, -0.07); Q = 23.5; df = 7; p = 0.00138; I ² = 70.2%; tau-squared = 0.051	Limited +
Functional impairment	RCTs and a quasi-RCT (5 studies; n=1,458) 4 medium risk of bias studies	ES = -0.27*; 95% CI (-0.47, -0.08); Q = 14.3; df = 6; p = 0.0265; I ² = 58%; tau-squared = 0.039	Limited +
Hope	RCTs and a quasi-RCTs (5 studies; n=1,703) 3 medium risk of bias studies	ES = 0.45*; 95% CI (0.19, 0.71); Q = 28.8; df = 6; p = 6.7E-5; I ² = 79.2%; tau-squared = 0.0909	Limited +
Conduct problems	RCTs (4 studies; n=1,607) 3 medium risk of bias studies	ES = -0.17; 95% CI (-0.61, 0.28); Q = 69.6; df = 5; p = 1.25E-13; I ² = 92.8%; tau-squared = 0.286	Limited +
Anxiety	RCTs (4 studies; n=1,607) 3 medium risk of bias studies	ES = -0.04; 95% CI (-0.15, 0.07); Q = 6.86; df = 5; p = 0.231; I ² = 27.2%; tau-squared = 0.00536	Moderate ++
Prosocial behaviours	RCTs (3 studies; n=1,204) 2 medium risk of bias studies	ES = 0.08; 95% CI (-0.16, 0.31); Q = 15.4; df = 4; p = 0.00388; I ² = 74.1%; tau-squared = 0.0521	Limited +
Psychological distress	RCTs (3 studies; n=1,204) 2 medium risk of bias studies	ES = -0.24; 95% CI (-0.51, 0.04); Q = 24.6; df = 4; p = 6.17E-5; I ² = 83.7%; tau-squared = 0.0832	Limited +
Coping	RCTs (2 studies; n=973) 1 medium risk of bias	n/a	Insufficient
Social support	RCT (1 study; n=329) 1 medium risk of bias study	n/a	Insufficient
Somatic complaints	Quasi-RCT (1 study; n=166) 1 high risk of bias study	n/a	Insufficient
Emotional problems	RCT (1 study; n=644) 1 high risk of bias study	n/a	Insufficient

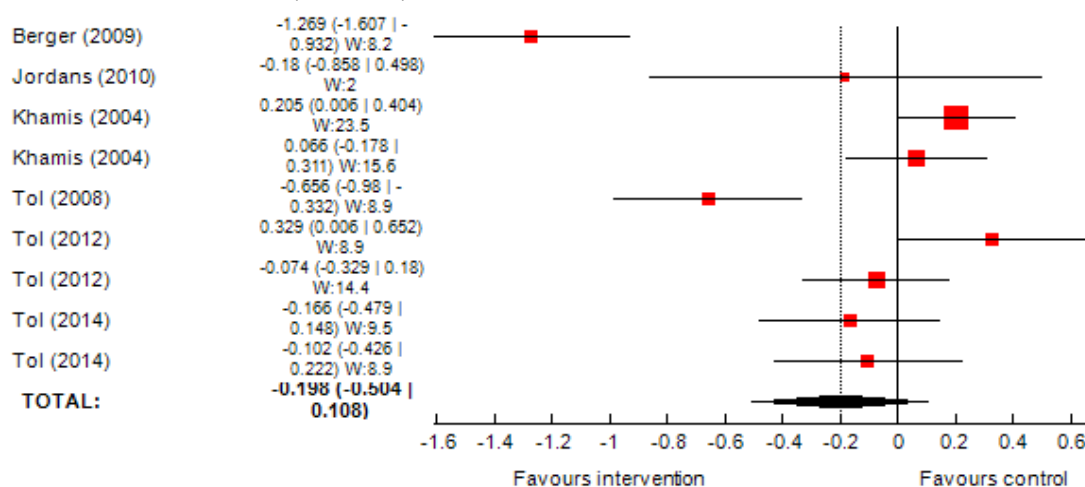
*Statistical significance at 95 percent; CI = confidence interval; n = no. of participants; n/a = not applicable.

Note: Negative sign of pooled SMD indicates positive impact of MHPSS, except for social support, hope, prosocial behaviours and coping.

Figure 5.12: Forest plot – pooled SMD of CBI reporting PTSD, random effects model (n=6)

Heterogeneity: $Q = 75$; $df = 8$; $p = 4.83E-13$; $I^2 = 89.3\%$; tau-squared = 0.19

Random effects model: -0.198 (-0.50, 0.11)



For TRT programmes, the findings suggest that this type of intervention probably reduces symptoms of PTSD (++). We have insufficient evidence regarding the impact of TRT on depression, psychological distress, prosocial behaviours and resilience (see Figure 5.10C and Figure 5.13 for the forest plot of TRT on PTSD). All forest plots from the meta-analysis of TF-CBT, CBI and TRT on other outcomes are presented in Appendix 3, Sections 3.5.1–3.5.3.

Table 5.10C: Pooled SMD of TRT – SMD, random effects model, or stated otherwise

Outcomes	Study design, number of studies and participants (n) and summary risk of bias	Findings and heterogeneity	Strength of evidence
PTSD	RCTs (3 studies; n=558) 2 low or medium risk of bias studies	ES = -0.35; 95% CI (-0.74, 0.04); $Q = 5.9$; $df = 3$; $p = 0.117$; $I^2 = 49.2\%$; tau-squared = 0.073	Moderate ++
Depression	RCTs (2 studies; n=522) 1 medium risk of bias study	n/a	Insufficient
Psychological distress	RCT (1 study; n=482) 1 medium risk of bias study	n/a	Insufficient
Prosocial behaviour	RCT (1 study; n=482) 1 medium risk of bias study	n/a	Insufficient
Resilience	RCT (1 study; n =40) 1 high risk of bias study	n/a	Insufficient

*Statistical significance at 95 percent; CI = confidence interval; n = no. of participants; n/a = not applicable.

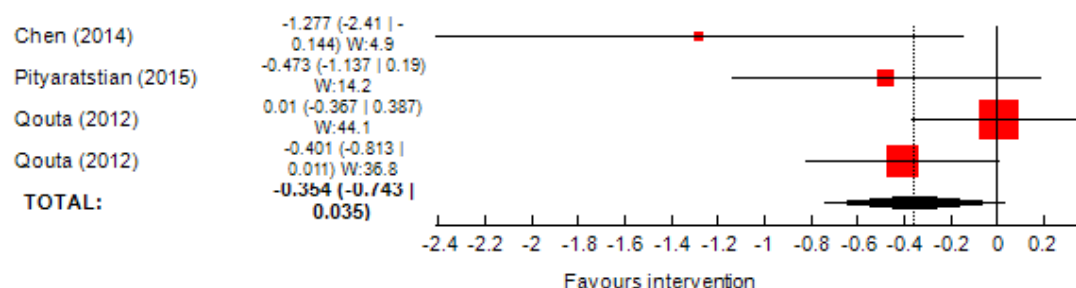
Note: Negative sign of pooled SMD indicates positive impact of MHPSS.

Figure 5.13: Forest plot – pooled SMD of TRT reporting PTSD, random effects model (n=3)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 5.9$; $df = 3$; $p = 0.117$; $I^2 = 49.2\%$; tau-squared = 0.073

Random effects model: -0.35 (-0.74, 0.03)



Characteristics of CBT studies

All CBT interventions (13 studies: three high, eight medium and two low risk of bias) were delivered in a group format. Nine studies assessed interventions delivered by lay facilitators who were trained to deliver them,^{81, 94, 96, 102, 105, 106, 115–117} and the remaining three were delivered by healthcare specialists.^{85, 108, 109} Three studies were carried out in DRC, two in Palestine and one each in China, Indonesia, Nepal, Sierra Leone, Burundi, Sri Lanka and Thailand. Ten studies evaluated CBT in conflict-affected settings, and two were carried out with CYP affected by earthquake and tsunami events.

TF-CBT

Three RCTs assessing the impact of culturally adapted, school-based and trauma-focused CBT (TF-CBT) interventions were carried out in DRC.^{102, 105, 106}

- The TF-CBT intervention evaluated in the McMullen (2013) (medium risk of bias) and O'Callaghan 2013 (low risk of bias) studies was a manualized, group-based treatment programme. It lasted for 15 sessions and was delivered by trained local facilitators. In both studies, one or more sessions aiming to explore trauma narratives were delivered to the participants individually. Three sessions were also organized for available parents and care-givers in both treatment and control groups.
- McMullen et al. (2013) assessed the impact of a culturally adapted TF-CBT programme delivered to 50 former child soldiers and war-affected boys aged 13–17. O'Callaghan et al. (2013) aimed to assess the impact of TF-CBT designed for war-affected, sexually exploited Congolese girls. The intervention was delivered in school three times a week (two hours per session) for five weeks to 52 girls aged 12–17. Both interventions used local games, songs and metaphors to explain and give examples throughout the sessions. Sports and games were available to the boys in addition to the treatment sessions in the McMullen study. Both studies assessed the impact of the TF-CBT sessions post-intervention and at three months follow-up.
- Another RCT study by O'Callaghan (2015) (low risk of bias) randomly assigned 50 war-affected Congolese youths to TF-CBT or child-friendly space interventions. The intervention utilized artwork for individual trauma narrative sessions. Nine sessions were delivered three times a week and each lasted approximately 90 minutes. Homework was given to practise the concepts learned on the day. In this study, 24 participants received no intervention and formed a convenient control group. The effectiveness of the intervention was assessed post-intervention and at six months post-intervention.

School-/classroom-based interventions

Five studies^{94, 96, 115–117} (two high risk and three medium risk of bias) evaluated the impact of an eclectic range of manualized school-/classroom-/camp-based intervention programmes, with some of the activities based on CBT, and including play, creativity, games, music, dance and resilience-focused sessions. The programmes were implemented over five weeks

in 15 sessions and delivered by trained local community workers, social workers or public health service professionals. The authors also noted that the interventions reported in these studies were part of wider public health intervention programmes. Four of the five studies were clustered RCTs (cRCTs).^{94, 115–117}

- The cRCT study by Tol (2008) (medium risk of bias) involved 495 children aged 7–15 (mean age = 9.9 years) who had been affected by recent political violence in Indonesia. Another CBT programme evaluated by Tol (2012) (medium risk of bias) was delivered to 399 children aged 9–12 (mean age = 11.03 years) affected by war and the 2004 tsunami in Sri Lanka.
- In another study, Tol and colleagues (2014) (medium risk of bias) assessed a school-based intervention designed for children in Burundi. The intervention was delivered to 329 children aged 8–17 (mean age = 12.29 years). Jordans et al. (2010) (medium risk of bias) evaluated a CBT programme in Nepal, delivered to 325 schoolchildren aged 11–14 (mean age = 12.7 years).
- One RCT study⁹⁶ (high risk of bias) randomly assigned children in schools in Gaza to a classroom-based intervention or to wait-list control groups. The CBT intervention received support from the local community and local government, who worked closely with the research team to implement it.
- One study evaluated the effect of a school-based ERASE-Stress intervention in Sri Lanka⁸⁰ (high risk of bias), which was designed to build resilience and help children to cope with exposure to threat, adversity and traumatic events. A total of 166 elementary schoolchildren aged 9–15 with PTSD symptoms were allocated either to the 12-session programme or to the wait-list control group. The impact of the programme was evaluated at three months follow-up.

Teaching Recovery Techniques (TRT)

Three studies^{85, 108, 109} (one high and two medium risk of bias) evaluated Teaching Recovery Techniques (TRT) programmes adapted from CBT.

- Chen et al. (2014) (high risk of bias) evaluated a TRT programme, plus general support provided for participants, delivered to CYP affected by the 2008 earthquake in Sichuan province, China. It was adapted to be culturally sensitive to a Chinese context (e.g. avoidance was not addressed in the sessions) and to those who had suffered due to the earthquake. The intervention was delivered by school teachers for one hour weekly, for six weeks. The key activities included discussion sessions about the future, homework assignments and exercises for controlling nightmares and improving coping skills and relaxation techniques, and practice sessions using techniques similar to EMDR. Thirty-two children were randomly assigned to three groups: CBT, parallel psychosocial support sessions and the control group (no intervention). The effectiveness of the intervention was assessed at post-intervention and again at three months follow-up.
- One adapted TRT programme delivered to children in the aftermath of a natural disaster (tsunami) was evaluated by a research team in Thailand¹⁰⁸ (medium risk of bias). The intervention was delivered by healthcare specialists but was modified to be delivered in only three sessions over three consecutive days, owing to the limited availability of healthcare professionals in the area. The programme delivered trauma exposure sessions through story-telling and drawing outside the classroom, and included outdoor activities and homework assignments. The study assessed the short-term impact of the intervention at one month post-intervention.
- A cRCT by Qouta (2012) (medium risk of bias) evaluated a TRT programme delivered to children in Gaza. A total of 482 schoolchildren aged 10–13 (mean age = 11.29 years) were randomly assigned to TRT or wait-list control (normal school support) groups. The intervention was delivered over four weeks in 16 sessions (two hours per session), with home assignments for children to work on with other family members. The impact assessments were carried out immediately post-intervention and at six months follow-up.

Youth Readiness Intervention (YRI)

The Youth Readiness Intervention (YRI)⁸¹ (medium risk of bias) is a culturally and contextually adapted group intervention based on CBT and group interpersonal therapy (IPT-G), which aims to address mental health symptoms and functionality problems that may be experienced by youth living in war-affected zones. At the initial development phase, a pilot study was undertaken with youth, care-givers and health experts. The findings from the pilot phase suggested that core components of the intervention were deemed safe to be delivered by lay health workers and in community settings. YRI was delivered to 436 young people aged 15–24 (mean age = 18 years) at six community sites in Sierra Leone weekly for 10 weeks, with sessions lasting about 90 minutes. The authors randomized the participants first into YRI and control group (no intervention). Then after YRI, all the young people were again randomly assigned either to receive educational incentives or to the wait-list (to receive the intervention in the next academic year). The effectiveness of YRI was assessed immediately after intervention and at six months follow-up.

Psychotherapy: Narrative Exposure Therapy

Five RCTs^{84, 88, 95, 112, 118} (two medium and three low risk of bias studies) evaluated the impact of NET on PTSD, depression, emotional problems, anxiety, suicide risk, functional impairment, somatic complaints, grief, guilt, school performance and stigmatization. The findings from the meta-analysis suggested that NET could have a positive impact on functional impairment (++). However, NET may have a negative impact on depression (+) in CYP and probably has little impact on PTSD (++). The findings from the narrative synthesis from one low risk of bias study suggest that NET may have a negative trend with a small effect size on anxiety and somatic complaints, and no impact on school performance. We found insufficient evidence of the impact of NET on grief, guilt, suicide and stigmatization (see Figure 5.14 and Figure 5.15 for the forest plot on PTSD).

Figure 5.14: Pooled effect sizes of NET for CYP – random effect model, or stated otherwise

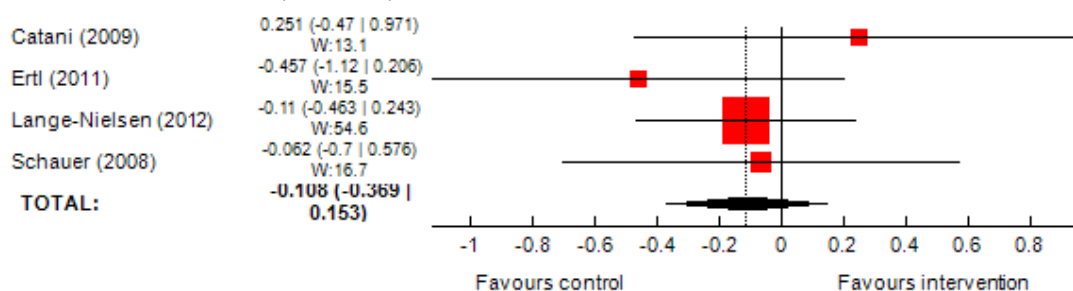
Outcomes	Study design, number of studies and participants (n) and summary risk of bias	Findings and heterogeneity	Strength of evidence
PTSD	RCTs (4 studies; n=287) 4 low or medium risk of bias studies	ES = -0.11; 95% CI (-0.37, 0.15); Q = 2.04; df = 3; p = 0.565; I ² = 0%; tau-squared = 0	Moderate ++
Depression	RCTs (2 studies; n=209) 2 low or medium risk of bias studies	ES = 0.66; 95 % CI (-0.54, 1.86); Q = 9.93; df = 1; p = 0.00163; I ² = 89.9%; tau-squared = 0.672	Limited +
Functional impairment	RCTs (2 studies; n=116) 2 low or medium risk of bias studies	ES = -0.52*; 95% CI (-1.02, -0.03); Q = 0.744; df = 1; p = 0.388; I ² = 0%; tau-squared = 0	Moderate ++
Anxiety	RCT (1 study; n=124) 1 low risk of bias study	Not pooled effect size ES = 0.20; 95% CI (-0.15, 0.56)	Limited +
Somatic complaints	RCT (1 study; n=31) 1 low risk of bias study	Not pooled effect size ES = 0.16; 95% CI (-0.55, 0.87)	Limited +
School performance	RCT (1 study; n=47) 1 low risk of bias study	No impact on school grade (p<0.19)	Limited +
Grief	RCT (1 study; n=64) 1 medium risk of bias study	n/a	Insufficient
Guilt	RCT (1 study; n=85) 1 medium risk of bias study	n/a	Insufficient
Suicide	RCT (1 study; n=85) 1 medium risk of bias study	n/a	Insufficient
Stigmatization	RCT (1 study; n=85) 1 medium risk of bias study	n/a	Insufficient

*Statistical significance at 95 percent; CI = confidence interval; n = no. of participants; n/a = not applicable.

Note: Negative sign of pooled SMD indicates positive impact of MHPSS.

Figure 5.15: Forest plot – pooled SMD of NET studies reporting PTSD, random effects model (n=4)Heterogeneity: $Q = 2.04$; $df = 3$; $p = 0.565$; $I^2 = 0\%$; tau-squared = 0

Random effects model: -0.11 (-0.37, 0.15)



Narrative synthesis of NET

One of two studies (low risk of bias) that assessed the impact of the Writing for Recovery (WfR) programme developed by the Children and War Foundation found that children in the intervention group might experience an increase in **anxiety** symptoms, compared with those in the control group.¹¹⁸ The findings from the study by Catani et al. (2009) (low risk of bias), assessing KIDNET (a version of NET for children) in Sri Lanka, suggested that children in the KIDNET group might experience an increase in **somatic symptoms**, compared with the control group. One study⁹⁵ (medium risk of bias) used a mixed-effects model and reported a positive difference between NET and wait-list control on NET in reducing **grief** symptoms for Afghan refugee children aged 12–18 participating in the intervention, compared with those in the control group (ES = -0.66*; 95 percent CI (-1.18, -0.14)). One study⁸⁸ (medium risk of bias) reported a significant reduction in feelings of **guilt** in former child soldiers in a NET group (ES = -0.58; 95 percent CI (-1.25, 0.09)), a reduction in feelings of **stigmatization** (ES = -0.52; 95 percent CI (-1.19, 0.41)) and a slight reduction in **suicide risk** (ES = -0.17; 95 percent CI (-0.94, 0.48)). One study found no impact of NET on **school performance**¹¹² (low risk of bias).

Characteristics of NET studies

Three NET programmes were delivered in a group format,^{95, 112, 118} and two were delivered to individual participants.^{84, 88} Four studies assessed interventions delivered by trained but non-specialized support workers^{84, 88, 112, 118} and one an intervention delivered by healthcare specialists.⁹⁵ Two studies were carried out in Sri Lanka, where children had been affected by civil war in the northern region of the country;¹¹² one study was also carried out immediately after the 2004 tsunami had struck the region.⁸⁴ Two were carried out in other conflict-affected countries in camps for IDPs, in Palestine¹¹⁸ and in Uganda.⁸⁸ One study was conducted in a refugee camp in Iran.⁹⁵

Ertl et al. (2011) (medium risk of bias) evaluated a NET intervention delivered to 85 former child soldiers aged 12–25 in an IDP camp in Northern Uganda. The FCSs were randomly assigned to either NET, academic catch-up or a wait-list. NET was delivered at home three times a week, providing a total of eight sessions of 90–120 minutes each. The impact of NET was assessed at three-, six- and 12-month follow-ups.

Two studies assessed KIDNET, a brief narrative exposure trauma-focused approach, implemented in Sri Lanka in six sessions each lasting 60–90 minutes. ‘Master counsellors’ trained school teachers and worked closely with participants to construct an account of their own lives to provide a coherent narrative, which was given back to each participant in the last session. One study, carried out by Catani et al. (2009) (low risk of bias), assessed an intervention delivered in the first few months after the tsunami through established school-based mental health services. Thirty-one children were randomly assigned to either KIDNET or treatment as usual (medication/relaxation treatments). The effectiveness of the KIDNET intervention was assessed post-intervention and at six months follow-up.

In another study of KIDNET in Sri Lanka by Schauer (2006) (low risk of bias), 47 children were randomly assigned to either KIDNET or to locally adapted meditation/relaxation treatments. The intervention was delivered in a post-conflict setting, two years after the ceasefire in 2002. The impact of KIDNET was evaluated post-intervention at five months and at 13 months follow-up.

Two studies assessed the Writing for Recovery (WfR) programme developed by the Children and War Foundation.^{95, 118} This was a manual-based group intervention delivered in school for six sessions, broken down into two 15-minute sessions delivered over three consecutive days. The writing sessions aimed to explore feelings related to traumatic events or loss. By the end of the programme, the expectation was to see a more structured narrative writing style to reflect a reduction in negative emotions towards previously experienced trauma. In Gaza, 139 children were randomly assigned to WfR or to a wait-list¹¹⁸ (low risk of bias). In the study by Kalantari et al. 2012 (medium risk of bias), 61 Afghan refugee children living in Iran, aged 12–18, were randomly assigned to WfR or a control group. Both studies assessed the effectiveness of the programmes a few weeks after the intervention.

Other therapies

We identified six studies (three medium and three high risk of bias) evaluating six different psychotherapy interventions designed for CYP in humanitarian settings, including interpersonal psychotherapy delivered in a group format (IPT-G)⁸² (medium risk of bias), counselling⁸⁵ (high risk of bias), yoga⁸⁶ (high risk of bias), mind and body techniques⁹⁰ (medium risk of bias), logotherapy⁹² (medium risk of bias) and school-based psychotherapy⁹⁹ (high risk of bias). The studies were carried out in five different countries (Bosnia and Herzegovina, China, Haiti, Uganda and Kosovo) affected by armed conflict^{82, 90, 99} or natural disaster.^{85, 92} The most common outcomes reported in this group of programmes were **PTSD** and **depression**. We did not carry out statistical syntheses on these outcome measures because of differences and variations in psychotherapeutic programme modalities and intervention approaches.

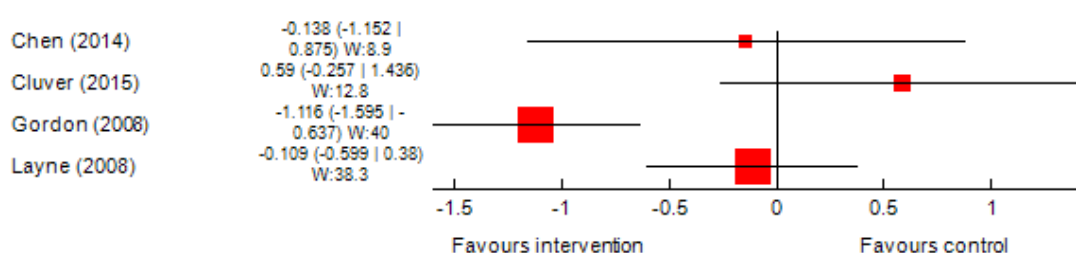
Narrative synthesis of other psychotherapies

PTSD

Four studies (one medium and three high risk of bias) reported unadjusted mean scores and standard deviations of **PTSD**.^{85, 90, 99, 86} The effect size estimates were subsequently calculated and presented in a forest plot (Figure 5.16). One medium risk of bias study evaluating a mind-body skills group in Kosovo found a significant impact of the intervention on PTSD.⁹⁰ Gordon et al. (2008) measured PTSD scores and reported that high school students who were in the mind-body skills group had significantly lower PTSD symptom scores than those in the wait-list control group (SMD = -1.12, 95 percent CI (-1.60, -0.64)).

The other three high risk of bias studies suggested mixed findings for the interventions. Chen et al. (2014) found that support group counselling may have had little impact on PTSD in CYP affected by the earthquake in China compared with those who received no intervention. The findings from the Layne et al. (2008) study also suggested that there might be little impact from a school-based psychotherapy intervention on schoolchildren in Bosnia. However, Cluver et al. (2015) found that yoga may increase PTSD in CYP compared with those in an aerobic dance group.

Figure 5.16: Forest plot – effect size estimates of psychotherapy studies reporting PTSD, random effects model (n=4)

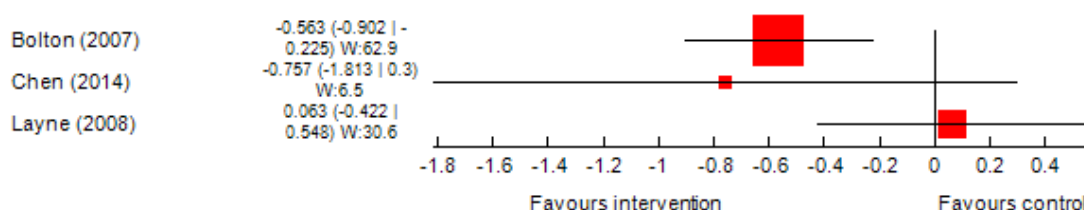


Depression

Three studies (one medium and two high risk of bias) assessed the impact of psychotherapy interventions on **depression**.^{82, 85, 99} Only Bolton et al.'s (2007) study (medium risk of bias) evaluating an IPT-G programme reported a positive impact of the intervention on depression (SMD = -0.56, 95 percent CI (-0.90, -0.23)). In this study, 314 Acholi children aged 14–17 from two IDP camps in Northern Uganda were randomly assigned to IPT-G, creative play or a wait-list control group. At post-intervention, the IPT-G participants showed a greater reduction in depression symptoms than those in the wait-list control group, by 9.79 points (95 percent CI (2.09, 23.14)).

The study by Layne et al. (2008) (high risk of bias) evaluated the effectiveness of a school-based Trauma and Grief Component Therapy for Adolescents (TGCTA) group programme to improve mental health and school performance outcomes. A group of 127 Muslim secondary school students in Bosnia were randomly assigned to two treatment conditions: 17 sessions of manual-based trauma and grief therapy or a classroom-based psycho-education programme. An explorative analysis suggested that there was probably no effect ($p > 0.01$) of the intervention at four months follow-up for depression. The findings of Chen et al. (2014) (high risk of bias) suggested that counselling interventions might improve depression symptoms.

Figure 5.17: Forest plot – effect size estimates of psychotherapy studies reporting depression, random effects model (n=3)



Other mental health and psychosocial outcomes

The findings of Chen et al. (2014) (high risk of bias) suggested that participants in the counselling support group reported higher scores on **resilience scales** than those in the control group ($p < 0.01$).

The study by Bolton et al. (2007) (medium risk of bias) reported a significantly greater reduction in local **anxiety** scores in the IPT-G group than in the wait-list control group, although the effect size was small (2.16 points, 95 percent CI (0.84, 3.48)). The study found no impact of IPT-G in improving **conduct problems** or **functioning scores**.

Another study, carried out by Cluver et al. (2015) (high risk of bias), measured the impact of MHPSS using mind and body techniques. In this study, 76 children aged 7–17 living in orphanages in Haiti were randomly allocated either to an eight-week yoga intervention, which included yoga postures, breathing exercises and meditation, to an aerobic dance group or to a control group. The study found that yoga might increase **psychological distress symptoms** in CYP (ES = 0.57; 95 percent CI (-0.18, 1.31)).

The Hooaakazei (2012) study (medium risk of bias) assessed the impact of logotherapy delivered to female students affected by the earthquake in Bam, Iran. This example of logotherapy was developed by Blaire (2004) and delivered to girls in an intervention group for eight sessions. The study reported a significant impact of the intervention when compared with the control group for **physical health**, **psychological health** and **environment**, but no impact was found on **social relations**.

Psychosocial interventions

Six RCTs^{82, 87, 88, 104, 105, 110} (two medium and four low risk of bias) were carried out to assess the impact of psychosocial interventions on various outcomes, including PTSD, depression, emotional problems, conduct problems, functional scores, prosocial behaviours, anxiety,

psychological distress, suicide, guilt, social support, stigmatization, physical health and well-being. The findings from the meta-analysis showed that psychosocial interventions might decrease PTSD (+), emotional problems (+) and conduct problems (+) in CYP. Psychosocial interventions probably lead to no improvement in functional impairment (++). Further, they probably increase depression symptoms (++) and may slightly decrease prosocial behaviours (++) . The findings from the narrative synthesis suggested that psychosocial interventions may improve social support (low risk of bias study), but have no impact on psychological distress (low risk of bias) and may increase anxiety symptoms (low risk of bias). Two low risk of bias studies reported mixed findings on the impact of psychosocial interventions on physical health. One found that such interventions may have no impact on psychosocial distress. We found insufficient evidence on the impact of psychosocial interventions on suicide, guilt and stigmatization (see Figure 5.18 and Figure 5.19 for PTSD).

Figure 5.18: Pooled SMD of psychosocial interventions for CYP – random effects model, or stated otherwise

Outcomes	Study design, number of studies and participants (n) and summary risk of bias	Findings and heterogeneity	Strength of evidence
PTSD	RCTs (4 studies; n=381) 4 low or medium risk of bias studies	ES = -0.67; 95% CI (-1.39, 0.04); Q = 22.7; df = 3; p = 4.77E-05; I ² = 86.8%; tau-squared = 0.436	Limited +
Depression	RCTs (4 studies; n=631) 4 low or medium risk of bias studies	ES = 0.27*; 95% CI (0.07, 0.46); Q = 2.37; df = 3; p = 0.499; I-squared = 0%; tau-squared = 0	Moderate ++
Emotional problems	RCTs (2 studies; n=209) 2 low risk of bias studies	ES = -0.98; 95% CI (-2.82, 0.86); Q = 16; df = 1; p = 6.33E-5; I ² = 93.8%; tau-squared = 1.65	Limited +
Conduct problems	RCTs (2 studies; n=209) 2 low risk of bias studies	ES = -0.45; 95% CI (-1.76, 0.86); Q = 9.95; df = 1; p = 0.00161; I ² = 89.9%; tau-squared = 0.806	Limited +
Functional impairment	RCTs (2 studies; n=399) 2 medium risk of bias studies	ES = -0.01; 95% CI (-0.31, 0.29); Q = 1.33; df = 2; p = 0.514; I ² = 0%; tau-squared = 0	Moderate ++
Prosocial behaviours	RCTs (2 studies; n=209) 2 low risk of bias studies	ES = -0.27; 95%CI (-0.55, 0.02); Q = 0.028; df = 1; p = 0.867; I ² = 0%; tau-squared = 0	Moderate ++
Anxiety	RCT (1 study; n=145) 1 low risk of bias study	Trend in favour of the control group	Limited +
Psychological distress	RCT (1 study; n=87) 1 low risk of bias study	No impact	Limited +
Physical health	RCTs (2 studies; n=232) 2 low risk of bias studies	Mixed	Limited +
Social support	RCT (1 study; n=87) 1 low risk of bias study	Positive trend in favour of the intervention group compared with control group	Limited +
Suicide	RCT (1 study; n=85) 1 medium risk of bias study	n/a	Insufficient
Guilt	RCT (1 study; n=85) 1 medium risk of bias study	n/a	Insufficient
Stigmatization	RCT (1 study; n=85) 1 medium risk of bias study	n/a	Insufficient

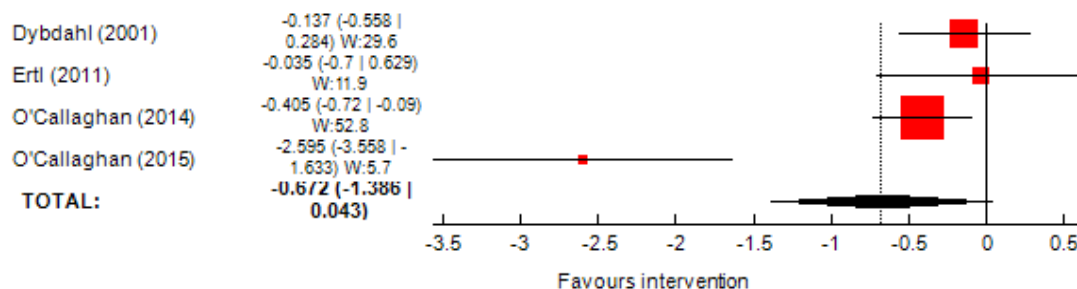
*Statistical significance at 95 percent; CI = confidence interval; n = no. of participants; n/a = not applicable.

Note: Negative sign of pooled SMD indicates positive impact of MHPSS, except prosocial behaviours.

Figure 5.19: Forest plot – pooled SMD of psychosocial studies reporting PTSD, random effects model (n=4)

Heterogeneity: $Q = 22.7$; $df = 3$; $p = 4.77E-5$; $I^2 = 86.8\%$; tau-squared = 0.436

Random effects model: -0.672 (-1.39, 0.0426)



Narrative synthesis of psychosocial programmes

One study¹¹⁰ (low risk of bias) reported the impact of a youth development sports programme on **anxiety**-like symptoms and found an undesirable effect on boys who participated in the intervention compared with the wait-list group (adjusted MD = 0.63, 95 percent CI (0.30, 0.96)); however, no significant impact was found on girls. The study also found no significant effect of the intervention on **physical health** (BMI-for-age, multi-stage fitness test and standing 'broad' jump).

Dybdahl (2001) (low risk of bias) found no impact of a psychosocial intervention for children and mothers on young children's **well-being and psychological distress** (anxiety and sadness, withdrawal and psychosomatic complaints), but reported a significant positive effect on young children's **weight gain** ($p < 0.05$) and mothers' perceived **social support** ($p < 0.10$).

One study⁸⁸ (medium risk of bias) reported the findings of an RCT investigating the impact of NET, academic catch-up with support counselling and a control group. The findings suggested that FCSs who were in the academic catch-up group were likely to report lower **guilt** scores when compared with those in the wait-list group (ES = -0.75, 95 percent CI (-1.32, -0.18)). However, the study found no significant impact of the academic catch-up group on **suicidal ideation** or **stigmatization**.

Characteristics of psychosocial intervention studies

Three RCTs were carried out in Uganda, two in DRC and one in Bosnia and Herzegovina, all countries affected by armed conflict. Six psychosocial programmes were delivered in a group format, and only one intervention⁸⁸ was delivered individually to participants.

Three studies were carried out in Uganda, delivering and evaluating a creative play programme in a refugee camp,⁸² competitive sport and games¹¹⁰ and academic writing.⁸⁸

- The creative play programme developed by War Child Holland for war-affected youth was designed to strengthen resilience through activities such as songs, art, music, sports and games. Group discussions were held after the activities and exercises to support the development of additional skills. The study randomly assigned 338 children stratified by camp and gender into three study arms – interpersonal psychotherapy, creative play and wait-list control group⁸² (medium risk of bias).
- The study by Richards (2014) (low risk of bias) examined the effectiveness of the Gum Marom Kids Leagues (GMKL), a community-based programme in Uganda, on children's mental and physical health and on community cohesion. Participants in the intervention group participated in a nine-week series of competitive 40-minute football games, supplemented with peace-building activities. Participants received awards for match results and behaviour on the football field and for other peace-building and community service activities. Participants in the treatment group were compared with children who did not register for the intervention and those assigned to the wait-list group.

- The study by Ertl et al. (2011) (medium risk of bias) was carried out to examine the effectiveness of a programme for former child soldiers. An academic catch-up treatment group with counselling sessions provided participants with academic support, textbooks, psycho-education and discussions about coping and current problems, without discussing traumatic experiences.

Two studies (O'Callaghan, 2014, 2015) were carried out in DRC.

- One study¹⁰⁴ (2014, low risk of bias) was a community-based, family-focused intervention designed for children aged 7–18. The participants were randomly allocated to the psychosocial intervention, which was delivered by local lay facilitators in eight sessions, or to a wait-list control group. The intervention components included a life skills leadership programme, short video clips to address discrimination and stigma towards FCSs who had returned to the community and relaxation techniques based on trauma-focused CBT.
- The other study by O'Callaghan (2015) (low risk of bias) evaluated child-friendly spaces, a community-based programme aiming to improve resilience and well-being. The intervention was delivered in eight sessions using creative, structured activities, including songs and football matches, to convey messages about daily dangers and how to avoid them. The sessions also included group discussions about sexual health and HIV/AIDS.

One study (low risk of bias) evaluated the effect of psychosocial support to mothers in conflict-affected Bosnia and Herzegovina.⁸⁷ The programme aimed to improve the health and well-being of young children through parent-child interaction and support. Participants in the intervention group received psycho-education about trauma in adults and children and participated in weekly group discussions, with a one-hour home visit by a group leader; these activities aimed to provide support to improve their self-confidence and knowledge and provide information about how to cope with traumatic events. The control group received basic medical care only.

6

RESULTS: EFFECTIVENESS OF MHPSS FOR ADULTS

This section presents the findings of the 29 outcome evaluations^{119–147} assessing the impact of MHPSS programmes on mental health and psychosocial well-being in adult populations affected by humanitarian emergencies. We first present an overview of the main characteristics of MHPSS programmes. Next, we provide a description of study designs and an assessment of the quality of the trials included in this review. This is followed by the results of the meta-analysis. We also narratively summarize results of individual studies where there was insufficient data to conduct a meta-analysis. In the final sections we discuss sensitivity analysis and sub-group analysis.

6.1

CHARACTERISTICS OF MHPSS PROGRAMMES FOR ADULT POPULATIONS

Programme design and implementation characteristics

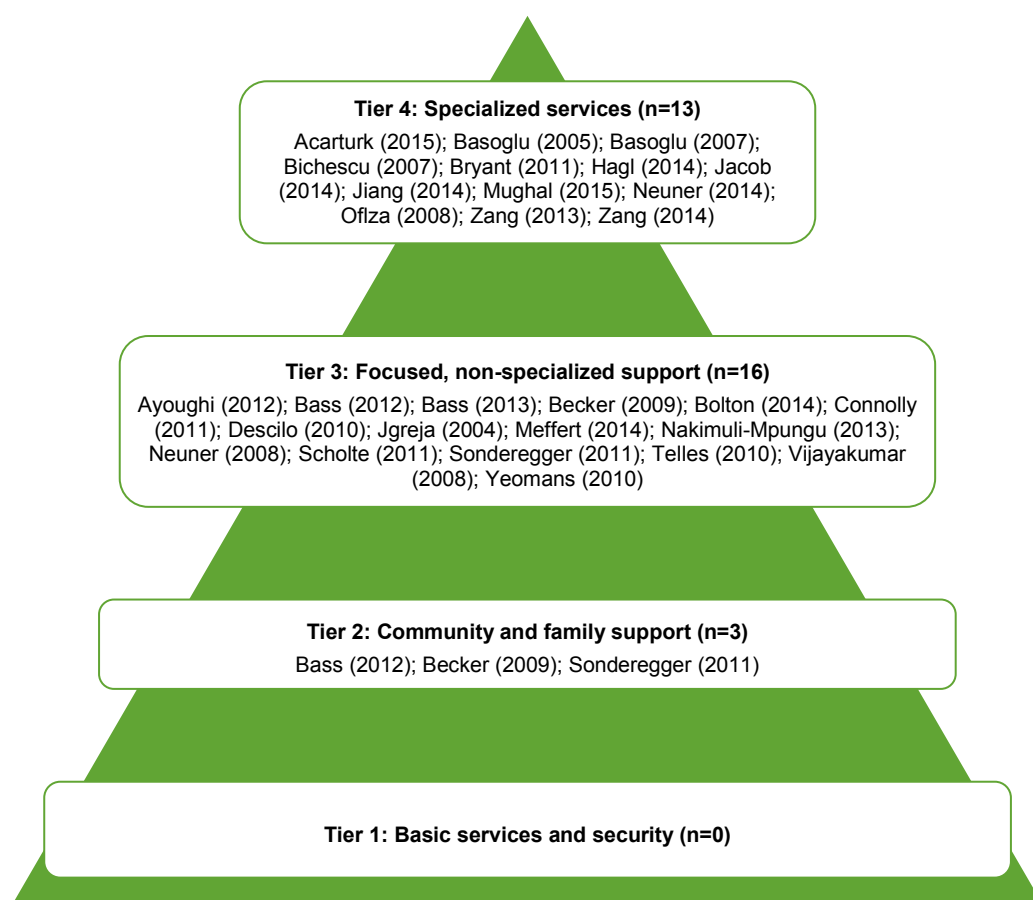
We identified 36 MHPSS programmes evaluated in the 29 included randomized controlled trials (RCTs) and non-RCTs (nRCTs). Seven MHPSS programmes were delivered in clinics,^{119, 120, 122, 127, 136, 137, 140} while five programmes were based in the community,^{123, 125, 127, 135, 141} three were delivered in refugee camps^{138, 139, 142} and four at participants' homes.^{127, 132, 133, 144} In one programme, participants received the intervention at places where they felt safe and comfortable, including in the home, in the community or at a clinic.¹²⁷ Eleven studies did not clearly specify the delivery setting.

The majority of the interventions were delivered to participants individually (n=21), and nine were in a group format.^{123–125, 130, 131, 137, 141, 142, 145} Eight MHPSS programmes were delivered by local facilitators or volunteers,^{124, 127, 132, 135, 138, 142, 144, 145} two by community leaders,^{125, 141} three by counsellors,^{123, 137, 147} two by yoga teachers,^{130, 143} two by therapists^{129, 131} and one each by social workers¹³⁷ and students.¹²⁶ Eleven programmes were delivered by healthcare professionals such as psychologists or physicians.^{119–122, 128, 133, 134, 136, 139, 140, 146}

The majority of MHPSS programmes encouraged participants to share and discuss traumatic experiences (n=21). Other main intervention strategies included providing psycho-education (n=15) and psychosocial support (n=8) and/or teaching relaxation techniques (n=7). Seven programmes involved a construction of narrative stories about traumatic experiences;^{126, 132, 133, 138, 139, 146, 147} two^{136, 140} offered medication as part of the treatment component; and two^{123, 142} were designed with local community engagement activities.

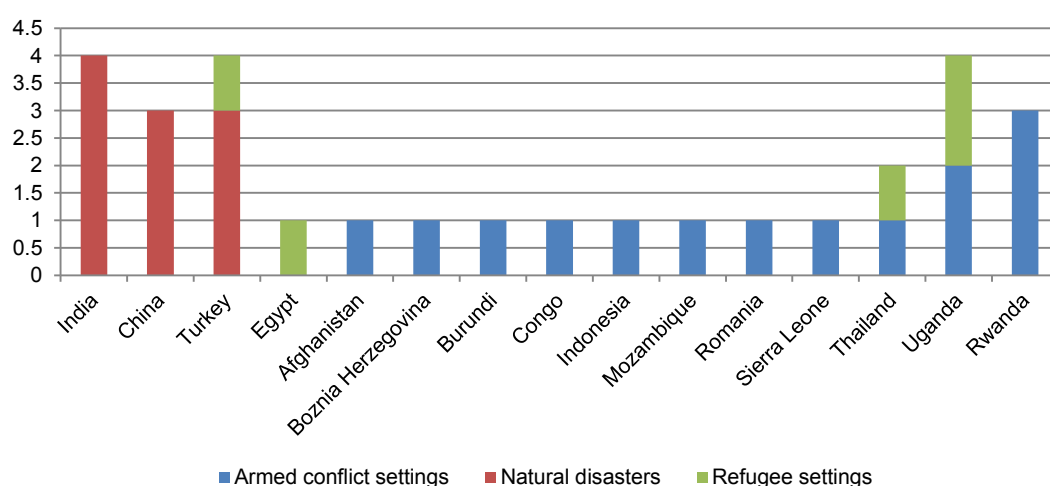
MHPSS programmes lasted on average between four and 13 sessions, each of approximately one to two hours, and over a period of two to 12 weeks. Four brief MHPSS programmes were delivered in one or two sessions, with each session lasting less than one hour.^{121, 122, 129, 132} Yeomans et al. (2010) organized a three-day reconciliation workshop for participants in Burundi. Becker et al. (2010) provided a community-based mental health programme for tsunami survivors with group support three times a week over a period of three months.

We identified 16 studies assessing MHPSS programmes that focused on addressing the specific impact of exposure to traumatic events on mental health and psychosocial well-being and were delivered by trained but non-specialized staff. A further set of three studies assessed programmes that aimed to strengthen community and family supports, and 13 evaluated programmes delivered by healthcare professionals. We found no MHPSS programmes designed to address basic services and security in adult populations (see Figure 6.1).

Figure 6.1: Studies evaluated on MHPSS for adult populations (n=29)*

* Codes not mutually exclusive as some studies include more than one type of MHPSS intervention.

Twenty-nine trials were undertaken in 16 countries. Nearly half of the studies were carried out in man-made disaster settings across 11 countries: three in Rwanda, two in Uganda and one each in Afghanistan, Bosnia and Herzegovina, Burundi, DRC, Indonesia, Mozambique, Romania, Sierra Leone and Thailand. Ten studies evaluated the impact of MHPSS programmes on adult populations affected by natural disasters in three countries: India (n=4), China (n=3) and Turkey (n=3). Five studies were carried out in refugee settings in four countries (see Figure 6.2).

Figure 6.2: Country and type of disaster (n=29)

Four studies^{120, 124, 125, 131} evaluated programmes that targeted only women; one study¹⁴³ included only male participants in a yoga-based intervention. One study evaluated the impact of an MHPSS programme for widowed and orphaned survivors of the 1994 Rwanda genocide, and one the impact of a programme for internally displaced populations in Uganda.¹⁴² Six studies investigated MHPSS programmes delivered during ongoing armed conflicts and violence.^{119, 120, 124, 127, 128, 135}

Study design characteristics

Twenty studies were randomized controlled trials (RCTs)^{119–122, 124, 126–129, 131–135, 138, 139, 143, 145–147} and nine were non-randomized comparison group studies.^{123, 125, 130, 136, 137, 140–142, 144} One study was a clustered RCT (cRCT), which assigned participants into groups by village.¹²⁴

Control groups included wait-list control groups (n=15), treatment as usual (TAU) (n=4) and active interventions (n=4). Five studies had more than one intervention arm^{130, 138–140, 145} and seven compared the effect of programmes on adult participants with those who received no intervention.^{123, 125, 132, 137, 138, 141, 144}

The most common outcomes reported across the studies were symptoms of post-traumatic stress disorder (PTSD) (n=24) and depression (n=18) (see Figure 6.3 for outcome measures included in the studies). The majority of the studies assessed the impact of MHPSS programmes immediately or up to three months after interventions were completed (n=26). Ten studies reported outcome measures at four to six months, and six at between seven and 12 months. Only one study assessed the impact of an MHPSS programme at more than one year.¹²² We identified a variety of outcome measures and checklists used in the included studies. The majority of the studies clearly specified whether and how standardized instruments were translated into local languages, previously piloted or adapted for use in the local setting (n=23).

Figure 6.3: Outcome measures reported in MHPSS studies (n=29)

Study/outcome	PTSD	Depression	Anxiety	Emotional problems	Fear and avoidance	Common MH problems	Anger	Grief	Somatic complaints	Functional impairment	Prosocial behaviours	Social support	Coping	Physical health	Partner violence	Conduct problem	Other physical and social well-being
Psychotherapy – CBT																	
Basoglu (2007)	✓	✓			✓					✓							
Basoglu (2005)	✓	✓		✓	✓					✓							
Bass (2013)	✓			✓						✓							
Bolton (2014)	✓	✓	✓							✓						✓	Alcohol use
Bryant (2011)	✓	✓						✓									
Hagl (2014)	✓					✓		✓									
Sonderegger (2011)*		✓	✓								✓					✓	

Study/outcome	PTSD	Depression	Anxiety	Emotional problems	Fear and avoidance	Common MH problems	Anger	Grief	Somatic complaints	Functional impairment	Prosocial behaviours	Social support	Coping	Physical health	Partner violence	Conduct problem	Other physical and social well-being
Psychotherapy – NET																	
Bichescu (2007)	✓	✓															
Igreja (2004)	✓					✓			✓								
Jacob (2014)	✓																
Neuner (2008)	✓																
Neuner (2004)	✓			✓		✓											
Zang (2013)	✓	✓	✓			✓						✓	✓				
Zang (2014)	✓	✓	✓			✓						✓	✓				
Psychotherapy – others																	
Acarturk (2015)	✓	✓															
Ayoughi (2012)		✓	✓										✓				
Connolly (2011)	✓	✓	✓		✓		✓										
Jiang (2014)	✓	✓					✓			✓					✓		Quality of life
Meffert (2014)	✓	✓					✓								✓		
Neuner (2008)	✓																
Neuner (2004)	✓			✓		✓											
Telles (2010)			✓	✓	✓												
Yeomans (2010)	✓			✓													
Descilo (2010)*	✓	✓															Quality of life
Nakmul-Mpungu (2013)*	✓	✓								✓							
Bass (2012)*		✓	✓			✓			✓	✓			✓				
Mughal (2015)*	✓		✓														Forgiveness; blame
Scholte (2011)*						✓											
Psychosocial interventions																	
Becker (2009)*	✓																
Sonderegger (2011)*		✓	✓								✓					✓	
Vijayakumar (2008)*	✓	✓				✓											Well-being
Psycho-education																	
Oflaz (2008)*	✓	✓			✓								✓				

* Non-randomized studies.

6.2 THE EFFECT OF MHPSS PROGRAMMES FOR ADULT POPULATIONS AFFECTED BY HUMANITARIAN CRISIS

In this section, we discuss the quality of the evidence and the findings (in the meta-analysis or narrative synthesis of numerical data) from 20 RCTs^{119–122, 124, 126–129, 131–135, 138, 139, 143, 145–147} that assessed the effectiveness of MHPSS programmes for adult populations affected by humanitarian crisis; therefore, the following sub-sections refer only to these 20 RCTs. Further details of the key characteristics of these 20 studies are presented in Tables 4.1 and 4.2 in Appendix 4.

Risk of bias and quality of evidence

Selection bias

Random sequence generation

Thirteen studies provided sufficient details of randomization sequence (simple randomization n=9; stratified randomization n=2; block randomization n=2) and were rated as low risk of bias. One study was judged as having an unclear risk of bias.¹²⁷ Six quasi-randomized controlled studies were judged to be high risk of bias.^{120, 126, 129, 131, 132, 138}

Allocation concealment

Five studies provided sufficient information to suggest that the participant allocation process had been concealed from key staff in the trials.^{122, 128, 133, 143, 145} The majority of the studies (n=15) did not provide information about allocation concealment, and so were rated as unclear risk of bias.

Blinding

Blinding of participants and personnel

The majority of the studies did not provide information about blinding of participants or personnel. Two studies were rated as low risk of bias.^{133, 145} One study¹³⁵ specified that participants were aware of their group assignment and was judged to be high risk of bias.

Blinding of outcome assessment

Three studies provided sufficient information to suggest that outcome assessments were not blinded to outcome assessors.^{126, 134, 135} Four studies were rated as being unclear risk of bias.^{120, 129, 131, 132} The majority of the studies provided information indicating that outcome assessors were blinded to group allocation.

Attrition bias

Incomplete outcome data

Fourteen studies employed intention-to-treat (ITT) analysis or had a drop-out rate (in each intervention arm) of less than 20 percent, so were judged as low risk of bias.^{119, 126, 128, 131–135, 138, 139, 143, 145–147} Six studies were rated as high risk of bias as they did not perform ITT analysis or had an attrition rate of 20 percent or higher.^{120–22, 124, 127, 129}

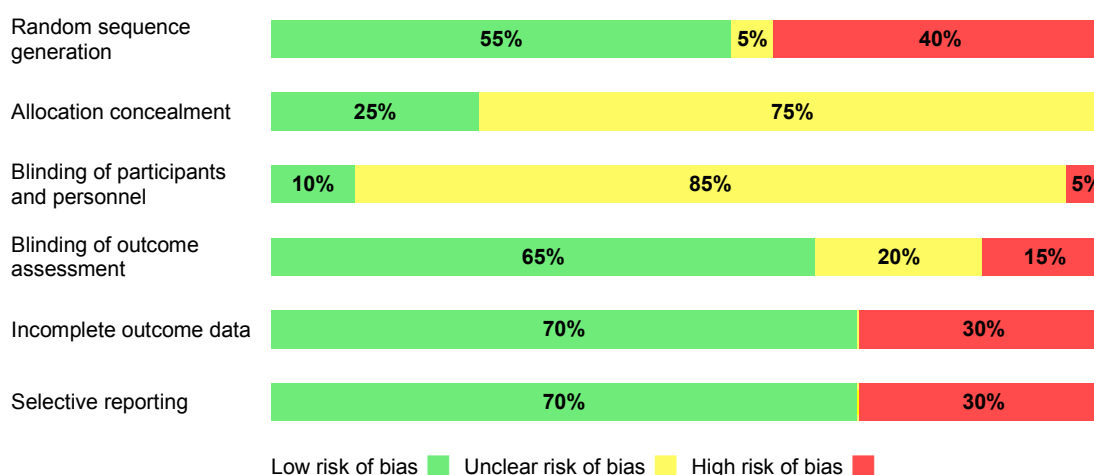
Selective reporting

Five studies did not report outcome data or findings of outcome measures specified in their methods.^{121, 122, 132, 134, 147} The other 15 studies were rated as low risk of bias. Figures 6.4 and 6.5 summarize the risk of bias for each study.

Figure 6.4: Summary of risk of bias (n=20)

Study and risk of bias	Selection bias		Blinding		Attrition bias	Reporting bias
	Random sequence generation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessment	Incomplete outcome data	Selective reporting
Acarturk (2015)	+	?	?	+	+	+
Ayoughi (2012)	-	?	?	?	-	+
Basoglu (2005)	+	+	?	+	-	-
Basoglu (2007)	+	?	?	+	-	-
Bass (2013)	+	?	?	+	-	+
Bichescu (2007)	-	?	?	-	+	+
Bolton (2014)	?	?	?	+	-	+
Bryant (2011)	+	+	?	+	+	+
Connolly (2011)	-	?	?	?	-	+
Hagl (2014)	-	?	?	?	+	-
Igreja (2004)	-	?	?	?	+	-
Jacob (2014)	+	+	+	+	+	+
Jiang (2014)	+	?	?	-	+	-
Meffert (2014)	+	?	-	-	+	+
Neuner (2004)	+	?	?	+	+	+
Neuner (2008)	-	?	?	+	+	+
Telles (2010)	+	+	?	+	+	+
Yeomans (2010)	+	+	+	+	+	+
Zang (2013)	+	?	?	+	+	+
Zang (2014)	+	?	?	+	+	-

+ Low risk of bias (■); - high risk of bias (■); ? unclear (■)

Figure 6.5: Summary risk of bias

Overall effectiveness of MHPSS for adults

Figure 6.6 presents findings from the meta-analysis by outcome measures (see Table 4.3 in Appendix 4 for scales used in the studies). Findings from the meta-analysis suggest that MHPSS programmes probably reduce PTSD symptoms (++), depression (++), anger (++) and partner violence (++). MHPSS programmes may slightly decrease grief (+) and emotional problems (+) and may lead to improvements in anxiety (+), common mental health problems (+) and fear/avoidance (+). However, the findings suggest that MHPSS programmes may have no impact on social support (++). We have insufficient evidence to

draw a conclusion about their impact on conduct problems, somatic complaints or functional impairment. Forest plots derived from the analysis are presented in Figure 6.7 for PTSD and in Appendix 4, Section 4.4 for all other outcomes.

Figure 6.6: Pooled effect sizes (standardized mean difference (SMD)) of MHPSS for mental health and psychosocial outcomes – random effects model

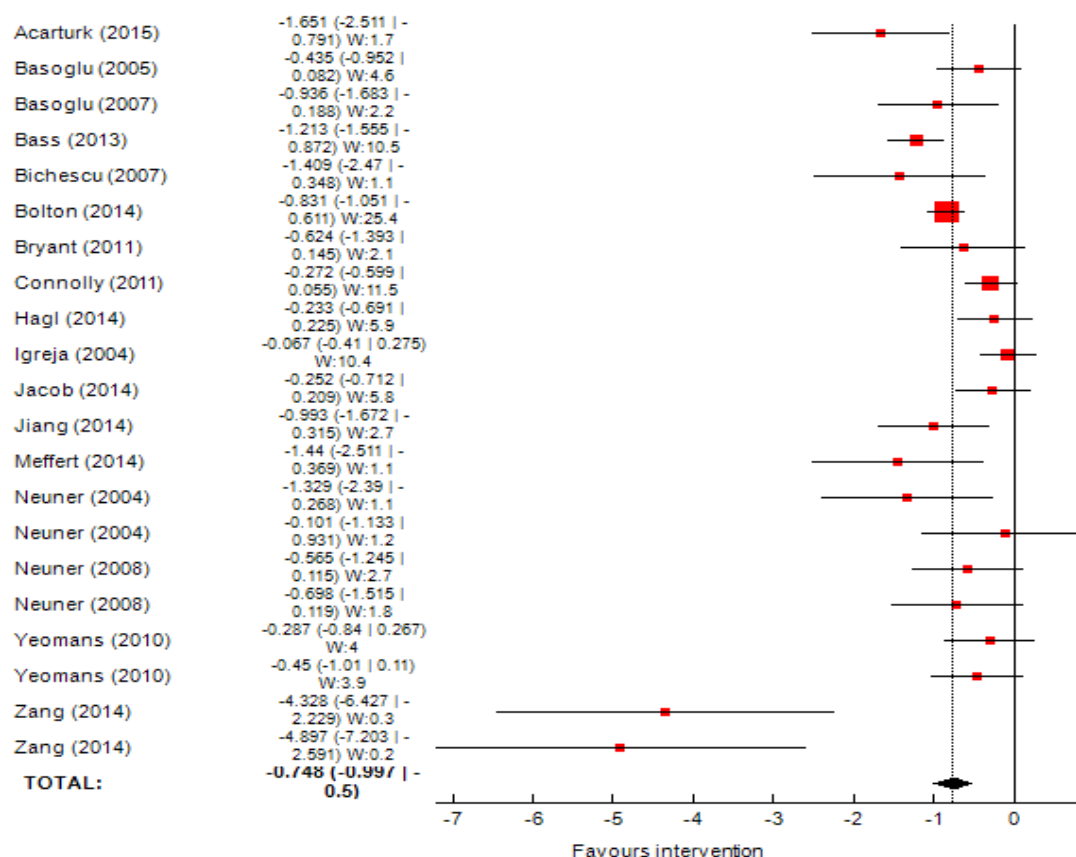
Outcomes	Study design, number of studies and participants (n) and summary risk of bias	Findings and heterogeneity	Strength of evidence
PTSD	RCTs and quasi-RCTs (17 studies; n=1,924) 8 low or medium risk of bias studies	ES = -0.75*; 95% CI (-0.997, -0.5); Q = 76.5; df = 20; p = 1.54E-8; I ² = 73.8%; tau-squared = 0.204	Moderate ++
Depression	RCTs and quasi-RCTs (12 studies; n=841) 6 low or medium risk of bias studies	ES = -1.18*; 95% CI (-1.65, -0.71); Q = 80.6; df = 12; p = 3.18E-12; I ² = 85.1%; tau-squared = 0.571	Moderate ++
Anxiety	RCTs and quasi-RCTs (6 studies; n=630) 3 low risk of bias studies	ES = -1.41*; 95% CI (-2.21, -0.61); Q = 69.3; df = 6; p = 5.81E-13; I ² = 91.3%; tau-squared = 0.98	Limited +
Functional impairment	RCTs (5 studies; n=888) 1 medium risk of bias study	ES = -0.695*; 95% CI (-1.07, -0.32); Q = 14.6; df = 4; p = 0.0055; I ² = 72.7%; tau-squared = 0.125	Insufficient
Emotional problems	RCTs (5 studies; n=653) 3 low risk of bias studies	ES = -0.25; 95% CI (-0.796, 0.29); Q = 34.4; df = 6; p = 5.53E-6; I ² = 82.6%; tau-squared = 0.421	Limited +
Common mental health problems	RCTs and quasi-RCTs (5 studies; n = 420) 3 low risk of bias studies	ES = -0.88*; 95% CI (-1.45, -0.30); Q = 25.5; df = 6; p = 0.00028; I ² = 76.4%; tau-squared = 0.387	Limited +
Fear and avoidance	RCTs and a quasi-RCT (4 studies; n=254) 1 low risk of bias study	ES = -0.73*; 95% CI (-1.01, -0.45); Q = 0.256; df = 3; p = 0.968; I ² = 0%; tau-squared = 0	Limited +
Anger	RCTs and a quasi-RCT (3 studies; n=197) 2 medium risk of bias studies	ES = -0.80*; 95% CI (-1.13, -0.47); Q = 0.817; df = 2; p = 0.665; I ² = 0%; tau-squared = 0	Moderate ++
Social support	RCTs (2 studies; n=52) 2 low risk of bias studies	ES = 0.08; 95% CI (-0.49, 0.64); Q = 0.627; df = 2; p = 0.731; I ² = 0%; TAU ² = 0	Moderate ++
Partner violence	RCTs (2 studies; n=71) 2 medium risk of bias studies	ES = -0.44; 95% CI (-0.97, 0.09); Q = 0.141; df = 1; p = 0.707; I ² = 0%; tau-squared = 0	Moderate ++
Grief	RCT and a quasi-RCT (2 studies; n=147) 1 low risk of bias study	ES = -0.23; 95% CI (-0.63, 0.16); Q = 0.227; df = 1; p = 0.634; I ² = 0%; tau-squared = 0	Limited +
Conduct problems	1 high risk of bias RCT (1 study; n=347)	n/a	Insufficient
Somatic complaints	1 high risk of bias quasi-RCT study (1 study; n=206)	n/a	Insufficient

* Statistical significance at 95%; CI = confidence interval; df = degree of freedom; ES = effect size; I² = I² statistic; n = no. of participants; n/a = not applicable; p = p-value; Q = Cochran's Q.

Note: Negative sign of pooled SMD indicates a positive effect of MHPSS, except for social support.

Figure 6.7: Forest plot – pooled SMDs from MHPSS studies reporting PTSD (n=17)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 76.5$; $df = 20$; $p = 1.54E-8$; $I^2 = 73.8\%$; $\tau^2 = 0.204$ Random effects model: -0.748 ($-0.997, -0.5$)

Sensitivity analysis

We carried out a sensitivity analysis to assess what impact the inclusion of high risk of bias studies had in the meta-analysis, for the main analysis assessing the impact of MHPSS programmes on all outcome measures. The findings from the meta-analysis when excluding high risk of bias studies suggested that there are some differences in magnitude of effect between the pooled effect sizes of low and moderate risk of bias studies and the pooled effect sizes of all trials. When excluding high risk of bias studies, the evidence on the impact of MHPSS programmes on depression, anxiety and emotional problems appears to be more consistent, leading to a higher level of strength of evidence grading. In addition, the overall conclusion of the impact of MHPSS programmes on emotional problems is affected by excluding the high risk of bias studies from the meta-analysis; i.e. when excluding high risk of bias studies, MHPSS programmes may have no impact on emotional problems (++) (see Table 4.7 in Appendix 4).

Sub-group analysis and Investigation of heterogeneity

Heterogeneity

We assessed the extent of the heterogeneity of findings and found significant heterogeneity in outcomes for PTSD, depression, anxiety, functioning, common mental health problems and emotional problems (see Figure 6.6).

We carried out meta-regression analyses to explore the associations of key factors (types of MHPSS intervention, types of comparison group, intensity, follow-up period, types of humanitarian crisis and summary risk of bias) with the pooled effect sizes of PTSD and

depression. We found no statistically significant association between any key characteristics and the effect of MHPSS interventions on PTSD and depression.

Participants and other characteristics

After further examination of narrative and analysis in the studies, no clear conclusion can be drawn to support the influence of gender or other characteristics of participants on the effect of MHPSS interventions.

Gender

Three studies discussed the role of gender.^{127, 132, 134} Jiang et al. (2014) and Bolton (2014) conducted exploratory analyses and found no effect of gender on the impact of MHPSS programmes on PTSD or major depressive symptoms. Igreja et al. (2004) examined the effect of testimony intervention to reduce PTSD symptoms in villages affected by the civil war in Mozambique. Although the overall effectiveness of the intervention could not be assessed by gender or by the number of experiences of violence, the authors of the study suggested in their findings that a trend of improving anxiety dreams could be found in women.

Psychosocial stressors

One study, Ayoughi et al. (2012), identified possible types of psychological stressors in Afghanistan (e.g. family conflicts, grief and loss, domestic violence, migration and poverty) to explore whether such stressors are associated with depression and anxiety symptoms. The authors cautiously suggested that changes in the number of psychosocial stressors might mediate symptoms of depression ($r = 0.81$, $p < 0.001$) and anxiety ($r = 0.82$, $p < 0.001$).

In the following sections, we further analyze the effect of MHPSS programmes by type (see Section 2 for the grouping decision process), which are reported in the following order: 1) psychotherapy: cognitive behaviour therapy (CBT); 2) psychotherapy: Narrative Exposure Therapy (NET); 3) psychotherapy: others. We examined the effectiveness of MHPSS programmes by carrying out a statistical synthesis where there was sufficient data to do so; otherwise, we synthesized the findings narratively. Under each section the findings are organized according to types of outcome measure reported in the included studies. We also narratively report key characteristics of the studies included in the analysis.

Psychotherapy: CBT

Six studies^{121, 122, 124, 127, 128, 131} (five high and one low risk of bias) were included in the meta-analysis assessing the impact of CBT on PTSD, depression, functional impairment, fear/avoidance, grief, emotional problems, anxiety, conduct problems and common mental health problems. The findings from the meta-analysis suggest that CBT may improve symptoms of PTSD (+) and depression (+) and may slightly reduce grief (+) in adult populations affected by humanitarian crises. We found insufficient evidence on the impact of CBT on functional impairment, fear/avoidance, emotional problems, anxiety, conduct problems and common mental health problems (see Figure 6.9 for a forest plot of the meta-analysis of CBT studies for PTSD and Section 4.5 in Appendix 4 for other outcomes).

Figure 6.8: Pooled SMD of CBT for adults, random effects model

Outcomes	Study design, number of studies and participants (n) and summary risk of bias	Findings and heterogeneity	Strength of evidence
PTSD	RCTs (6 studies; n=989) 1 low risk of bias study	ES = -0.74* (-1.04, -0.43); Q = 13.8; df = 5; p = 0.0167; I ² = 63.9%; tau-squared = 0.0819	Limited +
Depression	RCTs (4 studies; n=465) 1 low risk of bias study	ES = -0.54* (-1.07, -0.01; Q = 12.7; df = 3; p = 0.00542; I ² = 76.3%; tau-squared = 0.21	Limited +
Functional impairment	RCTs (4 studies; n=842) No low or medium risk of bias study	ES = -0.67*; 95% CI (-1.11, -0.22); Q = 14.5; df = 3; p = 0.00234; I ² = 79.3%; tau-squared = 0.157	Insufficient
Fear and avoidance	RCTs (2 studies; n=90) No low or medium risk of bias study	ES = -0.79; 95% CI (-1.22, -0.36); Q = 0.133; df = 1; p = 0.715; I ² = 0%; tau-squared = 0	Insufficient
Emotional problems	RCTs (2 studies; n=464) No low or medium risk of bias study	ES = -0.94*; 95% CI (-1.75, -0.131); Q = 6.73; df = 1; p = 0.0095; I ² = 85.1%; tau-squared = 0.291	Insufficient
Grief	RCTs (2 studies; n=147) 1 low risk of bias study	ES = -0.23; 95% CI (-0.63, 0.16); Q = 0.227; df = 1; p = 0.634; I ² = 0%; tau-squared = 0	Limited +
Anxiety	1 high risk of bias study (n=347)	ES = -0.53*; 95% CI (-0.74 -0.31)	Insufficient
Conduct problems	1 high risk of bias RCT (1 study; n=347)	ES = -0.51*; 95% CI (-0.73, -0.297)	Insufficient
Common health problems	1 high risk of bias study (n=119)	ES = -0.31; 95% CI (-0.68, 0.06)	Insufficient

* Statistical significance at 95%; CI = confidence interval; n = no. of participants.

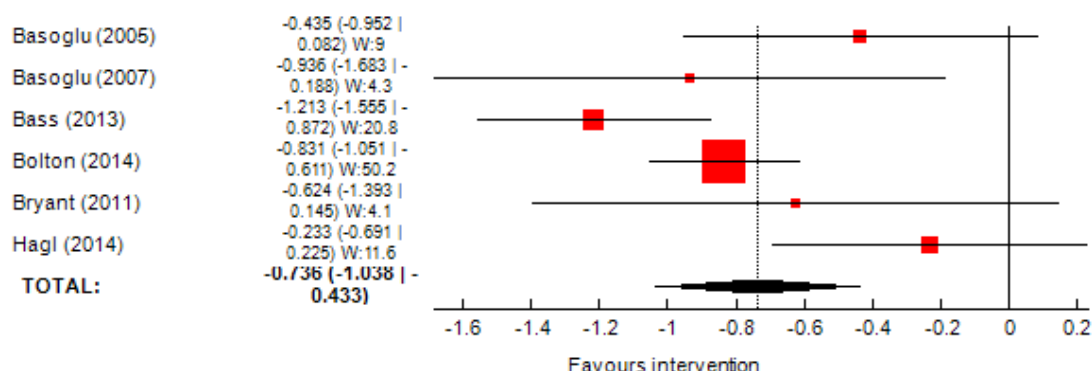
Note: Negative sign of pooled SMD indicates a positive effect of MHPSS.

Figure 6.9: Forest plot – pooled SMD of CBT studies reporting PTSD (n=3)

Measure: Continuous: d (Hedges g)

Heterogeneity: Q = 13.8; df = 5; p = 0.0167; I² = 63.9%; tau-squared = 0.0819

Random effects model: -0.74 (-1.04, -0.43)



Characteristics of CBT studies

Two RCTs assessed a single session of a CBT intervention designed for survivors of the 1999 earthquake in Turkey.^{121, 122} One RCT assessed a CBT intervention designed for survivors of terrorist attacks in southern Thailand.¹²⁸ One study¹³¹ assessed the impact of dialogical exposure on women who had lost their husbands during the war in Bosnia and Herzegovina. One study¹²⁴ evaluated cognitive processing therapy (CPT) designed for female survivors of sexual violence. One evaluated a trans-diagnostic community-based mental health (TCBMH) treatment¹²⁷ delivered to refugees in Thailand. Three programmes

were delivered individually to participants in CBT programmes; one was delivered in a group format.¹³¹ The CPT intervention was delivered in both group and individual formats.¹²⁴

- Bass et al. (2013) (high risk of bias) investigated the impact of CPT on women with PTSD in DRC. Sixteen villages were grouped by proximity and shared language, and subsequently were randomly assigned to the treatment group or to individual support groups. In all, 405 women who had experienced or witnessed sexual violence in the selected 14 villages participated in the study. This intervention was designed for individuals who had experienced or witnessed sexual violence, and contained no trauma narrative focus. In this study, the intervention was delivered by psychosocial assistants in 11 group sessions and one individual session. The impact of the intervention was measured immediately post-intervention and at six months follow-up.
- Bolton et al. (2014) (high risk of bias) assessed the impact of a TCBMH Common Elements Treatment Approach (CETA) programme. A total of 347 Burmese people living in a refugee camp in Thailand (mean age 35.6 years) were randomly allocated to the intervention or to a wait-list control. The TCBMH was designed to be implemented in resource-poor settings and delivered by lay health workers. It was adapted to be contextually sensitive, for example by including fewer elements or adapting manuals with user-friendly guidelines and examples for counsellors to follow. The intervention was delivered in nine weekly one-hour sessions. Its impact was assessed post-intervention.
- Bosoglu et al. (2005) (high risk of bias) randomly assigned 59 survivors of the 1999 earthquake in Turkey to a brief CBT intervention or to a wait-list control group. The CBT aimed to enhance survivors' sense of control and reduce traumatic stressors, including fears and avoidance, focusing on the treatment rationale only. It was a brief intervention, comprising a single one-hour session delivered by psychologists. It was designed to address barriers to attending psychological intervention programmes due to difficulties in the aftermath of a major disaster. The participants (mean age = 36.3 years) were recruited from two housing sites and screened for PTSD. The assessment of the impact of CBT was carried out at six weeks post-intervention.
- A second study by Bosoglu et al. (2007) (high risk of bias) was carried out after the 1999 earthquake in Turkey. Thirty-one survivors (mean age = 34 years) with PTSD were randomly assigned to a treatment group or to a wait-list control group. The treatment involved explaining treatment rationales and focusing on fears and avoidance symptoms. The participants in the intervention group also had exposure to simulated earthquake tremors, which aimed to help them control their fears. The participants themselves controlled the simulated tremors, turning them on/off and increasing intensity levels whenever they were ready. The session was over when the participants felt that they were in control, which took on average 33 minutes (range 9–70 minutes). The effect of CBT compared with the control group was assessed at one-month and two-month follow-ups.
- Bryant et al. (2011) (low risk of bias) examined the impact of CBT in adult populations affected by ongoing terrorist attacks in southern Thailand. All participants (female = 27; male = 1) were screened for PTSD after direct exposure to a terrorist attack, and were randomly assigned to the CBT group or to a supportive counselling group provided by psychiatrists. The CBT was delivered weekly, in eight one-hour sessions, by psychologists or psychiatric nurses trained to follow the treatment manual. The impact of CBT was assessed at post-intervention and at three months follow-up.
- Hagl et al. (2015) (high risk of bias) assessed the impact of a 'dialogical exposure therapy' treatment that aimed to address internal traumatic experiences using the Gestalt empty-chair method. A total of 119 women whose husbands had been killed or had gone missing during armed conflicts were selected to participate and assigned either to the treatment group or to a supportive control group. The treatment aimed to support women to express their feelings about their loss with a group of other women who had had similar experiences. The treatment was delivered by psychologists in seven weekly sessions over eight weeks. The impact of the intervention was assessed post-intervention and 12 months later, using a translated version of the Impact of Event Scale (IES) for PTSD symptoms.

Psychotherapy: Narrative Exposure Therapy

Seven studies^{126, 132, 133, 138, 139, 146, 147} (three high and three low risk of bias) evaluated the impact of NET on PTSD, depression, common mental health problems, anxiety, social support, coping, emotional problems and somatic complaints. The findings from the meta-analysis suggested that NET probably reduces depression (++) and anxiety (++) symptoms. It may also reduce PTSD (+) and common mental health problems (+) and may slightly improve coping (+). It may slightly increase emotional problems (+). The findings suggested that NET probably has little impact on social support (++) . We identified insufficient evidence on the impact of NET on somatic complaints (see Appendix 4, Section 4.6 for other outcomes).

Figure 6.10: Pooled SMD of NET studies for adults, random effects model

Outcomes	Study design, number of studies and participants (n) and a summary risk of bias	Findings and heterogeneity	Strength of evidence
PTSD	RCTs and quasi-RCTs (7 studies; n=596) 4 low risk of bias studies	ES = -1.24*; 95% CI (-1.99, -0.489); Q = 38.7; df = 6; p = 8.16E-7; I ² = 84.5%; tau-squared = 0.72	Limited +
Depression	RCTs (3 studies; n=70) 2 low risk of bias studies	ES = -1.19 (-1.72, -0.66); Q = 0.279; df = 3; p = 0.964; I ² = 0%; tau-squared = 0	Moderate ++
Common mental health symptoms	RCTs and a quasi-RCT (4 studies; n=301) 3 low risk of bias studies	ES = -1.27*; 95% CI (-2.31, -0.23); Q = 25.2; df = 4; p = 4.53E-5; I ² = 84.1%; tau-squared = 1.12	Limited +
Anxiety	RCTs (2 studies; n=52) 2 low risk of bias studies	ES = -1.31*; 95% CI (-1.94, -0.68); Q = 0.533; df = 2; p = 0.766; I ² = 0%; tau-squared = 0	Moderate ++
Social support	RCTs (2 studies; n=52) 2 low risk of bias studies	ES = 0.08; 95% CI (-0.49, 0.64); Q = 0.627; df = 2; p = 0.731; I ² = 0%; tau-squared = 0	Moderate ++
Coping	RCTs (1 study; n=22) 1 low risk of bias study	ES = 0.31; 95% CI (-0.53, 1.16)	Limited +
Emotional problems	1 low risk of bias study (1 study; n=43)	ES = 0.48; 95% CI (-0.32, 1.28)	Limited +
Somatic complaints	1 high risk of bias quasi-RCT study (1 study; n=206)	n/a	Insufficient

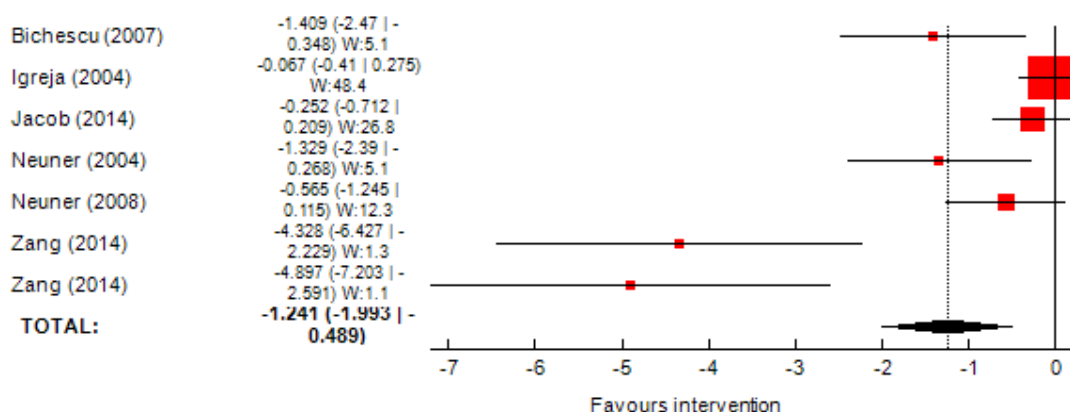
* Statistical significance at 95%; CI = confidence interval; n = no. of participants; n/a = not applicable.

Note: Negative sign of pooled SMD indicates a positive effect of MHPSS, except for social support and coping.

Figure 6.11: Forest plot – pooled SMD of NET studies reporting PTSD (n=5)

Heterogeneity: Q = 38.7; df = 6; p = 8.16E-7; I² = 84.5%; tau-squared = 0.72

Random effects model: -1.24 (-1.99, -0.489)



Narrative synthesis

There were mixed findings from two studies that used the Simplified Coping Styles Questionnaire (SCSQ) for active and passive coping¹⁴⁶ and the 28-item Brief COPE with 14 different types of coping.¹⁴⁷ There was no significant effect of NET on **emotional problems** (ES = 0.48; 95 percent CI (-0.32, 1.28))¹³⁹ (low risk of bias). We found no statistical effect of the testimony programmes when compared with the control groups on **nightmares** (ES = -0.06; 95 percent CI (-0.43, 0.31))¹³² (high risk of bias).

Characteristics of NET studies

Two studies assessed NET delivered to survivors of the 2008 Sichuan earthquake in China.^{146, 147} Two studies evaluated the impact of NET in refugee settlements in Uganda;^{138, 139} one study evaluated its impact on former political detainees in Romania,¹²⁶ one on widowed and orphaned survivors of the 1994 Rwanda genocide¹³³ and one on survivors of civil war.¹³² All but one¹³³ of these NET programmes were delivered to participants individually.

- Neuner et al. (2004) (low risk of bias) assessed the impact of NET delivered to Sudanese refugees living in Uganda. Seventy-six participants with PTSD were randomly allocated to receive four sessions of NET plus psycho-education, four sessions of supportive counselling plus psycho-education or one session of psycho-education only. NET was delivered by non-local trained psychologists working with translators. The treatment lasted approximately 90–120 minutes and was delivered in huts under trees near a clinic in the refugee camps. The effectiveness of NET was assessed post-intervention and at four months and one year follow-ups.
- In another study carried out in a refugee camp in Uganda, Neuner et al. (2008) (high risk of bias) assessed NET delivered to Rwandan, Somali and other refugees from other countries. A total of 227 refugees with PTSD symptoms were randomly assigned to NET, trauma counselling or wait-list control groups. A research team consisting of Rwandan and Somali researchers was recruited locally from the refugee camp and trained to deliver the treatment sessions. NET and trauma counselling were delivered in six sessions over three weeks, each lasting 60–120 minutes. The assessment was undertaken post-intervention and at six months follow-up.

Two studies^{146, 147} assessed NET interventions designed for survivors in Beishan county, China, more than two years after the 2008 earthquake.

- In the Zang et al. (2013) study (low risk of bias), 22 participants aged 37–75 (mean age = 55.7 years) and screened for PTSD were randomly allocated to NET or to a wait-list control group. The participants in Zang et al. (2014) (low risk of bias) were slightly younger (mean age = 53.63 years) and were randomly assigned to NET, NET shorter version (NET-R) or to wait-list control groups. The majority of the participants in both studies were women (77 percent and 90 percent respectively). In both studies, NET programmes were delivered in four sessions of 60–90 minutes over two weeks. The NET-R intervention in Zang et al. (2014) was adapted to be more efficient and was delivered in three or more sessions over just one week. The written testimony sign-off was removed from NET-R to reflect the limited number of therapists available during this large-scale disaster. Both studies assessed the impact of NET and NET-R post-intervention and at short-term (two and three months) follow-ups.

Bichescu and colleagues (2007) (high risk of bias) assessed the effectiveness of NET delivered to former political detainees in Romania. Fifty-nine former detainees screened for PTSD were allocated to the NET group or to a psycho-education control group. NET was delivered by a psychology student in four or five two-hour sessions over 10 weeks. The impact of NET was assessed at six months follow-up.

The testimony intervention was assessed for effectiveness by Igreja and colleagues (2004) (high risk of bias). The intervention involved participants writing a story about their traumatic experiences that was then read back by therapists. The intervention followed a trauma exposure technique that aimed to structure a coherent story that could help to reduce

participants' psychological distress. A total of 206 participants (mean age = 40.2 years) were divided first into two groups: case and non-case groups. Subsequently, 137 participants in the case group were randomly assigned to the testimony intervention or the no intervention group. The intervention was delivered once by local facilitators at participants' homes, and lasted approximately one hour. The effectiveness of the intervention was assessed at two months and 11 months follow-ups.

The study by Jacob et al. (2014) (low risk of bias) assessed the impact of NET on widowed and orphaned survivors of the 1994 genocide in Rwanda. The intervention was delivered in eight sessions, each of 90–150 minutes. The authors of the study prepared a manual to train local Rwandan facilitators to deliver NET. Seventy-six participants (43 widows and 33 orphans) were randomly assigned to receive NET or to a wait-list control group, waiting for six months to receive the intervention. The impact of the intervention was assessed at three months and 12 months follow-ups.

Psychotherapy – others

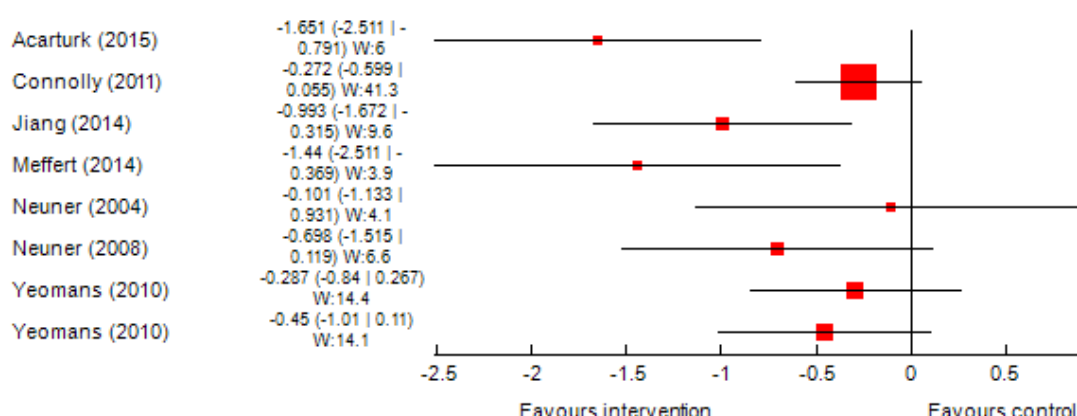
Nine studies assessed the impact of different psychotherapy approaches on mental health and psychosocial outcomes. Three studies assessed the impact of supportive counselling;^{120, 138, 139} two^{134, 135} assessed interpersonal psychotherapy (IPT); and one each assessed interventions using yoga,¹⁴³ eye movement desensitization and reprocessing (EMDR),¹¹⁹ Thought Field Therapy (TFT)¹²⁹ and a reconciliation workshop.¹⁴⁵ We did not perform a statistical meta-analysis of the outcome measures reported in this set of MHPSS programmes. However, we examined a trend of effect sizes and narratively report below the findings from the interventions assessing the effect of psychotherapy programmes.

Narrative synthesis

PTSD

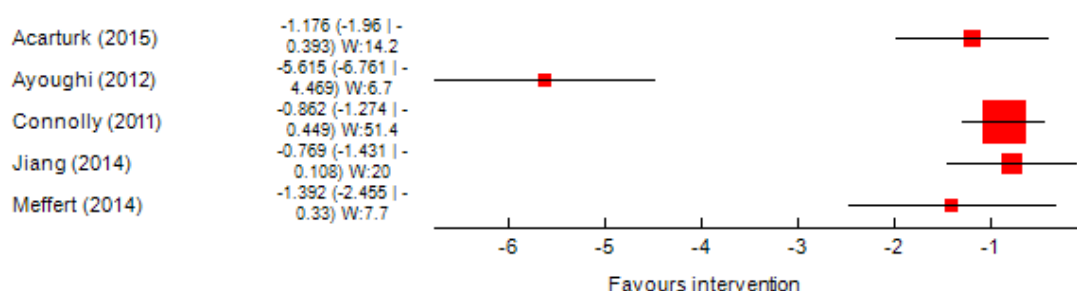
Seven studies (three low, two medium and two high risk of bias) measured the impact of psychotherapy interventions on **PTSD**.^{119, 129, 134, 135, 138, 139, 143, 145} The forest plot in Figure 6.12 illustrates that three studies – on EMDR (low risk of bias)¹¹⁹ and IPT (two medium risk of bias)^{134, 135} – yielded positive and statistically significant effects (with effect sizes ranging from -1.65 to -0.993). The other four studies (two low and two high risk of bias) also suggested a positive trend in favour of the treatment group compared with the control group, although the effect was not statistically significant.

Figure 6.12: Forest plot of SMD of other psychotherapy studies reporting PTSD (n=7)



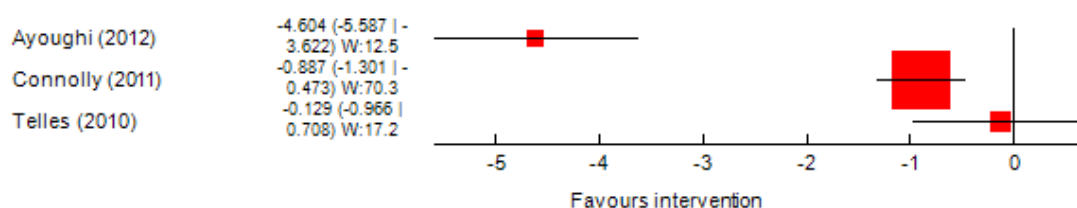
Depression

Five studies (one low, two medium and two high risk of bias) in four types of intervention (EMDR,¹¹⁹ counselling,¹²⁰ IPT^{134, 135} and TFT¹²⁹) reported outcome evaluation data on **depression**, and all suggested a significant positive effect of the psychotherapy intervention in reducing depression symptoms, with effect sizes ranging from -5.61 to -0.77 (see Figure 6.13).

Figure 6.13: Forest plot of SMD of psychotherapy studies reporting depression (n=5)

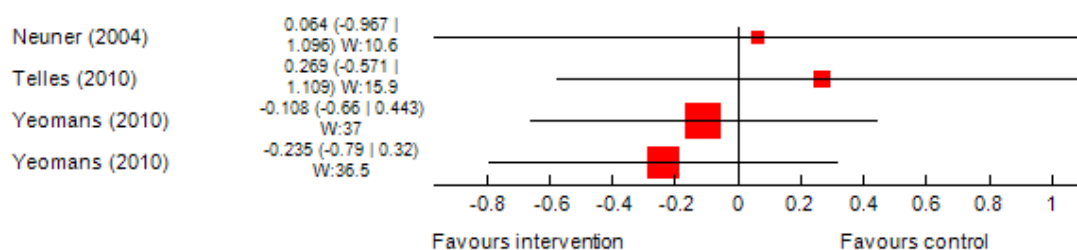
Anxiety

Figure 6.14 illustrates the effect sizes from three studies (one low and two high risk of bias) assessing the impact of counselling,¹²⁰ TFT¹²⁹ and yoga¹⁴³ on **anxiety**. Both high risk of bias studies found a significant benefit of the interventions in reducing anxiety symptoms, with effect sizes ranging from -4.60 to -0.13, though this was not seen in the low risk of bias study.¹⁴³

Figure 6.14: Forest plot of SMD of psychotherapy studies reporting anxiety (n=3)

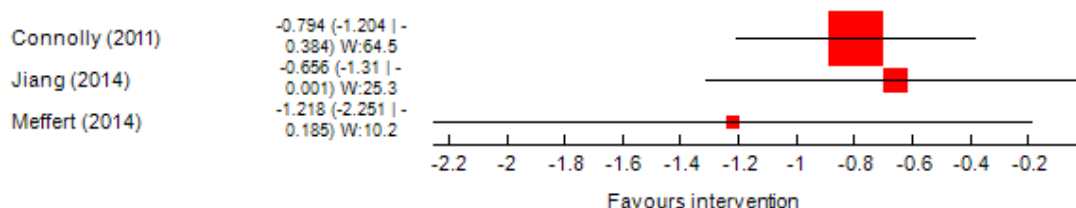
Emotional problems

Another three RCTs (three low risk of bias) evaluated the impact of psychotherapy interventions (yoga,¹⁴³ counselling¹³⁹ and a reconciliation workshop¹⁴⁵) on emotional problems. The findings from the three studies were mixed. The two assessing counselling and yoga programmes found that the interventions may slightly increase emotional problems. However, the findings from Yeomans (2010) assessing the reconciliation workshop showed a positive impact of the intervention on emotional outcomes. No findings were statistically significant (see Figure 6.15).

Figure 6.15: Forest plot of SMD of psychotherapy studies reporting emotional problems (n=3)

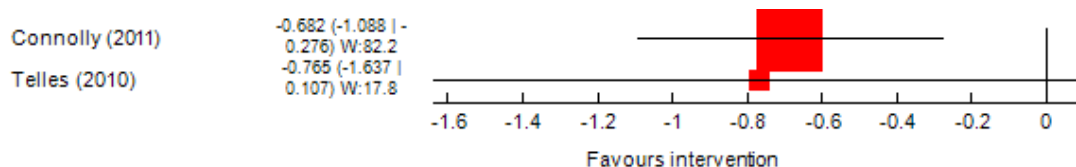
Anger

The findings from three studies (two medium and one high risk of bias) suggested a positive significant impact of IPT^{134, 135} and TFT¹²⁹ on **anger** (effect size between -1.22 and -0.66) (see Figure 6.16).

Figure 6.16: Forest plot of SMD of psychotherapy studies reporting anger (n=3)

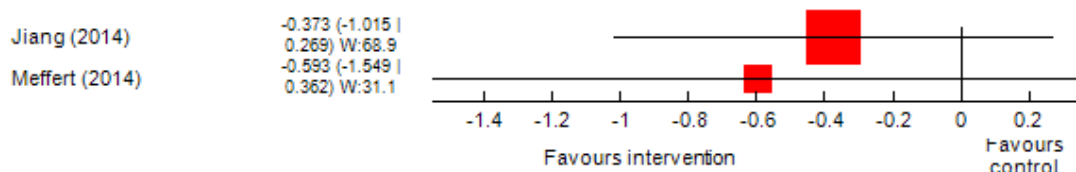
Fear and avoidance

Two studies (one low and one high risk of bias) assessed the impact of yoga¹⁴³ and TFT¹²⁹ on **fear and avoidance**. Connolly (2011) (high risk of bias) found a significant impact of the TFT intervention on avoidance measured by the Trauma Symptom Inventory (TSI) on defensive and avoidance sub-scales (effect size = -0.68; 95 percent CI (-1.09, -0.28)). Telles (2010) (low risk of bias) found a positive impact but no significant effect of a yoga intervention on fear measured by visual analogue scales (VAS).

Figure 6.17: Forest plot of SMD of psychotherapy studies reporting fear and avoidance (n=2)

Partner violence

Two studies (medium risk of bias) assessed the impact of IPT^{134, 135} on **partner violence**. The findings from both studies suggest that IPT has a positive but not a statistically significant impact in reducing partner violence in adults affected by natural or man-made disasters.

Figure 6.18: Forest plot of SMD of psychotherapy studies reporting partner violence (n=2)

Other outcomes

Jiang et al. (2014) (medium risk of bias) reported a significant positive impact of an IPT intervention on **quality of life** of survivors of the earthquake in China (ES = 0.89*, 95 percent CI (0.23, 1.56)) and on their **functioning scores** (ES = -0.85*; 95 percent CI (-1.50, -0.17)). Ayoughi et al. (2012) (high risk of bias) reported a significant effect of psychosocial counselling on **coping** strategies (t (59) = -28.58, p<0.01). We found no statistical effect of the psychotherapy programme when compared with the control groups on supportive counselling for **common mental health symptoms**¹³⁹ (ES = -0.177; 95 percent CI (-0.42, 0.07)) (low risk of bias).

Characteristics of psychotherapy (others) intervention studies

Nine RCTs were undertaken in eight countries: Uganda, Burundi, Rwanda, Egypt, India, Afghanistan, China and Turkey. The majority of the studies were carried out in order to assess the impact of the interventions in armed conflict^{120, 124, 129, 131, 132, 145} and refugee settings.^{119, 127, 135, 138, 139, 143} One psychotherapy intervention was delivered in a group format,^{131, 145} while the other eight interventions were delivered to the participants individually.^{119, 120, 127, 129, 132, 134, 135, 138, 139, 143}

Two IPT studies were carried out in Egypt¹³⁵ and China.¹³⁴

- Meffert et al. (2014) (medium risk of bias) assessed the impact of IPT on Sudanese refugees living in Cairo. A total of 25 potential participants were screened for PTSD symptoms; 22 (mean age = 31 years) met the inclusion criteria and were randomly assigned to IPT treatment or to a wait-list control group. The implementation of IPT was adapted to reflect resources and ethical concerns in the setting. It was delivered in six sessions, twice a week over three weeks, and was compared with the standard IPT version of 12–16 individual weekly sessions. It was delivered by local Sudanese community members with no mental health qualifications, but trained to deliver IPT.
- Jiang et al. (2014) (medium risk of bias) assessed the impact of IPT in reducing PTSD and depression symptoms in survivors of the 2008 Sichuan earthquake. Forty-nine participants screened for PTSD were randomly allocated to IPT plus treatment as usual (TAU) or to a TAU-only group. The IPT was modified to meet local needs and did not focus on interpersonal sensitivity or deficit. It was delivered in 12 one-hour sessions over 12 weeks by clinicians and lay health professionals or a teacher. The participants in the IPT group also received medication and counselling supports. The impact of IPT was assessed at three months and six months post-intervention.

Three studies examined the effectiveness of supportive counselling.^{120, 138, 139}

- Neuner et al. (2004, 2008) randomly allocated participants into two active treatment arms (NET and supportive counselling) and a control group. In both studies, the supportive counselling included a variety of treatment and counselling approaches, with flexibility for the therapists to adapt their treatments to each participant's psychological and social needs. The focus of the counselling treatment group in the Neuner (2004) study (low risk of bias) was on psycho-education, interpersonal problems, hope and decision-making processes for the future, without a focus on or discussion of past traumatic events; this was delivered in four sessions. In the Neuner et al. (2008) study (high risk of bias) in Uganda, the participants in the counselling group also received sessions to address grief and to improve active listening, problem solving and coping skills.
- Another counselling support intervention by Ayoughi et al. (2012) (high risk of bias) assessed the effect of psychosocial counselling interventions on the help-seeking behaviours of Afghan women. Sixty-one participants (aged 14–60 years) recruited at a primary healthcare centre were allocated to receive counselling treatment or medication. The counselling followed the treatment guidelines of the Basic Package of Health Services (BPHS) in the Afghan healthcare system. The sessions focused on the relationship between personal symptoms and psychosocial stressors. It also aimed to improve the participants' self-efficacy and coping mechanisms. The interventions were offered to participants for 5–8 sessions. Each session lasted for 45–60 minutes and was delivered by trained psychosocial counsellors. The impact of the counselling programmes was assessed at three months follow-up.
- Acarturk et al. (2015) (low risk of bias) examined the impact of EMDR on PTSD symptoms in Syrian refugees in a refugee camp in Turkey. Twenty-nine participants (aged 19–63 years) with PTSD symptoms were allocated to EMDR or to a wait-list control group. The participants in the EMDR group received seven 90-minute sessions, delivered by Turkish psychologists. The implementation was adapted to consider cultural sensitivity, including providing psycho-education to community leaders at the camp and delivering the sessions in a location and at a time of day that would encourage participation. The impact was assessed at seven weeks post-intervention.

- Another brief intervention, Thought Field Therapy (TFT), was delivered to Rwandan survivors of the 1994 genocide¹²⁹ (high risk of bias). Trained, non-healthcare professional staff provided the treatment to participants in one session, lasting approximately 49 minutes. In all, 171 participants with PTSD symptoms aged 18–73 years participated in the study and were assigned to the treatment or to a wait-list control group. The impact of the intervention was assessed one week post-intervention and two years post-intervention using a self-reporting tool, the Modified PTSD Symptom Scale (MPSS), for measuring the frequency and severity of PTSD symptoms.
- Yeomans et al. (2010) (low risk of bias) assessed the impact of a reconciliation workshop with psycho-education delivered to people who were experiencing psychological distress due to the armed conflict in Burundi. A total of 124 participants were randomly assigned to three treatment groups: workshop with psycho-education, workshop without psycho-education and wait-list control group. The three-day workshop aimed to encourage interaction with other individuals in the group, followed by the psycho-education session delivered on the last day of the workshop. The workshop followed the Healing and Rebuilding Our Communities (HROC) workshop manual, which emphasizes the relationships between personal recovery and community reconciliation. The impact of the intervention was assessed immediately afterwards using the Harvard Trauma Questionnaire (HTQ) for PTSD symptoms¹⁴⁸ and the Hopkins Symptom Checklist-25 for anxiety and depression symptoms.¹⁴⁹
- Telles et al. (2010) (low risk of bias) examined the impact of yoga delivered to male flood survivors in India. The yoga was delivered in seven one-hour sessions for one week. Twenty-two participants were randomly assigned to the yoga treatment group or to a wait-list control group. The participants practised yoga daily, and were asked not to practise yoga again during the day. The effect of the yoga intervention on physical health (heart and breathing rates) was assessed post-treatment. Other psychological distress reactions (fear, anxiety, disturbed sleep, sadness) were measured using a visual analogue scale (VAS).

7 COMBINING THE EVIDENCE

7.1 CROSS-STUDY SYNTHESIS APPROACH

In this section, we present the findings from combining the evidence from process evaluation studies (Section 4) and impact evaluation studies (Sections 5 and 6) to form the final synthesis. In this analysis, we take the six hypotheses generated from the key findings of the synthesis of process, derived from recipient and provider views (see Section 4), to further explore the descriptive and statistical evidence in trials (Sections 5 and 6). In doing this, we aim to explore how interventions might be influenced or moderated by implementation processes and contextual factors. The six hypotheses are presented in the box below, 'Key hypotheses'.

Key hypotheses

MHPSS programmes may be more effective if they address the following implementation issues.

1. **Community engagement** – steps are taken to engage with the community and/or family members.
2. **Government and partnerships** – programmes are delivered in partnership with governments and/or local agencies.
3. **Trained providers** – the challenge of recruiting and retaining trained providers to deliver a range of MHPSS programmes is overcome.
4. **Cultural sensitivity** – programme activities are designed that are socially and/or culturally meaningful.
5. **Group-based programmes** – opportunities are provided for people to interact as a group.
6. **Establish good relationships** – programme providers build trusting and supportive relationships with programme recipients.

This section is structured to answer the following three questions:

- 1 Which characteristics of MHPSS programmes correspond with the hypotheses emerging from the process synthesis?
- 2 Do these hypotheses suggest whether mental health and psychosocial programmes do or do not work for PTSD and depression?
- 3 Which themes derived from the process synthesis have yet to be addressed by trials evaluating MHPSS programmes for children and adults?

1. WHICH CHARACTERISTICS OF MHPSS PROGRAMMES CORRESPOND WITH THE HYPOTHESES EMERGING FROM THE PROCESS SYNTHESIS?

To answer this question, the hypotheses were entered into a matrix alongside the individual trials evaluating MHPSS programmes for CYP and adults, grouped by type of intervention (see Figures 7.1 and 7.2). We then examined the matrix to identify whether key mechanisms or programme component design had been incorporated into MHPSS studies.

Hypothesis 1: Community engagement

Approaches to engaging with the community featured minimally in MHPSS programmes for adults, with only a few examples provided in trial programme descriptions (n=3). They featured more strongly in MHPSS programmes targeting children (n=13), and were an approach adopted by all tier two psychosocial programmes seeking to strengthen family and community supports (n=6). Examples of community engagement strategies in MHPSS programmes for CYP included focusing on building strong links with parents, a key sub-theme in the process synthesis. Equivalent strategies in the trials included visiting the family home, holding family and community meetings and conducting psycho-education workshops with parents to increase their engagement and support for the programme. Where community engagement was a focus in adult MHPSS programmes, emphasis was placed on assisting people to build new social connections, or on the restoration and repair of existing community relationships. These approaches were often considered an essential process in developing effective coping skills in the aftermath of war.

Hypothesis 2: Government partnership

Only a few of the MHPSS programmes evaluated partially matched this hypothesis (n=9). Studies provided positive but brief examples of informal government backing of MHPSS programming and its importance in reducing barriers to implementation. However, there was a lack of detail or reference to a need or any strategies for joint working, as cited in the process synthesis. In some cases, rather than formal involvement, providers delivered programmes known to be authorized by national or regional public health policies, to ensure that they were in alignment with government priorities. In a post-disaster setting, one author noted that the government's response to attending to the needs of the local population was viewed as a supportive and positive experience for people as they continued to rebuild their lives.

Hypothesis 3: Trained providers

Ensuring that MHPSS programmes were delivered by trained providers was a key theme in the process synthesis and a key feature of the trials across all programme domains, both for CYP (n=26) and for adults (n=19). In most cases, trials drew on existing local mental health practitioners whom they provided with tailored training packages of varying lengths and intensity to enable them to deliver the specific MHPSS programmes under evaluation. There were also examples of lay facilitators (e.g. providers with non-clinical backgrounds) who were trained to deliver programmes such as CBT or NET. Descriptions of providers' skill-sets ranged from qualifications in named psychological modalities (e.g. EMDR, TF-CBT, etc.) to 'basic' counselling skills (e.g. listening, empathy, reflection). In addition to training provided prior to implementation, some practitioners also received ongoing supervision, to meet ethical requirements and to maximize programme fidelity. One trial discussed challenges with the training component of an MHPSS programme, as some of the trainees were affected by the disaster themselves, which influenced how they provided the treatment to participants. Further trials also mentioned study implementation concerns and the importance of recruiting and retaining staff.

Hypothesis 4: Socially and culturally meaningful MHPSS

Designing programmes to ensure that they were socially and culturally meaningful to CYP was a key feature across all programme domains (n=17), but particularly for those delivering CBT and psychosocial programmes. Evaluations of adult MHPSS programmes also emphasized the importance of socially and culturally appropriate programming (n=11). A common modification of programmes originally developed in Western and non-Western, but not culturally transferable, contexts was to ensure that the content of programme material was culturally applicable and to use culturally familiar activities (e.g. songs, games, local rituals). Other modifications included adapting Western psychological concepts or integrating them with local cultural and spiritual beliefs about how to attend to mental health and psychosocial well-being. These modifications were often achieved by conducting focus groups with local facilitators. Further adaptations included taking into consideration participants' characteristics, such as age, gender and educational levels (e.g. where people may not be literate).

Hypothesis 5: Group-based programmes

The benefit of participating in group-based programmes was a theme emerging from the narratives of women and CYP in the synthesis of process. The majority of trials evaluating programmes delivered to children were also group-based (n=26; e.g. psychosocial programmes, group-based CBT, NET). This was partly responding to a need to reach large numbers of participants. However, for some programmes it was also a core mode of delivery (e.g. youth sports-based programmes), while for others this format reflected a desire to increase opportunities for social activities and peer group contact. In contrast, MHPSS programmes for adults were more likely to be delivered to individuals, with only three group-led programmes. However, two of these programmes were delivered to women only in post-conflict settings to address the impact of sexual violence and traumatic loss and complicated grief after war.

Hypothesis 6: Establishing good relationships

The importance of establishing trusting and supportive relationships between programme providers and recipients was more commonly addressed in programmes delivered to children (n=11), compared with adults (n=2). This appeared, in part, to be in recognition of the need to narrow the power differential between programme providers and child recipients. In some cases, programmes acknowledged that they were attending to traumatic narratives and therefore needed to build trust with recipients, which was achieved by visiting them in their homes or in familiar and safe settings, as determined by them.

Figure 7.1: Children and young people cross-study matrix

Study by type of MHPSS programme	Community engagement	Government partnership	Trained providers	Socially or culturally meaningful	Group-based programme	Establishing good relationships
Psychotherapy – CBT						
Betancourt (2014)	✓	×	✓	✓	✓	×
Berger (2009)	×	×	✓	✓	✓	×
Chen (2014)	×	×	✓		✓	✓
Jordans (2010)	×	×	✓	×	✓	×
Khamis (2004)	×	✓	✓	✓	✓	×
McMullen (2013)	✓	×	✓	✓	✓	✓
O'Callaghan (2013)	✓	×	✓	✓	✓	✓
O'Callaghan (2015)	✓	×	✓	✓	✓	✓
Pityaratstian (2015)	×	×	✓	✓	✓	×
Qouta (2012)	×	×	✓	✓	✓	×
Tol (2008)	×	×	✓	✓	✓	×
Tol (2012)	×	×	✓	×	✓	×
Tol (2014)	×	×	✓	×	✓	×
Psychotherapy – NET						
Catani (2009)	×	×	✓	×	×	×
Ertl (2011)	✓	×	✓	✓	×	✓
Lange-Nielsen (2012)	×	×	✓	×	✓	×
Kalantari (2012)	×	×	×	×	✓	×
Schauer (2008)	×	✓	✓	×	✓	×
Psychotherapy – others						
Bolton (2007)†	✓	×	✓	✓	✓	×
Chen (2014)	×	×	✓	✓	✓	✓
Cluver (2015)	×	×	×	×	✓	✓
Hoaakazemi (2012)	×	×	×	×	×	×
Gordon (2008)	×	×	✓	✓	✓	×
Layne (2008)	✓	✓	✓	×	✓	×
Psychosocial						
Bolton (2007)†	✓	×	✓	✓	✓	×
Dybdahl (2001)†	✓	×	✓	×	✓	×
Ertl (2011)†	✓	×	✓	✓	×	✓
O'Callaghan (2014)†	✓	×	×	✓	✓	✓
O'Callaghan (2015)	✓	×	✓	✓	✓	✓
Richards (2014)†	✓	✓	✓	×	✓	✓

† Tier two programmes.

Figure 7.2: Adults cross-study matrix

Study by type of MHPSS	Community engagement	Government partnership	Trained providers	Socially or culturally meaningful	Group-based programme	Establishing good relationships
Psychotherapy – CBT						
Basoglu (2005)	x	x	✓	x	x	x
Basoglu (2007)	x	x	✓	x	x	x
Bass (2013)†	x	x	✓	✓	✓	x
Bolton (2014)	✓	x	✓	✓	x	✓
Bryant (2011)	x	x	✓	✓	x	x
Hagl (2014)	x	x	✓	x	✓	x
Psychotherapy – NET						
Bichescu (2007)	x	x	✓	x	x	✓
Igreja (2004)	x	x	x	x	x	x
Jacob (2014)	x	x	✓	✓	x	x
Neuner (2004)	x	x	✓	x	x	x
Neuner (2008)	x	✓	✓	x	x	x
Zang (2013)	x	✓	✓	✓	x	x
Zang (2014)	x	✓	✓	✓	x	x
Psychotherapy – others						
Acarturk (2015)	x	✓	✓	✓	x	x
Ayoughi (2012)	x	✓	✓	✓	x	x
Connolly (2011)	✓	x	✓	x	x	x
Jiang (2014)	x	x	✓	✓	x	x
Meffert (2014)	x	x	✓	✓	x	x
Telles (2010)	x	x	✓	✓	x	x
Yeomans (2010)	✓	x	✓	x	✓	x

† Tier two programme.

2. DO THESE HYPOTHESES SUGGEST WHETHER MENTAL HEALTH AND PSYCHOSOCIAL PROGRAMMES DO OR DO NOT WORK IN REDUCING PTSD AND DEPRESSION?

As stated above, Section 4 suggested a range of different mechanisms through which key stakeholders and external factors could potentially influence the impact of MHPSS programmes. To address this question, we performed a meta-regression analysis. This enabled us to explore the association between studies matching the six hypotheses with the effect size estimates of the two outcome measures, PTSD and depression. Explorations of further outcome measures were not possible as there were insufficient effect size estimates for them. In addition, we explored whether the interventions do or do not work by examining trends in the effect size estimates in PTSD and depression.

Overall, the findings from the meta-regression did not indicate a significant association between any hypothesis and PTSD or depression in MHPSS programmes for adult populations. We did find a significant association between two hypotheses: a) having trained providers (Hypothesis 3) ($p=0.026$) and b) building relationships between programme providers and recipients (Hypothesis 6) ($p=0.003$) and PTSD in MHPSS for CYP (see Appendix 5). We also found a significant association between MHPSS interventions designed to be socially and culturally meaningful (Hypothesis 4) with depression in MHPSS for CYP ($p=0.031$). According to the findings of the meta-regression on CYP, the further

explorative examination of (un)successful MHPSS programmes in reducing PTSD and depression in CYP was carried out and suggested the following, when data was available (see Figure 7.3).

- All but one of the MHPSS programmes effective in reducing PTSD in CYP were delivered by trained providers. The family-focused psychosocial intervention (O’Callaghan, 2014) did not clearly specify whether the local facilitators received training for delivering the intervention, although the authors stated that they were supervised closely by the study researchers.
- We observed a negative trend, which does not reach a statistically significant level, of MHPSS programmes for CYP on PTSD in four studies, none of which emphasized establishing relationships between programme providers and recipients.^{95, 96, 109, 115} Two studies reported an elevated level of PTSD symptoms in girls who participated in classroom-based and Teaching Recovering Techniques programmes compared with the comparison groups.^{109, 116} The study by Khamis (2009) found an unintended effect of an MHPSS programme on PTSD in younger children aged 6–12 in Palestine. Finally, Catani et al. (2009), assessing the impact of KIDNET, found that the participants in the comparison group showed a greater improvement compared with those in the KIDNET group.
- All studies that reported a significant impact of MHPSS programmes in reducing depression were adapted to be sensitive to local cultural and social contexts. However, two studies^{110, 118} that did not clearly report the adaptation of MHPSS programmes to local contexts showed a significant unintended effect of MHPSS programmes on depression.

3. WHICH THEMES DERIVED FROM THE PROCESS SYNTHESIS HAVE YET TO BE ADDRESSED BY TRIALS EVALUATING MHPSS PROGRAMMES FOR CYP AND ADULTS?

Several gaps existed between the views of programme providers and recipients in trials evaluating MHPSS programmes, particularly those targeting adults. For example, although strategies for community engagement were deployed, they mainly focused on engaging parents in the context of delivering programmes for CYP. Very few of the trials evaluating adult MHPSS programmes sought to mobilize or sensitize local communities about the impact of humanitarian crises on mental health or psychosocial well-being. This may be because it was deemed unnecessary or it was not explicitly reported. Similarly, the need to work in collaboration with government and local NGOs was either achieved (and not reported) or did not appear to be a major concern, or was reported as a barrier to implementing programmes across tiers. Although many of the programmes targeting children decided to extend their reach by delivering to groups and to provide opportunities for peer support, this was not similarly addressed in programmes for adults. Although providing a significant finding in the meta-regression, another gap was the extent to which programmes took steps to build supportive relationships with recipients – a phenomenon which, while present, was thinly reported across all trials.

Figure 7.3: Children and young people cross-study matrix and effect size estimates of PTSD and depression

Study by type of MHPSS programmes	Community engagement	Government partnership	Trained providers	Socially or culturally meaningful	Group-based programme	Establishing good relationships	Effect of MHPSS on PTSD Effect sizes (SMD)	Effect of MHPSS on depression Effect sizes (SMD)
Psychotherapy – CBT								
Betancourt (2014)	✓	X	✓	✓	✓	X	n/a	n/a
Berger (2009)	X	X	✓	✓	✓	X	-1.27*	-0.43*
Chen (2014)	X	X	✓	✓	✓	✓	-1.28*	-1.18*
Jordans (2010)	X	X	✓	X	✓	X	-0.18	-0.37
Khamis (2004)	X	✓	✓	✓	✓	X	0.20 (age 6–11 years) 0.07 (age 12–16 years)	-0.62 (age 6–11 years)*
McMullen (2013)	X	X	✓	✓	✓	✓	-2.73*	n/a
O'Callaghan (2013)	✓	X	✓	✓	✓	✓	-1.94*	n/a
O'Callaghan (2015)	✓	X	✓	✓	✓	✓	-1.99*	n/a
Pityaratstian (2015)	X	X	✓	✓	✓	X	-0.47	n/a
Qouta (2012)	X	X	✓	✓	✓	X	Girls 0.01	Girls 0.08
						X	Boys -0.40	Boys 0.12
Tol (2008)	X	X	✓	✓	✓	X	-0.66*	-0.36*
Tol (2012)	X	X	✓	X	✓	X	Girls 0.33	Girls 0.10
							Boys -0.07	Boys -0.04
Tol (2014)	X	X	✓	X	✓	X	Girls -0.10 Boys -0.17	Girls -0.31 Boys -0.03
Psychotherapy – NET								
Catani (2009)	X	X	✓	X	X	X	0.25	n/a
Ertl (2011)	✓	X	✓	✓	X	✓	-0.46	0.02
Lange-Nielsen (2012)	X	X	✓	X	✓	X	-0.11	1.24*
Kalantari (2012)	X	✓	X	X	✓	X	n/a	n/a
Schauer (2008)	X	✓	✓	X	✓	X	-0.06	n/a
Psychotherapy – others								
Bolton (2007)†	✓	X	✓	✓	✓	X	n/a	-0.56*
Chen (2014)	X	X	✓	✓	✓	✓	-0.14	-0.76
Cluver (2015)	X	X	X	X	✓	✓	n/a	n/a
Shoaakazemi (2012)	X	X	X	X	X	X	n/a	n/a
Gordon (2008)	X	X	✓	✓	✓	X	-1.12*	n/a
Layne (2008)	✓	✓	✓	X	✓	X	-0.11	0.06
Psychosocial								
Bolton (2007)†	✓	X	✓	✓	✓	X	n/a	0.21
Dybdahl (2001)†	✓	X	✓	X	✓	X	-0.14	0.07
Ertl (2011)†	✓	X	✓	✓	X	✓	-0.04	0.16
O'Callaghan (2014)†	✓	X	X	✓	✓	✓	-0.41*	n/a
O'Callaghan (2015)	✓	X	✓	✓	✓	✓	-2.60*	n/a
Richards (2014)†	✓	✓	✓	X	✓	✓	n/a	0.46*

Green – positive trend; Orange – negative trend; Grey – data not available; n/a = data not available.

8 DISCUSSION AND CONCLUSIONS

This section presents the key findings of this review and considers implications for future research. It also reflects on the strengths and limitations of systematic review methods.

8.1 SUMMARY OF KEY FINDINGS

Included studies

After screening citations identified from the search of bibliographic databases and websites, a total of 100 reports were included to answer the review questions. Of these, 82 were distinct studies and 18 were additional reports of the same study. Thirteen studies provided data on the implementation and/or receipt of MHPSS programmes and 69 were outcome evaluations; 40 interventions targeted children and 29 were delivered to adults. When mapped against the IASC pyramid of programme types, studies fell primarily into tiers 2–4, with only one study in tier one. Further summary details of the key characteristics and findings from each synthesis are provided below.

Barriers to, and facilitators of, implementing and receiving MHPSS programmes

Nine of the 13 studies evaluating process examined MHPSS programmes in response to civil wars and four evaluated programmes after exposure to natural disasters. Six studies evaluated tier two community-based initiatives seeking to strengthen family and peer supports, with four of these targeting children. Three non-focused, specialized support service interventions (tier three) aimed to address trauma in adults via counselling support groups or psychosocial trauma recovery programmes designed for children. A further three tier four specialized service interventions evaluated the delivery of primary mental healthcare services. The remaining study evaluated a tier one community-based primary healthcare service that included mental health and psychosocial programme components. The 13 process evaluations provided data on a number of themes focused on the contextual barriers and facilitators affecting implementation and receipt of MHPSS programmes; their findings included the following.

Community engagement was a key mechanism to support the successful implementation and uptake of MHPSS programmes in humanitarian settings, in particular:

- employing mental health sensitization and mobilization strategies to increase understanding and acceptance of the mental health and psychosocial impacts of war and natural disasters
- developing effective partnerships and greater coordination with local NGOs and governments during planning and implementation stages to increase programme reach, particularly when attempting to deliver integrated primary and mental healthcare services in post-conflict and post-natural disaster settings
- establishing good relationships with parents, including when there is a need to communicate the value of children's and young people's continued participation in MHPSS programmes.

The views of programme implementers suggested that:

- There is a need to address the challenge of recruiting providers to deliver programmes in resource-limited settings, particularly where there may be a lack of incentive to work in the mental health sector.
- In addition to recruitment, programmes need to retain sufficient numbers of trained providers to ensure that they can be delivered as intended and that they achieve full programme reach.

The views of programme recipients suggested that engagement in MHPSS programmes would benefit from:

- designing programmes that are socially and culturally meaningful to ensure that they are appealing and achieve their intended aims
- facilitating engagement with peers in group-based programmes as they provide an opportunity to connect with people from similar circumstances and backgrounds, helping to promote greater social cohesion and reduce social isolation
- providers continuing to build trusting and supportive relationships with recipients to maximize engagement and increase programme impact.

The effectiveness of MHPSS programmes for CYP

We identified 40 studies assessing the impact of MHPSS programmes on children and young people in humanitarian crises. The majority of programmes were delivered in a group format and implemented in school/classroom settings. They were designed, on average, for between four and 15 sessions, each lasting 1–2 hours and delivered over a period of 1–3 months. Three studies evaluated gender-specific MHPSS programmes. When programmes were aligned with the IASC (2007) intervention pyramid, we did not identify studies that evaluated MHPSS programmes aiming to address basic services and security (tier one). The majority of MHPSS programmes were implemented in order to address the mental health and psychological needs of populations affected by armed conflict. A quarter of the studies evaluating MHPSS programmes were designed and implemented in the aftermath of two types of natural disaster, tsunami and earthquakes. More than three-quarters of MHPSS studies were assessed for impact in the short term (post-intervention to three months); only four studies assessed the impact of programmes at more than one year post-intervention.

Of the 40 studies, 26 were RCTs and 14 were non-RCTs. The most commonly reported outcomes were PTSD, compared with psychosocial and well-being outcomes such as resilience or coping, which were less frequently evaluated or reported.

We included 26 RCT studies (eight low, 13 medium and five high risk of bias) in the in-depth review and quantitative synthesis. The majority of these did not provide sufficient information on random sequence generation, allocation concealment or blinding of participants or personnel. However, more than half of studies reported a low drop-out rate, indicating a low risk of attrition bias.

The overall strength of evidence from the 26 RCTs suggests that:^k

- There is strong evidence that mental health and psychosocial support programmes are effective in reducing functional impairment (+++), but have no impact on anxiety (+++).
- MHPSS programmes probably slightly reduce PTSD symptoms, psychological distress and conduct problems (++)
- MHPSS programmes may have no impact on depression or prosocial behaviours (++)
- MHPSS programmes may reduce emotional problems, slightly reduce somatic complaints and marginally increase hope (+).
- MHPSS programmes may slightly decrease social support perceived by CYP (+).

^k Strength of evidence for studies included in the meta-analysis: strong (+++), moderate (++) , limited (+).

The overall strength of evidence on different types of MHPSS programmes suggests that:

Cognitive behavioural therapy

- Trauma-focused CBT (TF-CBT) programmes are effective in reducing PTSD symptoms, conduct problems and emotional problems (++).
- TF-CBT programmes may improve prosocial behaviours in CYP (+).
- School-/classroom-based intervention (CBI-CBT) programmes appear to be effective in reducing depression, functional impairment and psychological distress and in slightly improving hope in CYP (+), but may have little or no impact on PTSD (+), anxiety (++) , conduct problems (+) or prosocial behaviours (+).
- The findings from the narrative synthesis (two medium risk of bias studies) suggest that CBT may have no impact on social support.

Narrative Exposure Therapy

- There are indications from a small number of studies that NET can improve functional impairment (++) .
- NET may have a negative impact on depression (+) and may slightly increase anxiety and somatic complaints (+) in CYP, but probably has little impact on PTSD symptoms (++) or school performance (+).
- The findings from the narrative synthesis (one low risk of bias study) suggest that NET may have a negative effect, albeit marginal, on anxiety and somatic complaints, and no impact on school performance.

Other therapies

- The narrative synthesis from four studies (one medium and three high risk of bias) shows a positive trend in favour of three psychotherapy programmes – a mind and body skills group, counselling (n=2) and a school-based trauma/grief intervention (n=1) – in reducing PTSD symptoms. However, there was no clear pattern observed, from a small number of studies, to indicate the impact of psychotherapy on other mental health and psychosocial outcomes.

Psychosocial interventions

- There were indications from a small number of studies to suggest that psychosocial interventions could lead to an increased level of depression symptoms (++) and may slightly decrease prosocial behaviours (++) in CYP.
- Psychosocial interventions may reduce PTSD symptoms (+), emotional problems (+) and conduct problems (+) in CYP. They probably lead to no improvement in functional impairment (++) .
- The findings from the narrative synthesis suggest that psychosocial interventions may improve social support (low risk of bias study), but have no impact on psychological distress (low risk of bias study). They may also increase anxiety symptoms (low risk of bias study).
- Two low risk of bias studies reported mixed findings on the impact of psychosocial interventions on physical health, and one low risk of bias study found that they may have no impact on psychosocial distress.

Sub-group analysis of MHPSS

- There is evidence to suggest that programme intensity is associated with the effect of MHPSS programmes for CYP on PTSD. Also, there is evidence to indicate that the follow-up period is associated with the effect of MHPSS programmes for CYP on depression.
- We observed no clear pattern, from a small number of studies, to confirm that characteristics of participants, exposure to traumatic events or family or social supports are factors influencing the impact of MHPSS programmes on CYP.

The effectiveness of MHPSS programmes for adults

A total of 29 studies assessing the impact of MHPSS programmes on adult populations affected by humanitarian crises were identified. When reported, these programmes were delivered in clinics, refugee camps, community settings or at study participants' homes, and were most often delivered to participants individually. Approximately one-third of the programmes were delivered by healthcare professionals. Similarly to MHPSS programmes designed for CYP, MHPSS interventions for adult populations were delivered, on average, for 4–13 sessions, each lasting for 1–2 hours, and delivered over a period of two weeks to three months. According to the definitions outlined in the IASC (2007) intervention pyramid, more than half of the studies evaluated a focused and structured MHPSS programme delivered by non-specialized personnel. We did not identify any MHPSS programmes addressing basic services and security in adult populations. Fewer than one-fifth of the studies evaluated MHPSS programmes designed for women; one included only men. The short-term impact of the programmes was assessed in all but three studies; only one study assessed the impact of a programme at more than one year post-intervention.

Of the 29 studies, 20 were RCTs and nine were nRCTs. The studies reported a wide range of outcomes using different scales and measures. The most commonly reported mental health outcome was PTSD. Other psychosocial and well-being outcomes included coping, fear and avoidance, anger, quality of life, social support, alcohol use and self-efficacy.

The findings from 20 RCTs (eight low, two medium and 10 high risk of bias) were included in the quantitative synthesis. The majority of the studies described a randomization process and stated that outcome assessors were blinded to group allocation. Attrition bias was rated as high in six studies.

The overall strength of evidence from 20 RCTs suggests that:

- Overall, MHPSS programmes probably reduce PTSD (++), depression (++), anger (++) and self-reported sexual violence (++).
- There are some indications that MHPSS programmes may lead to improvements in anxiety (+), common mental health problems (+) and fear/avoidance (+). In addition, MHPSS programmes may slightly reduce grief (+) and emotional problems (+).
- MHPSS programmes may have no impact on social support (++).

When examining the effectiveness of MHPSS by types of programme design and implementation:

- NET is effective in reducing depression (++) and anxiety (++).
- There are indications from a small number of studies to suggest that CBT is effective in reducing PTSD (+) and depression (+), and may slightly reduce grief (+).
- NET may also reduce PTSD (+) and common mental health problems (+) and may slightly improve coping (+), but has little or no impact on social support (++).
- NET may slightly increase emotional problems (+).

- Findings from the narrative synthesis show a positive trend in favour of psychotherapy interventions in reducing PTSD symptoms (EMDR and IPT), depression (EMDR, counselling,¹²⁰ IPT^{134, 135} and TFT¹²⁹), anger (TFT and IPT), anxiety symptoms (TFT and IPT), fear and avoidance (TFT), partner violence (IPT) and common mental health problems (counselling).

Cross-study synthesis

We identified a number of key findings when bringing together evidence from the process and outcome studies. First, we matched the hypothesis generated from the process synthesis against trials evaluating the impact of MHPSS programmes; second, we ran a meta-regression for two key outcomes, PTSD and depression; and third, we explored any gaps in the analysis. For each hypothesis, this showed that programmes may be more effective if they address the following implementation issues:

Hypothesis 1: Community engagement – steps are taken to engage with the community and/or family members

- Thirteen MHPSS programmes for CYP and three for adults engaged with the community.
- Community engagement was a feature of all tier two psychosocial programmes seeking to strengthen family and community supports for CYP.
- However, when running the meta-regression, no significant association for PTSD or depression was found for either population group.

Hypothesis 2: Government partnership – programmes are delivered in partnership with governments and/or local agencies

- The MHPSS programmes in nine trials reported examples of government involvement, four delivered to children and five to adults.
- As with Hypothesis 1, no significant association for PTSD or depression was found for CYP or adults.

Hypothesis 3: Trained providers – the challenge of recruiting and retaining trained providers is overcome

- MHPSS programmes were delivered by trained providers in 26 MHPSS programmes for children and 19 for adults.
- No significant association in reducing PTSD or depression was found for adults. However, a significant association was found between having trained providers and PTSD in programmes for CYP ($p=0.026$).
- Further explorative examination of MHPSS programmes that were statistically successful in reducing PTSD in CYP supported this association, indicating that (with the exception of one) all MHPSS programmes effective in reducing PTSD were delivered by trained providers.
- For depression, all successful MHPSS programmes that reported a significant impact of MHPSS in reducing depression were delivered by trained providers.

Hypothesis 4: Socially and culturally meaningful MHPSS – programme activities are designed that are socially and/or culturally meaningful

- Seventeen MHPSS programmes for CYP and 11 for adults were designed to be socially and culturally meaningful.
- We found a significant association with this aspect of programming for MHPSS programmes for CYP in depression only ($p=0.031$). This finding was also supported by an

explorative analysis of successful MHPSS programmes for CYP, which found that all MHPSS programmes that reported a significant impact in reducing depression were adapted to be sensitive to local cultural and social contexts.

- Similarly, two studies that did not clearly report if MHPSS programmes for children had been adapted to local contexts showed a significant unintended effect of MHPSS on depression.
- No further statistical associations were found for PTSD in CYP or for either outcome in adults.

Hypothesis 5: Group-based programmes – opportunities are provided for people to interact as a group

- Twenty-six trials evaluating programmes delivered to CYP were group-based, while only three programmes targeting adults were delivered in a group format.
- Despite positive appraisal of the group experience in the process synthesis, no significant association for PTSD or depression was found.

Hypothesis 6: Establish good relationships – programme providers build trusting and supportive relationships with programme recipients

- Establishing trusting and supportive relationships between programme providers and recipients was addressed in 11 programmes delivered to children compared with two for adults.
- For adults, no significant association was found for PTSD or depression.
- For children, a significant association was found for PTSD ($p=0.003$), but not for depression. Exploration of MHPSS programmes successful in reducing PTSD and depression in CYP also revealed a non-statistically significant negative trend across four studies that did not emphasize the importance of establishing relationships between programme providers and recipients.

A number of gaps existed between the views of programme providers and recipients in trials evaluating MHPSS programmes, particularly those targeting adults. These included the following:

- Very few trials evaluating adult MHPSS programmes sought to mobilize or sensitize local communities about the impact of humanitarian crises on MHPSS well-being.
- The need to work in collaboration with government and local NGOs was either achieved (and not reported) or did not appear to be a barrier to implementation.
- Although many of the programmes targeting children decided to extend their reach by delivering to groups and providing opportunities for peer support, this was not apparent in programmes for adults.
- Although providing a significant association in the meta-regression, another gap was the extent to which programmes took steps to build supportive relationships with recipients, a phenomenon that was present, but thinly reported, across all trials.

8.2 CONCLUSIONS

The findings of this review paint a complex picture of how MHPSS programmes are designed and implemented, and how they might work or not work for populations affected by humanitarian crises. They also draw attention to the implementation and methodological challenges faced when seeking to evaluate the impact of MHPSS programmes delivered in humanitarian emergencies. The evidence from 21 RCTs involving CYP and 17 involving adults synthesized in this review indicates that MHPSS programmes may be effective in reducing functional impairment, but have little or no impact on anxiety.

Exploring the findings by type of MHPSS programme and by population group provides additional insights. For example, although evidence for trauma-focused CBT programmes for CYP is available only from a small number of studies, meta-analytic findings clearly indicate that TF-CBT programmes may be effective in reducing PTSD and conduct and emotional problems (internalizing problems). There are also some indications from a small number of meta-analyzed studies that school-/classroom-based CBT and NET may not be effective in reducing PTSD, but may reduce functional impairment. Similar synthesis findings on the effectiveness of TF-CBT and school-/classroom-based CBT in young children affected by armed conflict can be found in a recent systematic review by O'Sullivan (2016),¹⁵⁰ as previously noted by Tol (2011).³⁹

An important finding from a smaller number of studies in the meta-analysis is that NET for CYP could increase depression and anxiety symptoms and somatic complaints. Psychosocial interventions could also decrease prosocial behaviours. Further investigation reveals, however, that the conditions in which NET and psychosocial programmes were delivered e.g. where threats were ongoing, thus intensifying risks and insecurity, could mean that programmes may not be adequately and sufficiently implemented to improve the mental health of CYP when measured at the symptom level. Another plausible explanation suggested by findings from the cross-study synthesis is that psychosocial, social and other MHPSS programmes failing to show effectiveness may not be sufficiently adapted to local contexts.

Further, although the evidence is inconclusive from a small number of studies, there is a suggestion of trends of differential effects of engagement in MHPSS programmes by gender and age group, with younger children or girls responding to programmes differently from boys or older children. These findings are consistent with Barry et al.'s (2013)¹⁵¹ review of mental health promotion for young people in LMICs, which also reports mixed findings according to gender and age groups. Future MHPSS programmes may need to be tailored to address the needs of populations according to these characteristics, and further research is needed in this area to confirm and explore these findings in more detail.

For adults, there is evidence to suggest that MHPSS programmes are effective in reducing PTSD. When examining the impact of NET studies, in contrast with the findings on NET for CYP, the evidence suggests that NET for adults has a positive impact not only on PTSD and depression but also on other mental health outcomes. Other reviews on the impact of NET programmes, including for both CYP and adults,^{152–154} recommend NET for the treatment of PTSD in their findings. However, this review has found no indication that NET is effective in reducing PTSD and, indeed, it may increase depression symptoms in CYP. This mixed finding underscores the need for more research on the impacts and delivery of MHPSS programmes for gender- and age-specific groups.

In addition to exploring differential findings across types of MHPSS programmes for CYP and adults, a number of insights can be gathered from the synthesis of evidence on how MHPSS programmes are implemented across different humanitarian settings. It appears that some programmes may not be successfully implemented until providers assure local communities, family members and government agencies that investing in the mental health and psychosocial well-being of affected populations is of value. This may be particularly salient for the provision of integrated primary mental health services (with existing health services), where evidence from providers suggests that delivery aims would have been better achieved if they had developed effective partnerships and greater coordination with local NGOs and governments.

Another key mechanism that may contribute to successful implementation and outcomes of MHPSS programmes is ensuring that they are delivered by appropriate numbers of trained personnel. The majority of trials appeared to achieve this; however, evidence from both sets of studies suggests that in practice the recruitment and retention of adequate numbers of providers sufficiently skilled to deliver MHPSS programmes can be challenging, especially in settings that may disincentivize practitioners from entering the MHPSS sector.

The need to attend to cultural and ethical issues when addressing the mental health and psychosocial well-being of different groups of people is relatively well documented,¹⁵⁵ including for humanitarian settings.^{156, 157} The synthesized process evidence further reiterates this need. Findings highlight the importance of ensuring that programmes remain

appealing and accessible to local populations by increasing opportunities for meaningful engagement via peer group support and the inclusion of programme components that are socially and culturally relevant. The latter may be particularly important for programmes seeking to reduce depression in CYP, a positive association found in the cross-study synthesis. Findings from the cross-study synthesis for reducing PTSD for children confirm the importance of developing relationships between providers and recipients – a finding commonly cited in systematic reviews synthesizing providers' and participants' views of social interventions for CYP¹⁵⁸ or adults.¹⁵⁹

The growing body of evidence examining the impact of MHPSS programmes in LMICs has resulted in the inclusion of a wide range of programmes designed for populations affected by humanitarian crises, as seen across the 13 process evaluations and 69 outcome evaluations included in this review, 46 of which were RCTs included in the meta-analysis. However, within this evidence base there are some notable gaps. For example, there is a tendency to focus on post-conflict settings, with far fewer studies conducted in the context of natural disasters, either immediately after the event or some time later. There is also a lack of studies evaluating the impact of MHPSS programmes focused on social considerations in basic services and security (tier one in the IASC pyramid). This research gap, previously highlighted by Tol et al. (2011), still exists, indicating a need for further research focused on whether strengthening community supports and providing basic security can have a positive impact on MHPSS outcomes. There also remains a gap in research on cost-effectiveness and long-term follow-up studies exploring the possibilities and implications of implementing MHPSS programmes in resource-constrained settings.

In addition, although trials provided some evidence on characteristics of participants that might influence programme effects, similar evidence on characteristics of participants acting as barriers or facilitators to uptake and engagement was lacking in process evaluations. There is also a lack of evidence on younger (≤ 10 years old) or ageing populations (≥ 55), another common finding across evaluations of social programmes. Further, despite the relatively high volume of trials, there was limited crossover with process evaluations. For example, we did not identify any mixed-methods evaluations, and very few process evaluations investigating similar types of programme were found in trials.

The most commonly reported outcome measures across RCTs were PTSD and depression. Less frequently reported were psychosocial outcomes such as resilience, hopefulness, social support or coping strategies. Only a few studies evaluated the impact of MHPSS programmes on well-being or co-morbid conditions such as substance misuse or suicidal ideation. We identified nearly 100 different scales and sub-scales used to measure mental health and psychosocial symptoms across the 69 outcome evaluation studies. This variation of measurement tools may reflect a lack of standardization in the field, or an attempt to capture mental health symptoms across different socio-cultural contexts. Although the majority of the studies validated or piloted scales that had been tested for reliability and validity in similar populations, only a few developed and used scales locally. In many low literacy settings, one of the key challenges was to find ways to capture symptoms expressed by participants in local languages, through interviews and very often with translators.

As noted by several authors, there are a number of methodological challenges in conducting impact evaluations in humanitarian settings. For example, studies conducted during ongoing armed conflict were not able to include more participants or study sites during the study recruitment process because of threats to security and other logistical barriers.¹⁰⁴ Movement was also restricted, limiting researchers' ability to fully supervise programme implementation.¹²⁰ Researchers also faced challenges in terms of participant attrition, adherence and assessing long-term benefits of MHPSS programmes. Participants might be lost to follow-up assessments when the study was carried out in settings with a high risk of abduction (e.g. children and their families¹⁰⁴), or where limited financial resources available to families meant that children or participants had to return to paid work and thus dropped out of the intervention and study.^{78, 95, 102, 130, 146} There were also examples of ethical concerns, such as delaying treatments for participants in the wait-list group,^{102, 104, 122} while for practical reasons one study in Rwanda was required to complete the treatment in a single session.¹²⁴

Implications

Implications for practice

The current evidence base suggests that there is a need to address other areas of programme impact and the complexity of implementation. Further theorization on the links between programme aims, focus and choice of programme components, delivery mechanisms and how programmes intend to improve a range of outcomes may benefit the field. This could support an understanding of MHPSS programmes which adopt a broader lens than just trauma, in addition to providing a more nuanced explanation and account of intended and unintended impacts of MHPSS interventions. This programme theorization would also benefit from an understanding of how characteristics of participants, such as age, gender or other individual or social characteristics, interact with programme effects.

The findings suggest that additional consideration should be given to timing the delivery of MHPSS programmes in humanitarian emergencies and the possibility of harm, as there are indications of unintended effects in delivering programmes to CYP during ongoing conflicts. It may be that additional feasibility studies and/or longer piloting periods are required to ensure that programmes have been adapted appropriately before attempting to scale up MHPSS programmes for delivery while there are ongoing threats to safety and security.

MHPSS programmes for children and adults should continue to focus their efforts on recruiting and training local facilitators, adjusting programmes to the local context and identifying any other cultural or social barriers that may be impeding uptake and engagement, to ensure that they address and meet the needs of target populations and achieve their intended impacts. In addition, it may be resource- and cost-effective to deliver MHPSS programmes for children in group-based formats; however, it is important to note that this may not translate into improvements in outcomes, and thus other delivery mechanisms may need to be addressed to support implementation and effectiveness. This could include identifying the length and intensity required to achieve outcomes, a significant association found in the sub-group analyses for children and adults.

The findings from the cross-study synthesis suggest that attention should be given to the required individual qualities of programme providers, and to the potential added value of investing in building high-quality relationships with recipients to support both participants and improvements in outcomes, particularly for programmes delivered to children. Lastly, although there was a lack of significant association when running the meta-regression on the importance of community engagement, the findings from the process synthesis suggest that strategies which communicate the value of programmes seeking to address the mental health and psychosocial needs of the individual and wider community should not be overlooked.

Implications for research

- The evidence base of MHPSS programmes in humanitarian emergencies would be enhanced by additional robust evidence on basic services and security, on cost-effectiveness, in ongoing conflict and natural disaster settings and on gender- and age-specific evaluations.
- Although challenging, evaluations of MHPSS programmes should consider adopting consistent approaches to measuring mental health and psychosocial outcomes across settings. Long-term follow-ups for impact and process evaluations should also be considered and incorporated into study design to inform the sustainability and maintenance of benefits or to detect harmful consequences.
- MHPSS programme evaluations should consider other psychosocial outcomes, such as resilience, coping and social support, and other mental health presentations such as substance misuse or suicidal ideation.

8.3 STRENGTHS AND LIMITATIONS

This research builds on previous systematic reviews conducted in the field, and one of its key strengths lies in a systematic and transparent approach to synthesizing evidence on implementation, receipt and outcomes of MHPSS programmes delivered to populations affected by humanitarian crises in LMICs. By drawing on a broad evidence base to synthesize evidence on the multi-faceted nature of MHPSS programmes, we have attempted to highlight and engage with their characteristic complexity and the multiple factors potentially mediating and moderating their success. In doing so, we have attempted to examine single- and multi-component programmes, delivered across different humanitarian settings to children, adults, families and communities, taking different clinical and non-clinical approaches and measuring a broad range of outcomes beyond PTSD, to provide a fuller picture of the evidence base. However, this breadth has also generated challenges when attempting to decipher which 'group' or 'type' of programme is more or less effective for all or some outcomes, and with which participants and when. We have also attempted to navigate the transferability of experiences and perceptions from one set of stakeholders (e.g. providers, recipients, family members) for one particular MHPSS programme and setting to other settings in the process synthesis and when combining that evidence with trials.

Our search was successful in locating a substantial literature on the impact of MHPSS interventions and a comparative number of studies with process data to answer the review questions. During the review process we noted some strengths and limitations of studies. Firstly, the lack of cut-off date means that although we did not penalize older studies, the field is rapidly changing and there may be some limitations in the applicability of data from evaluations conducted over 10 years ago. Secondly, the relatively smaller number of studies on the impact of natural disasters and the predominance of findings from post-conflict settings may have obscured relevant findings specific to natural disaster settings. Study quality also varied, with process evaluations ranging from high to low reliability and usefulness. Overall, approaches to data collection in the process studies were strong, but approaches to sampling and methods of analysis were under-reported. Some studies provided rich descriptions with liberal use of quotes from participants, while others remained at the level of author description. Despite this degree of variation, we were able to develop the synthesis with better-quality studies and use the less reliable and useful studies to support the findings. Trials also suffered from a lack of reporting on blinding, but this did not disqualify them from inclusion in the statistical meta-analysis or change the final conclusions.

We also note some positives and a few caveats when conducting and interpreting our statistical results. The findings from several pooled effect sizes were derived from a small number of studies. As stated, there were variations in the quality of evidence of the studies included in the meta-analysis. We performed the sensitivity analysis to investigate the impact of including high risk of bias studies in the meta-analysis. In some cases, when there were missing data elements that were required for estimating effect sizes, we needed to contact the study authors to request missing values. However, we were unsuccessful in retrieving the necessary information from any of the study authors, and instead transformed and/or imputed missing data when it was appropriate to do so, or the outcomes were excluded from the analysis. When studies were excluded from analysis, we instead summarized their findings narratively. In addition, as discussed in the result sections, we observed a significant difference in the effectiveness of MHPSS programmes. Subsequently, we analyzed the effectiveness of interventions by a broad type of MHPSS programme (e.g. CBT, NET), and found that this partly explained the variations in intervention effectiveness. We also explored the characteristics of key participants and contextual factors, as reported by the study authors, and performed a test to ascertain whether quality of evidence, key intervention design and intervention implementation could explain the variations between intervention studies to strengthen the overall analysis.

A wide range of outcomes using different scales and checklists was reported in the included studies. Standardized mean difference (SMD) was used to combine the outcome data that measured conceptually similar outcomes using different scales. In addition, the variations observed in the effectiveness of interventions could be partly due to the differences in population characteristics or other variables identified above, which can influence the effect size estimates. We combined SMDs using only unadjusted mean scores to ensure comparable effect size estimates. When the studies reported data at different time points,

e.g. immediately post-intervention, three months or six months follow-up, we included only the data at the longest follow-up time point and when the data was reported separately for both intervention and comparison groups.

In addition, conducting the cross-study synthesis afforded us the opportunity to identify which hypotheses generated by stakeholders' views in the process synthesis are currently being addressed by existing evaluations of MHPSS programmes, and where there are gaps. It also supported a greater explorative analysis, identifying which mechanisms are statistically associated with the impact of MHPSS programmes for the two key outcomes of PTSD and depression. Further, study-by-study interpretations of the presence of certain programme features that might contribute to increasing uptake and engagement could also be made, despite these features not necessarily translating to statistically significant improvements in some outcomes.

Despite these strengths, there remain some important limitations in combining impact studies and process evaluations. In attempting to bring together findings from a qualitative process synthesis and trials in the quantitative meta-analysis, it is important to highlight that, although there are some core areas of programme and study complementarity – namely their aims of addressing the impact of humanitarian emergencies on mental health and psychosocial well-being – there are also key differences in their epistemological standpoints and overall philosophies. Qualitative studies and the process synthesis seek to form an overall view of how contextual mechanisms are perceived as influencing the implementation and receipt of MHPSS programmes. As such, this qualitative data can generate quantitative hypotheses for testing, as attempted here. However, the synthesis of quantitative evidence is aggregative and attempts to test effectiveness. Thus, the process of 'combining' data becomes an interpretative and numerical endeavour and not one of straightforward matching, and should be understood as such.

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APPENDIX 1: METHODS

APPENDIX 1.1: PRISMA CHECKLIST

Section/ topic		Checklist item	Reported
Title	1	Identify the report as a systematic review, meta-analysis, or both.	Title page
Abstract			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	Abstract
Introduction			
Rationale	3	Describe the rationale for the review in the context of what is already known.	Section 1
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes and study design (PICOS).	Section 1
Methods			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g. web address) and, if available, provide registration information including registration number.	Section 2
Eligibility criteria	6	Specify study characteristics (e.g. PICOS, length of follow-up) and report characteristics (e.g. years considered, language, publication status) used as criteria for eligibility, giving rationale.	Section 2
Information sources	7	Describe all information sources (e.g. databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	Section 2
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	Appendix 1.4
Study selection	9	State the process for selecting studies (i.e. screening, eligibility, included in systematic review and, if applicable, included in the meta-analysis).	Section 2
Data collection process	10	Describe method of data extraction from reports (e.g. piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	Section 2
Data items	11	List and define all variables for which data were sought (e.g. PICOS, funding sources) and any assumptions and simplifications made.	Section 2, Synthesis of results
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	Section 2, Synthesis of results
Summary measures	13	State the principal summary measures (e.g. risk ratio, difference in means).	Section 2, Synthesis of results
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g. I^2) for each meta-analysis.	Section 2, Synthesis of results
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g. publication bias, selective reporting within studies).	Section 2, quality assessment
Additional analyses	16	Describe methods of additional analyses (e.g. sensitivity or sub-group analyses, meta-regression), if done, indicating which were pre-specified.	Section 2

Section/ topic		Checklist item	Reported
Results			
Study selection	17	Give numbers of studies screened, assessed for eligibility and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	Sections 3
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g. study size, PICOS, follow-up period) and provide the citations.	Sections 4, 5 and 6 and Appendices 2, 3 and 4
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see Item 12).	Sections 4, 5, 6
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	Sections 5 and 6 and Appendices 3 and 4
Synthesis of results	21	Present results of each analysis and meta-analysis done, including confidence intervals and measures of consistency.	Sections 4, 5 and 6
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	Sections 5 and 6
Additional analysis	23	Give results of additional analyses, if done (e.g. sensitivity or sub-group analyses, meta-regression (see Item 16)).	Sections 5, 6 and 7 Appendices 3, 4 and 5
Discussion			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g. healthcare providers, users and policy makers).	Section 8
Limitations	25	Discuss limitations at study and outcome level (e.g. risk of bias), and at review level (e.g. incomplete retrieval of identified research, reporting bias).	Section 8
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	Section 8
Funding	27	Describe sources of funding for the systematic review and other support (e.g. supply of data); role of funders for the systematic review.	Acknowledgements

APPENDIX 1.2: STAKEHOLDER INVOLVEMENT

Advisory group member	Organisation/affiliation
Claire Allen	Evidence Aid, Operations Manager
Dan Ayliffe	UN Resident Coordinator, DFID, humanitarian advisor (Bangladesh)
Katie Dawson	Refugee Trauma & Recovery Program, UNSW Australia, Clinical Psychologist
Alison Girdwood	British Council, Senior Advisor
Jeroen Jansen	Evidence Aid, Director
Leslie Snider	Peace in Practice, B.V, Global psychosocial consultant/director

APPENDIX 1.3: EXCLUSION CRITERIA

Inclusion criteria	Exclusion criteria
Participants: studies aimed at populations affected by humanitarian emergencies or those who have been exposed to events leading to MHPSS impacts as a result of a humanitarian crisis	We exclude studies where: The population of interest is military personnel or those working in the context of humanitarian emergencies. However, their views on delivering and implementing MHPSS will be included for studies evaluating process.
Intervention: Programmes which seek to provide MHPSS interventions delivered in the context of humanitarian emergencies or for populations affected by humanitarian emergencies in low- and middle-income countries (LMICs)	We exclude studies: Delivering MHPSS interventions not in the context of humanitarian emergencies or not for populations affected by humanitarian emergencies in LMICs.
Study design: Process synthesis: Quantitative and/or qualitative data on intervention planning and design, implementation, engaging in, or causal pathways of the interventions. Outcome synthesis: Prospective experimental and quasi-experimental studies including randomized controlled trials and non-randomized controlled trials with control groups. Comparison groups can be those with no intervention, other active interventions or usual care.	We exclude studies which do not : Process synthesis: report a process evaluation of an MHPSS intervention OR Outcome synthesis: report an outcome evaluation of MHPSS interventions using prospective experimental and quasi-experimental studies with control groups.
Reported data: Process data: We include narrative or numerical data on implementing or receiving MHPSS. Outcome data: We include any type of mental health or psychosocial outcomes reported in the study (e.g. individual, family, community, social outcomes).	We exclude studies which do not : Process synthesis: collect and report data on the process of delivering or receiving MHPSS interventions OR Outcome synthesis: collect and report outcome data on the impact of an MHPSS intervention
Language: Published in English.	We exclude studies: Not published in English
Date: Published in or after 1980.	Published before 1980

APPENDIX 1.4: SEARCH STRATEGY

1.4.1 Key terms

Concept 1: Emergency settings	Concept 2: Mental health and psychosocial interventions/conditions	Concept 3: Study design (quantitative/qualitative/process evaluation)
Armed conflict	Mental health	Non-randomized controlled trials
Post conflict	Psychosocial	Interrupted time series analysis
Conflict affected	Mental health disorders	Controlled before and after studies
Mass conflict	Psychiatric	Pragmatic clinical trial
War conflict	Psychotherapy	Programme evaluation
War	Psychological treatment	Pilot schemes
Civil war	Mental health services	Outcome evaluation
War exposed	Social support	Clinical trials
War affected	Acute patient care	Randomized controlled trial
Post war	Specialized care/service	Pilot study
Displacement	Primary care	Feasibility study
Refugee	Cognitive behavioural therapy	Multi-centre study
Mass killing	Community-based psychosocial support	Programme scheme
Genocide	Counselling	Effectiveness intervention
Disaster	Cognitive processing therapy	Outcome assessment
Natural disaster	Creative arts	Process assessment
Earthquake	Debriefing	Controlled trial
Typhoon	Crisis intervention	Control group
Drought	Economic support	Comparison group
Flood	Exposure therapy	Comparison studies
Industrial disaster	Eye movement desensitization and reprocessing (EMDR)	Repeated measure
Political violence	Eclectic	Performance assessment
Humanitarian setting	Group therapy	Cross-over trial
Hurricane	Interpersonal therapy	Double blind
Displaced populations	Grief intervention	Quasi experiment
Displacement	Individual therapy	Policy experiment
Mass adversity	Family therapy	Comparative analysis
Industrial accidents	Family-based intervention	Natural experiment
Volcano	Narrative Exposure Therapy	Social experiment
Landslide	Music therapy	Propensity score
Avalanche	Gender-based violence	Regression discontinuity
Tsunami	Pharmacotherapy	Ethnography
Explosion	Psychological intervention	Content analysis
Storm surges	Psychosocial care intervention	Observational methods
Tornado	Relaxation	Participant observation
Cyclone	Preventive psychosocial intervention	Field notes
Epidemic	Self-care	Process evaluation
Infestation	Family care	Monitoring and evaluation

Concept 1: Emergency settings	Concept 2: Mental health and psychosocial interventions/conditions	Concept 3: Study design (quantitative/qualitative/process evaluation)
Wildfire	Psychodynamic therapy	Ethnopsychology
Extreme temperature	Skill based group	Focus group
Terrorist attack	Schooling	Narration
Terrorism	Safe space	Qualitative
	Family support	Interview
	Trauma focused intervention	Case studies
	Thought field therapy	Thematic synthesis
	Individual prevention	Framework synthesis
	Dance and movement therapy	Phenomenology
	Psychoeducation	Grounded theory
	Prolonged exposure therapy	Grounded research
	Stress Inoculation Therapy	Grounded studies
	KIDNET	Constant comparative
	Specialized psychotherapeutic intervention	Field research
	Interpersonal psychotherapy	Conservation analysis
	Testimony therapy	Theoretical saturation
	Trauma healing	Realist
	Reconciliation	Constructionist
	Psychopharmacological treatment	Inductive
	Physiotherapy	Mixed methods
	Psychological care	Pragmatism
	Community-based psychological support	Realism
	Acute patient care	Feminism
	Sport and recreation	Social construction
	Case management	Stakeholder views
	Human rights advocacy	Barrier
	Legal services	Facilitator
	Vocational training	Implementation science
	Mentoring	Participatory research
	Community-oriented public mental health service	Intervention delivery
	Resettlement assessment	Fidelity
	Outreach	Adaptation
	Self-help	Participant engagement
	Psychotherapeutic intervention	Attitudes
	Surveillance	Perspectives
	Risk communication	

Examples of search strategy:

MEDLINE (OVID)

1. exp Clinical Trials as Topic/ or controlled trial*.mp. or exp Randomized Controlled Trials as Topic/
2. Interrupted time series analysis.mp. or exp Interrupted Time Series Analysis/
3. (Controlled before and after stud*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]
4. Pragmatic clinical trial*.mp.
5. program evaluation.mp. or exp Program Evaluation/
6. exp Pilot Projects/ or pilot scheme*.mp.
7. Outcome evaluation.mp. or exp Evaluation Studies as Topic/
8. Pilot stud*.mp.
9. exp Feasibility Studies/ or Feasibility stud*.mp.
10. Effectiveness intervention*.mp.
11. exp "Outcome and Process Assessment (Health Care)"/ or exp "Outcome Assessment (Health Care)"/ or Outcome assessment.mp.
12. Process assessment.mp.
13. Control group*.mp.
14. comparison group*.mp.
15. Comparison stud*.mp.
16. Repeated measure*.mp.
17. Performance assessment.mp.
18. Cross over trial*.mp.
19. exp Double-Blind Method/
20. Quasi experiment*.mp.
21. policy experiment*.mp.
22. Natural experiment*.mp.
23. Social experiment*.mp.
24. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23
25. armed conflict*.mp.
26. post conflict*.mp.
27. conflict affected.mp.
28. mass conflict*.mp.
29. War/ or exp War Crimes/ or war.mp.
30. conflict-related.mp.
31. civil war.mp.
32. ('war-exposed' or 'war-affected').mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]
33. postwar.mp.
34. postconflict*.mp.
35. Displacement.mp. or exp "Displacement (Psychology)"/
36. exp Refugees/ or refugee*.mp.
37. Mass killing.mp.
38. Genocide.mp. or exp Genocide/
39. Disaster*.mp. or exp Disasters/
40. Natural disaster*.mp.
41. Earthquakes/ or Earthquake*.mp.
42. Typhoon*.mp.
43. exp Droughts/ or Drought*.mp. or famine.mp. or exp Starvation/ or food shortage.mp. or food scarcity.mp.
44. exp Floods/ or Flood*.mp.
45. Industrial disaster*.mp.
46. Political violence.mp.
47. exp Relief Work/ or Humanitarian.mp.
48. Hurricane.mp. or exp Cyclonic Storms/
49. displaced population*.mp.
50. displaced person.mp.
51. mass adversity.mp. or Environmental crisis.mp. or exp Radioactive Hazard Release/ or Nuclear accident*.mp.

52. Industrial accident*.mp.
53. exp Volcanic Eruptions/ or Volcano*.mp.
54. Landslide*/ or landslide*.mp.
55. Avalanche*.mp. or exp Avalanches/
56. exp Tsunamis/ or Tsunami*.mp.
57. Storm surge*.mp.
58. Tornado*.mp.
59. Cyclone*.mp.
60. Infestation*.mp.
61. Wildfire.mp.
62. extreme temperature.mp.
63. exp Terrorism/ or Terrorist attack*.mp. or exp Bioterrorism/
64. 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 or 48 or 49 or 50 or 51 or 52 or 53 or 54 or 55 or 56 or 57 or 58 or 59 or 60 or 61 or 62 or 63
65. Mental health*.mp. or exp Mental Health/
66. exp Mental Disorders/ or psychosocial.mp. or exp Depressive Disorder/ or exp Psychosocial Deprivation/ or exp Adaptation, Psychological/ or exp Social Adjustment/ or exp Stress, Psychological/
67. exp Psychiatric Somatic Therapies/ or psychiatric.mp. or exp Social Work, Psychiatric/
68. exp Psychotherapy, Rational-Emotive/ or exp Psychotherapy/ or exp Psychotherapy, Multiple/ or exp Psychotherapy, Group/ or psychotherapy.mp. or exp Psychotherapy, Brief/ or exp Psychotherapy, Psychodynamic/
69. exp Depression/ or exp Cognitive Therapy/ or exp Stress Disorders, Post-Traumatic/ or Psychological treatment*.mp. or exp Behavior Therapy/
70. Mental health service*.mp. or exp Mental Health Services/
71. Social support.mp. or exp Social Support/
72. exp Anxiety Disorders/ or Cognitive Behavioural Therap*.mp.
73. Community-based psychosocial support.mp.
74. exp Counseling/ or Counselling.mp.
75. counseling.mp. or Counseling/
76. Cognitive processing therap*.mp.
77. exp Art Therapy/ or Creative arts.mp.
78. Debriefing.mp. or exp Crisis Intervention/
79. Economic support.mp.
80. Exposure therap*.mp. or exp Implosive Therapy/
81. (Eye movement Desensitization and Reprocessing).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]
82. Eclectic.mp.
83. Group therap*.mp.
84. Interpersonal therap*.mp.
85. Grief Intervention*.mp.
86. Family therap*.mp. or Family Therapy/
87. family-based intervention*.mp.
88. Narrative exposure therap*.mp.
89. Music therap*.mp. or exp Music Therapy/
90. Psychological intervention*.mp.
91. Psychosocial care intervention*.mp.
92. exp Relaxation/ or Relaxation.mp. or exp Relaxation Therapy/
93. Preventive psychosocial intervention*.mp.
94. Psychodynamic therap*.mp.
95. Skill based group*.mp. or exp Health Education/
96. Safe space.mp.
97. psychoeducation.mp.
98. Trauma focused intervention*.mp.
99. Thought field therap*.mp.
100. (Dance and movement therap*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]
101. Prolonged exposure therap*.mp.
102. School-based.mp.
103. Stress Inoculation Therap*.mp.

104. KIDNET.mp.
105. exp Psychophysiologic Disorders/ or Specialised psychotherapeutic intervention.mp.
106. Interpersonal psychotherapy.mp.
107. Testimony Therap*.mp.
108. Trauma healing.mp.
109. Reconciliation.mp.
110. Psychopharmacological treatment*.mp.
111. Physiotherapy.mp.
112. Psychological care.mp.
113. exp Home Care Services/ or exp Self Care/
114. (Sport and recreation).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]
115. Case management.mp. or exp Case Management/ or exp "Referral and Consultation"/
116. exp Human Rights/
117. Legal services.mp.
118. exp Vocational Education/ or exp Rehabilitation, Vocational/ or Vocational training.mp.
119. Mentoring.mp.
120. exp Community Mental Health Services/ or community oriented public mental health service*.mp.
121. Resettlement assessment.mp.
122. Outreach.mp.
123. exp Self-Help Groups/
124. Psychotherapeutic intervention*.mp.
125. Psychological first Aid.mp.
126. ('implosive therap*' or flooding therap*' or 'imaginal floodings').mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]
127. 65 or 66 or 67 or 68 or 69 or 70 or 71 or 72 or 73 or 74 or 75 or 76 or 77 or 78 or 79 or 80 or 81 or 82 or 83 or 84 or 85 or 86 or 87 or 88 or 89 or 90 or 91 or 92 or 93 or 94 or 95 or 96 or 97 or 98 or 99 or 100 or 101 or 102 or 103 or 104 or 105 or 106 or 107 or 108 or 109 or 110 or 111 or 112 or 113 or 114 or 115 or 116 or 117 or 118 or 119 or 120 or 121 or 122 or 123 or 124 or 125 or 126
128. 24 and 64 and 127
129. limit 128 to (english language and humans and yr="1980 -Current")
130. Ethnography.mp.
131. Content analysis.mp.
132. Participant observation.mp.
133. Field note*.mp.
134. exp "Process Assessment (Health Care)"/ or Process evaluation.mp. or exp "Outcome and Process Assessment (Health Care)"/
135. (Process measure* or process assessment*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]
136. Ethnopsychology.mp. or exp Ethnopsychology/
137. exp Qualitative Research/ or exp Focus Groups/ or Focus group*.mp.
138. (Qualitative method* or Qualitative stud*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]
139. (group interview* or in-depth interview* or one-to-one interview*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]
140. Mixed-methods.mp.
141. Thematic synthesis.mp.
142. thematic analysis.mp.
143. qualitative analysis.mp.
144. framework synthesis.mp.
145. framework analysis.mp.
146. Grounded theory.mp. or exp Grounded Theory/

147. (Grounded research or grounded stud*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]
148. Constant comparative.mp.
149. Theoretical saturation.mp.
150. realist.mp.
151. Constructionist.mp.
152. (Pragmatism or realism).mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier]
153. exp Feminism/ or Feminis*.mp.
154. Social construction.mp.
155. stakeholder view*.mp.
156. acceptability.mp.
157. affordability.mp.
158. accessibility.mp.
159. Implementation science.mp.
160. exp Community-Based Participatory Research/ or Participatory research.mp.
161. Intervention delivery.mp.
162. fidelity.mp.
163. Needs assessment.mp. or exp Needs Assessment/
164. 130 or 131 or 132 or 133 or 134 or 135 or 136 or 137 or 138 or 139 or 140 or 141 or 142 or 143 or 144 or 145 or 146 or 147 or 148 or 149 or 150 or 151 or 152 or 153 or 154 or 155 or 156 or 157 or 158 or 159 or 160 or 161 or 162 or 163
165. 64 and 127 and 164
166. limit 165 to (english language and humans and yr="1980 -Current")
167. 129 or 166

CINAHL (EBSCO)

#	Query	Limiters/expanders
S197	S153 AND S194 AND S195	Narrow by language: – English Search modes – Boolean/Phrase
S196	S153 AND S194 AND S195	Search modes – Boolean/Phrase
S195	S35 OR S59	Search modes – Boolean/Phrase
S194	S154 OR S155 OR S156 OR S157 OR S158 OR S159 OR S160 OR S161 OR S162 OR S163 OR S164 OR S165 OR S166 OR S167 OR S168 OR S169 OR S170 OR S171 OR S172 OR S173 OR S174 OR S175 OR S176 OR S177 OR S178 OR S179 OR S180 OR S181 OR S182 OR S183 OR S184 OR S185 OR S186 OR S187 OR S188 OR S189 OR S190 OR S191 OR S192 OR S193	Search modes – Boolean/Phrase
S193	terrorism	Search modes – Boolean/Phrase
S192	(MH "Terrorism+") OR "terrorism"	Search modes – Boolean/Phrase
S191	Terrorist attack*	Search modes – Boolean/Phrase
S190	extreme temperature*	Search modes – Boolean/Phrase
S189	Wildfire*	Search modes – Boolean/Phrase
S188	Cyclone*	Search modes – Boolean/Phrase
S187	Tornado*	Search modes – Boolean/Phrase
S186	Storm surge*	Search modes – Boolean/Phrase
S185	Tsunami*	Search modes – Boolean/Phrase
S184	Avalanche*	Search modes – Boolean/Phrase
S183	Landslide*	Search modes – Boolean/Phrase
S182	Volcano*	Search modes – Boolean/Phrase
S181	industrial accidents	Search modes – Boolean/Phrase
S180	mass adversity	Search modes – Boolean/Phrase
S179	displaced populations	Search modes – Boolean/Phrase

#	Query	Limiters/expanders
S178	hurricane*	Search modes – Boolean/Phrase
S177	humanitarian	Search modes – Boolean/Phrase
S176	political violence	Search modes – Boolean/Phrase
S175	industrial disaster*	Search modes – Boolean/Phrase
S174	flood*	Search modes – Boolean/Phrase
S173	Drought	Search modes – Boolean/Phrase
S172	typhoon*	Search modes – Boolean/Phrase
S171	genocide	Search modes – Boolean/Phrase
S170	earthquake*	Search modes – Boolean/Phrase
S169	“mass casualty incident”	Search modes – Boolean/Phrase
S168	natural disasters	Search modes – Boolean/Phrase
S167	“disaster” OR (MH “Mass Casualty Incidents”) OR (MH “Natural Disasters”) OR (MH “Disasters+”)	Search modes – Boolean/Phrase
S166	“mass killings”	Search modes – Boolean/Phrase
S165	post conflict reconstruction	Search modes – Boolean/Phrase
S164	displaced people	Search modes – Boolean/Phrase
S163	displaced persons	Search modes – Boolean/Phrase
S162	refugee*	Search modes – Boolean/Phrase
S161	war affected	Search modes – Boolean/Phrase
S160	“Post war”	Search modes – Boolean/Phrase
S159	“War exposed”	Search modes – Boolean/Phrase
S158	“civil war”	Search modes – Boolean/Phrase
S157	(MH “War+”) OR “war”	Search modes – Boolean/Phrase
S156	(Conflict W1 affected) OR (Mass W1 conflict) OR (conflict W1 related)	Search modes – Boolean/Phrase
S155	“Post conflict**”	Search modes – Boolean/Phrase
S154	“armed conflict**”	Search modes – Boolean/Phrase
S153	S60 OR S61 OR S62 OR S63 OR S64 OR S65 OR S66 OR S67 OR S68 OR S69 OR S70 OR S71 OR S72 OR S73 OR S74 OR S75 OR S76 OR S77 OR S78 OR S79 OR S80 OR S81 OR S82 OR S83 OR S84 OR S85 OR S86 OR S87 OR S88 OR S89 OR S90 OR S91 OR S92 OR S93 OR S94 OR S95 OR S96 OR S97 OR S98 OR S99 OR S100 OR S101 OR S102 OR S103 OR S104 OR S105 OR S106 OR S107 OR S108 OR S109 OR S110 OR S111 OR S112 OR S113 OR S114 OR S115 OR S116 OR S117 OR S118 OR S119 OR S120 OR S121 OR S122 OR S123 OR S124 OR S125 OR S126 OR S127 OR S128 OR S129 OR S130 OR S131 OR S132 OR S133 OR S134 OR S135 OR S136 OR S137 OR S138 OR S139 OR S140 OR S141 OR S142 OR S143 OR S144 OR S145 OR S146 OR S147 OR S148 OR S149 OR S150 OR S151 OR S152	Search modes – Boolean/Phrase
S152	“mental health rehabilitation”	Search modes – Boolean/Phrase
S151	(MM “Referral and Consultation+”) OR “Referral and consultation”	Search modes – Boolean/Phrase
S150	(MM “Behavior Therapy+”) OR “implosive therap**”	Search modes – Boolean/Phrase
S149	“Psychological First Aid”	Search modes – Boolean/Phrase
S148	reminiscence therap*	Search modes – Boolean/Phrase
S147	(MM “Psychotherapeutic Processes+”) OR (MM “Reminiscence Therapy”) OR “Psychotherapeutic intervention**”	Search modes – Boolean/Phrase
S146	(MM “Support Groups+”) OR “Self-help”	Search modes – Boolean/Phrase
S145	“Outreach” OR (MM “Health Facility Business Ventures”)	Search modes – Boolean/Phrase
S144	Resettlement assessment	Search modes – Boolean/Phrase

#	Query	Limiters/expanders
S143	public mental health service*	Search modes – Boolean/Phrase
S142	community oriented public mental health service*	Search modes – Boolean/Phrase
S141	"Mentoring"	Search modes – Boolean/Phrase
S140	"Vocational training"	Search modes – Boolean/Phrase
S139	"Legal services"	Search modes – Boolean/Phrase
S138	"Human rights advocacy"	Search modes – Boolean/Phrase
S137	"case management" AND ("mental health" OR psychosocial)	Search modes – Boolean/Phrase
S136	"Sport* and recreation"	Search modes – Boolean/Phrase
S135	"community engagement"	Search modes – Boolean/Phrase
S134	Community-based psychological support	Search modes – Boolean/Phrase
S133	"psychological care"	Search modes – Boolean/Phrase
S132	"recreational therap**"	Search modes – Boolean/Phrase
S131	"community integration"	Search modes – Boolean/Phrase
S130	"community reintegration"	Search modes – Boolean/Phrase
S129	(MM "Physical Therapy+") OR (MM "Rehabilitation, Psychosocial+") OR (MM "Recreational Therapy")	Search modes – Boolean/Phrase
S128	(MM "Psychopharmacology") OR "Psychopharmacological treatment**"	Search modes – Boolean/Phrase
S127	"Reconciliation"	Search modes – Boolean/Phrase
S126	Trauma healing*	Search modes – Boolean/Phrase
S125	Testimony Therap*	Search modes – Boolean/Phrase
S124	psychotherapeutic intervention*	Search modes – Boolean/Phrase
S123	Specialised psychotherapeutic intervention*	Search modes – Boolean/Phrase
S122	"KIDNET"	Search modes – Boolean/Phrase
S121	"Stress Inoculation Therap**"	Search modes – Boolean/Phrase
S120	"Prolonged exposure therap**"	Search modes – Boolean/Phrase
S119	"School-based Intervention**"	Search modes – Boolean/Phrase
S118	"Dance and movement therap**"	Search modes – Boolean/Phrase
S117	"Thought field therap**"	Search modes – Boolean/Phrase
S116	"Trauma focused intervention**"	Search modes – Boolean/Phrase
S115	(MM "Psychoeducation") OR "psychoeducation"	Search modes – Boolean/Phrase
S114	"Skill based group**"	Search modes – Boolean/Phrase
S113	"Skill based group**"	Search modes – Boolean/Phrase
S112	"Psychodynamic therap**" OR (MM "Psychotherapy, Psychodynamic")	Search modes – Boolean/Phrase
S111	"Homecare service**"	Search modes – Boolean/Phrase
S110	(MM "Self Care+") OR "self care"	Search modes – Boolean/Phrase
S109	psychosocial support	Search modes – Boolean/Phrase
S108	psychosocial support system	Search modes – Boolean/Phrase
S107	psychosocial support in disaster-affected communities	Search modes – Boolean/Phrase
S106	primary care mental health integration	Search modes – Boolean/Phrase
S105	"mental health prevention**"	Search modes – Boolean/Phrase
S104	Preventive psychosocial intervention*	Search modes – Boolean/Phrase
S103	"Preventive psychosocial intervention**"	Search modes – Boolean/Phrase
S102	(MM "Relaxation") OR (MM "Simple Relaxation Therapy (Iowa NIC)")	Search modes – Boolean/Phrase
S101	"Psychosocial care intervention**"	Search modes – Boolean/Phrase

#	Query	Limiters/expanders
S100	"music therap*"	Search modes – Boolean/Phrase
S99	(MM "Music Therapy")	Search modes – Boolean/Phrase
S98	"Narrative exposure therap*"	Search modes – Boolean/Phrase
S97	"Family-based intervention**"	Search modes – Boolean/Phrase
S96	(MM "Family Therapy (Iowa NIC)") OR (MM "Family Therapy") OR "Family therap*"	Search modes – Boolean/Phrase
S95	"Grief Intervention**"	Search modes – Boolean/Phrase
S94	"interpersonal therap*"	Search modes – Boolean/Phrase
S93	(MM "Therapy Group (Iowa NIC)") OR "group therapy" OR (MM "Psychotherapy, Group+")	Search modes – Boolean/Phrase
S92	eclectic therap*	Search modes – Boolean/Phrase
S91	(MM "Eye Movement Desensitization and Reprogramming") OR "eye movement desensitization and reprocessing"	Search modes – Boolean/Phrase
S90	eye movement desensitization and reprocessing (emdr)	Search modes – Boolean/Phrase
S89	"Exposure therap*" OR (MM "Desensitization, Psychologic+")	Search modes – Boolean/Phrase
S88	"economic support"	Search modes – Boolean/Phrase
S87	(MH "Crisis Intervention") OR "crisis intervention**"	Search modes – Boolean/Phrase
S86	"debriefing"	Search modes – Boolean/Phrase
S85	creative arts therap*	Search modes – Boolean/Phrase
S84	(MM "Art Therapy") OR "Creative arts" OR (MM "Performing Arts")	Search modes – Boolean/Phrase
S83	cognitive processing therap*	Search modes – Boolean/Phrase
S82	counselling	Search modes – Boolean/Phrase
S81	counseling	Search modes – Boolean/Phrase
S80	(MM "Counseling+") OR (MM "Peer Counseling")	Search modes – Boolean/Phrase
S79	Community-based psychosocial support	Search modes – Boolean/Phrase
S78	"cognitive behavioral therap*" or cbt	Search modes – Boolean/Phrase
S77	"Cognitive Behavioural Therapy" OR (MM "Cognitive Therapy+") OR (MM "Cognitive Therapy (Iowa NIC)+")	Search modes – Boolean/Phrase
S76	"Social support" OR (MM "Support, Psychosocial+")	Search modes – Boolean/Phrase
S75	"psychological treatment**"	Search modes – Boolean/Phrase
S74	(MM "Psychotherapy+") OR "Psychotherapy" OR (MM "Psychotherapy, Brief") OR (MM "Psychotherapy, Psychodynamic") OR (MM "Psychotherapy, Group+")	Search modes – Boolean/Phrase
S73	(MM "Psychiatric Service") OR "Psychiatric service**"	Search modes – Boolean/Phrase
S72	(MM "Somatic Therapies, Psychiatric+")	Search modes – Boolean/Phrase
S71	Somatic Therap*	Search modes – Boolean/Phrase
S70	(MM "Hospitals, Psychiatric") OR "psychiatric"	Search modes – Boolean/Phrase
S69	(MM "Mental Disorders, Chronic") OR (MM "Mental Disorders+")	Search modes – Boolean/Phrase
S68	"mental health disorder**"	Search modes – Boolean/Phrase
S67	(MM "Support, Psychosocial+") OR "psychosocial" OR (MH "Psychosocial Care (Saba CCC)")	Search modes – Boolean/Phrase
S66	(MM "Mental Health Services+")	Search modes – Boolean/Phrase
S65	"mental health service**"	Search modes – Boolean/Phrase
S64	(MM "Community Mental Health Services+")	Search modes – Boolean/Phrase
S63	"community mental health service**"	Search modes – Boolean/Phrase
S62	"mental health organization**"	Search modes – Boolean/Phrase
S61	(MM "Mental Health Organizations+") OR "mental health organisation"	Search modes – Boolean/Phrase

#	Query	Limiters/expanders
S60	(MM "Mental Health") OR "mental health"	Search modes – Boolean/Phrase
S59	S36 OR S37 OR S38 OR S39 OR S40 OR S41 OR S42 OR S43 OR S44 OR S45 OR S46 OR S47 OR S48 OR S49 OR S50 OR S51 OR S52 OR S53 OR S54 OR S55 OR S56 OR S57 OR S58	Search modes – Boolean/Phrase
S58	Natural experiment* OR Social experiment*	Search modes – Boolean/Phrase
S57	"Policy experiment"	Search modes – Boolean/Phrase
S56	(MM "Quasi-Experimental Studies+") OR "Quasi experiment"	Search modes – Boolean/Phrase
S55	(MH "Double-Blind Studies") OR "Double blinded"	Search modes – Boolean/Phrase
S54	(MM "Crossover Design") OR "Cross over trial"	Search modes – Boolean/Phrase
S53	"Performance assessment"	Search modes – Boolean/Phrase
S52	(MM "Repeated Measures") OR "Repeated measure"	Search modes – Boolean/Phrase
S51	"comparison group" OR "comparison stud"	Search modes – Boolean/Phrase
S50	(MM "Control Group") OR (MM "Pretest-Posttest Control Group Design") OR "control group"	Search modes – Boolean/Phrase
S49	Controlled trial*	Search modes – Boolean/Phrase
S48	(MM "Process Assessment (Health Care)+") OR "Process assessment"	Search modes – Boolean/Phrase
S47	"Effectiveness intervention"	Search modes – Boolean/Phrase
S46	"Feasibility stud"	Search modes – Boolean/Phrase
S45	"pilot stud"	Search modes – Boolean/Phrase
S44	(MM "Clinical Trials+") OR "Clinical trial"	Search modes – Boolean/Phrase
S43	(MM "Outcome Assessment") OR "Outcome evaluation"	Search modes – Boolean/Phrase
S42	(MM "Pilot Studies") OR "pilot schemes"	Search modes – Boolean/Phrase
S41	(MM "Program Evaluation") OR "program evaluation"	Search modes – Boolean/Phrase
S40	"Pragmatic clinical trial"	Search modes – Boolean/Phrase
S39	(MH "Controlled Before-After Studies") OR "Controlled before and after studies"	Search modes – Boolean/Phrase
S38	(MM "Interrupted Time Series Analysis") OR "Interrupted time series analysis"	Search modes – Boolean/Phrase
S37	randomised controlled trial*	Search modes – Boolean/Phrase
S36	(MM "Randomized Controlled Trials") OR "Non-randomized controlled trial"	Search modes – Boolean/Phrase
S35	S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR 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 S24 OR S25 OR S26 OR S27 OR S28 OR S29 OR S30 OR S31 OR S32 OR S33 OR S34	Search modes – Boolean/Phrase
S34	"dose* delivered"	Search modes – Boolean/Phrase
S33	"programme accessibility" OR "intervention accessibility"	Search modes – Boolean/Phrase
S32	"Affordability"	Search modes – Boolean/Phrase
S31	"thematic analysis" OR "framework analysis"	Search modes – Boolean/Phrase
S30	"acceptability"	Search modes – Boolean/Phrase
S29	"mental health needs assessment"	Search modes – Boolean/Phrase
S28	intervention adaptation	Search modes – Boolean/Phrase
S27	"Fidelity"	Search modes – Boolean/Phrase
S26	(MM "Intervention Trials") OR "Intervention delivery"	Search modes – Boolean/Phrase
S25	(MM "Action Research") OR "Participatory research"	Search modes – Boolean/Phrase
S24	"Implementation science"	Search modes – Boolean/Phrase
S23	Social construction* OR "stakeholder view"	Search modes – Boolean/Phrase

#	Query	Limiters/expanders
S22	(MM "Feminism+") OR "Feminis**"	Search modes – Boolean/Phrase
S21	realism	Search modes – Boolean/Phrase
S20	"Pragmatism"	Search modes – Boolean/Phrase
S19	"Mixed-methods"	Search modes – Boolean/Phrase
S18	"constructivis**"	Search modes – Boolean/Phrase
S17	"Realist"	Search modes – Boolean/Phrase
S16	"Theoretical saturation"	Search modes – Boolean/Phrase
S15	"Constant comparative analysis"	Search modes – Boolean/Phrase
S14	grounded theory methodology	Search modes – Boolean/Phrase
S13	"Grounded theory"	Search modes – Boolean/Phrase
S12	"framework synthesis"	Search modes – Boolean/Phrase
S11	(MM "Thematic Analysis") OR (MM "Meta Synthesis") OR "Thematic synthesis"	Search modes – Boolean/Phrase
S10	(MM "Interviews+")	Search modes – Boolean/Phrase
S9	""Qualitative method*" OR "Qualitative analysis" OR "Qualitative stud**" OR (MM "Qualitative Studies+")	Search modes – Boolean/Phrase
S8	(MM "Narratives") OR "Narration" OR (MM "Open-Ended Questionnaires")	Search modes – Boolean/Phrase
S7	(MM "Focus Groups") OR "Focus group**"	Search modes – Boolean/Phrase
S6	"Ethnopsychology"	Search modes – Boolean/Phrase
S5	"Process evaluation"	Search modes – Boolean/Phrase
S4	(MM "Field Notes") OR "Field notes"	Search modes – Boolean/Phrase
S3	(MM "Participant Observation") OR "Participant observation" OR (MM "Nonparticipant Observation")	Search modes – Boolean/Phrase
S2	"Content analysis method**"	Search modes – Boolean/Phrase
S1	(MM "Ethnographic Research") OR "Ethnography"	Search modes – Boolean/Phrase

ECONLIT (EBSCOhost)

#	Query	Limiters/expanders
S131	S27 AND S64 AND S129	Narrow by Language: – English Search modes – Boolean/Phrase
S130	S27 AND S64 AND S129	Search modes – Boolean/Phrase
S129	S65 OR S66 OR S67 OR S68 OR S69 OR S70 OR S71 OR S72 OR S73 OR S74 OR S75 OR S76 OR S77 OR S78 OR S79 OR S80 OR S81 OR S82 OR S83 OR S84 OR S85 OR S86 OR S87 OR S88 OR S89 OR S90 OR S91 OR S92 OR S93 OR S94 OR S95 OR S96 OR S97 OR S98 OR S99 OR S100 OR S101 OR S102 OR S103 OR S104 OR S105 OR S106 OR S107 OR S108 OR S109 OR S110 OR S111 OR S112 OR S113 OR S114 OR S115 OR S116 OR S117 OR S118 OR S119 OR S120 OR S121 OR S122 OR S123 OR S124 OR S125 OR S126 OR S127 OR S128	Search modes – Boolean/Phrase
S128	rehabilitation	Search modes – Boolean/Phrase
S127	referral and consultation	Search modes – Boolean/Phrase
S126	psychological first aid	Search modes – Boolean/Phrase
S125	outreach OR self-help	Search modes – Boolean/Phrase
S124	resettlement assessment	Search modes – Boolean/Phrase
S123	mentoring	Search modes – Boolean/Phrase
S122	vocational education	Search modes – Boolean/Phrase
S121	vocational training	Search modes – Boolean/Phrase

#	Query	Limiters/expanders
S120	legal service*	Search modes – Boolean/Phrase
S119	human rights advocacy	Search modes – Boolean/Phrase
S118	sport and recreation	Search modes – Boolean/Phrase
S117	physiotherapy	Search modes – Boolean/Phrase
S116	psychopharmacological intervention	Search modes – SmartText Searching
S115	psychopharmacological intervention	Search modes – Boolean/Phrase
S114	psychopharmacological	Search modes – SmartText Searching
S113	psychopharmacological	Search modes – Boolean/Phrase
S112	reconciliation	Search modes – Boolean/Phrase
S111	psychotherapeutic interventions	Search modes – SmartText Searching
S110	psychotherapeutic interventions	Search modes – Boolean/Phrase
S109	psychotherapeutic intervention*	Search modes – SmartText Searching
S108	psychotherapeutic intervention*	Search modes – Boolean/Phrase
S107	trauma focused intervention*	Search modes – SmartText Searching
S106	trauma focused intervention*	Search modes – Boolean/Phrase
S105	“safe space**”	Search modes – Boolean/Phrase
S104	“skill-based group**”	Search modes – Boolean/Phrase
S103	“homecare service**”	Search modes – Boolean/Phrase
S102	“self care”	Search modes – Boolean/Phrase
S101	psychosocial care intervention*	Search modes – SmartText Searching
S100	psychosocial care intervention*	Search modes – Boolean/Phrase
S99	psychological intervention*	Search modes – Boolean/Phrase
S98	school based intervention*	Search modes – Boolean/Phrase
S97	family based intervention*	Search modes – Boolean/Phrase
S96	therap*	Search modes – Boolean/Phrase
S95	interpersonal therap*	Search modes – Boolean/Phrase
S94	group therap*	Search modes – Boolean/Phrase
S93	“Eclectic therap**”	Search modes – Boolean/Phrase
S92	eye movement desensitization and reprocessing	Search modes – SmartText Searching
S91	eye movement desensitization and reprocessing	Search modes – Boolean/Phrase
S90	exposure therapy	Search modes – SmartText Searching
S89	exposure therapy	Search modes – Boolean/Phrase
S88	“economic support**”	Search modes – Boolean/Phrase
S87	crisis intervention*	Search modes – Boolean/Phrase
S86	debriefing	Search modes – Boolean/Phrase
S85	creative arts therapy	Search modes – SmartText Searching
S84	creative arts therapy	Search modes – Boolean/Phrase
S83	“creative art**”	Search modes – Boolean/Phrase
S82	cognitive processing therapy	Search modes – SmartText Searching
S81	cognitive processing therap*	Search modes – Boolean/Phrase
S80	counseling	Search modes – Boolean/Phrase
S79	counselling	Search modes – Boolean/Phrase
S78	“community-based psychosocial”	Search modes – Boolean/Phrase
S77	behavior* therap*	Search modes – Boolean/Phrase
S76	behaviour* therap*	Search modes – Boolean/Phrase

#	Query	Limiters/expanders
S75	CBT	Search modes – Boolean/Phrase
S74	cognitive behavioral therapy	Search modes – Boolean/Phrase
S73	“social support*”	Search modes – Boolean/Phrase
S72	psychological treatment*	Search modes – Boolean/Phrase
S71	psychotherapy	Search modes – Boolean/Phrase
S70	psychiatri*	Search modes – Boolean/Phrase
S69	psychosocial	Search modes – Boolean/Phrase
S68	mental health service*	Search modes – Boolean/Phrase
S67	mental disorder*	Search modes – Boolean/Phrase
S66	mental illness	Search modes – Boolean/Phrase
S65	“mental health*”	Search modes – Boolean/Phrase
S64	S28 OR S29 OR S30 OR S31 OR S32 OR S33 OR S34 OR S35 OR S36 OR S37 OR S38 OR S39 OR S40 OR S41 OR S42 OR S43 OR S44 OR S45 OR S46 OR S47 OR S48 OR S49 OR S50 OR S51 OR S52 OR S53 OR S54 OR S55 OR S56 OR S57 OR S58 OR S59 OR S60 OR S61 OR S62 OR S63	Search modes – Boolean/Phrase
S63	terrorist attack*	Search modes – Boolean/Phrase
S62	terrorism	Search modes – Boolean/Phrase
S61	extreme temperatures	Search modes – Boolean/Phrase
S60	wildfire*	Search modes – Boolean/Phrase
S59	Cyclone*	Search modes – Boolean/Phrase
S58	Tornado*	Search modes – Boolean/Phrase
S57	storm surge*	Search modes – Boolean/Phrase
S56	Tsunami*	Search modes – Boolean/Phrase
S55	avalanche*	Search modes – Boolean/Phrase
S54	Landslide*	Search modes – Boolean/Phrase
S53	Volcano*	Search modes – Boolean/Phrase
S52	industrial accidents	Search modes – Boolean/Phrase
S51	“mass adversity”	Search modes – Boolean/Phrase
S50	Hurricane*	Search modes – Boolean/Phrase
S49	humanitarian	Search modes – Boolean/Phrase
S48	political violence	Search modes – Boolean/Phrase
S47	flood*	Search modes – Boolean/Phrase
S46	famine	Search modes – Boolean/Phrase
S45	drought*	Search modes – Boolean/Phrase
S44	typhoon*	Search modes – Boolean/Phrase
S43	earthquake*	Search modes – Boolean/Phrase
S42	disaster*	Search modes – Boolean/Phrase
S41	genocide	Search modes – Boolean/Phrase
S40	ethnic cleansing	Search modes – Boolean/Phrase
S39	mass killings	Search modes – Boolean/Phrase
S38	refugee*	Search modes – Boolean/Phrase
S37	displaced populations	Search modes – Boolean/Phrase
S36	displaced persons	Search modes – Boolean/Phrase
S35	civil violence	Search modes – Boolean/Phrase
S34	War*	Search modes – Boolean/Phrase

#	Query	Limiters/expanders
S33	conflict-related	Search modes – Boolean/Phrase
S32	“Mass conflict*”	Search modes – Boolean/Phrase
S31	Conflict affected	Search modes – Boolean/Phrase
S30	post conflict reconstruction	Search modes – Boolean/Phrase
S29	post-conflict*	Search modes – Boolean/Phrase
S28	armed conflict*	Search modes – Boolean/Phrase
S27	S13 OR S26	Search modes – Boolean/Phrase
S26	S14 OR S15 OR S16 OR S17 OR S18 OR S19 OR S20 OR S21 OR S22 OR S23 OR S24 OR S25	Search modes – Boolean/Phrase
S25	quasi experiment* OR policy experiment* OR natural experiment* OR social experiment*	Search modes – Boolean/Phrase
S24	repeated measure* OR performance assessment OR cross over trial*	Search modes – Boolean/Phrase
S23	controlled trial* OR control group* OR comparison group*	Search modes – Boolean/Phrase
S22	process assessment	Search modes – Boolean/Phrase
S21	outcome measure* OR outcome assessment* OR outcome evaluation	Search modes – Boolean/Phrase
S20	effectiveness intervention*	Search modes – Boolean/Phrase
S19	feasibility stud*	Search modes – Boolean/Phrase
S18	pilot stud* OR pilot scheme* OR Pilot project*	Search modes – Boolean/Phrase
S17	programme evaluation	Search modes – Boolean/Phrase
S16	(controlled before and after) OR clinical trial*	Search modes – Boolean/Phrase
S15	interrupted time series	Search modes – Boolean/Phrase
S14	randomized controlled trial* OR randomised controlled trial*	Search modes – Boolean/Phrase
S13	S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10 OR S11 OR S12	Search modes – Boolean/Phrase
S12	affordability OR accessibility	Search modes – Boolean/Phrase
S11	acceptability OR thematic analysis OR framework analysis	Search modes – Boolean/Phrase
S10	implementation OR intervention delivery OR fidelity	Search modes – Boolean/Phrase
S9	constructiv* OR mixed-methods OR realism	Search modes – Boolean/Phrase
S8	constant comparative analysis OR theoretical saturation OR realist evaluation	Search modes – Boolean/Phrase
S7	grounded theory	Search modes – Boolean/Phrase
S6	thematic synthesis OR framework synthesis	Search modes – Boolean/Phrase
S5	qualitative	Search modes – Boolean/Phrase
S4	focus group* OR narration OR interview*	Search modes – Boolean/Phrase
S3	process evaluation	Search modes – Boolean/Phrase
S2	content analysis OR participation observation OR field notes OR ethnopsychology	Search modes – Boolean/Phrase
S1	ethnography	Search modes – Boolean/Phrase

Web of Science

#23	#22 AND #19 AND #12 <i>DocType=All document types; Language=All languages;</i>
#22	#21 OR #20 <i>DocType=All document types; Language=All languages;</i>
#21	((TS = ("randomised controlled trial*") OR TS = ("randomized controlled trial*") OR TS = ("interrupted time series") OR TS = ("controlled before and after stud*") OR TS = ("controlled before and after trial*") OR TS = ("clinical trial*") OR TS = ("program* evaluation") OR TS = (" pilot stud*") OR TS = ("pilot scheme*") OR TS = ("pilot project*") OR TS = ("outcome evaluation") OR TS = ("outcome measure*") OR TS = ("feasibility stud*") OR TS = ("effectiveness intervention*") OR TS = ("effectiveness stud*") OR TS = ("efficacy stud*") OR TS = ("efficacy trial*") OR TS = ("outcome assessment") OR TS = ("process assessment") OR TS = ("controlled trial*") OR TS = ("controlled stud*") OR TS = ("control group*") OR TS = ("comparison group*") OR TS = ("comparison stud*") OR TS = ("repeated measure*") OR TS = ("performance assessment") OR TS = ("double blinded") OR TS = ("quasi experiment*") OR TS = ("quasi-experiment*") OR TS = ("policy experiment*") OR TS = ("natural experiment*") OR TS = ("social experiment*")) AND LANGUAGE: (English) <i>DocType=All document types; Language=All languages;</i>
#20	((TS = ethnography OR TS = ("content analysis") OR TS = ("participant observation") OR TS = ("filed note*") OR TS = ("process evaluation") OR TS = ("qualitative method*") OR TS = ("qualitative analysis") OR TS = ("qualitative stud*") OR TS = ethnopsychology OR TS = ("focus group*") OR TS = narration OR TS = ("thematic analysis") OR TS = ("framework analysis") OR TS = ("thematic synthesis") OR TS = ("framework synthesis") OR TS = interview* OR TS = ("grounded theory") OR TS = ("theoretical saturation") OR TS = ("realist evaluation") OR TS = ("constructivist*") OR TS = ("constructivism") OR TS = ("mixed-methods") OR TS = ("feminism") OR TS = ("social construction") OR TS = ("implementation science") OR TS = ("fidelity") OR TS = ("intervention delivery") OR TS = ("acceptability") OR TS = ("affordability") OR TS = ("accessibility")) AND LANGUAGE: (English) <i>DocType=All document types; Language=All languages;</i>
#19	#18 OR #17 OR #16 OR #15 OR #14 OR #13 <i>DocType=All document types; Language=All languages;</i>
#18	((TS = ("armed conflict*") OR TS = ("armed-conflict*") OR TS = ("conflict* affected") OR TS = ("post conflict*") OR TS = ("post-conflict*") OR TS = ("postconflict*") OR TS = ("mass conflict*") OR TS = ("conflict* related") OR TS = ("conflict*-related")) AND LANGUAGE: (English) <i>DocType=All document types; Language=All languages;</i>
#17	((TS = War OR TS =Postwar)) AND LANGUAGE: (English) <i>DocType=All document types; Language=All languages;</i>
#16	((TS = Refugee*)) AND LANGUAGE: (English) <i>DocType=All document types; Language=All languages;</i>
#15	((TS = ("displaced person*") OR TS = ("displaced population*")) AND LANGUAGE: (English) <i>DocType=All document types; Language=All languages;</i>
#14	((TS =("mass killing*") OR TS = ("ethnic cleansing*") OR TS = genocide)) AND LANGUAGE: (English) <i>DocType=All document types; Language=All languages;</i>
#13	(TS = disaster* OR TS = earthquake* OR TS = typhoon* OR TS = drought* OR TS = famine OR TS = ("food shortage*") OR TS = ("food scarcity") OR TS = starvation OR TS =flood OR TS = ("political violence") OR TS = humanitarian OR TS = hurricane* OR TS = ("mass adversity") OR TS = ("industrial accident*") OR TS = volcano* OR TS = landslide* OR TS = Avalanche* OR TS = tsunامي* OR TS = ("storm surge*") OR TS = Tornado OR TS = cyclone* OR TS = wildfire* OR TS = ("extreme temperature*") OR TS = terrorist* OR TS = terrorism OR TS = ("environmental crisis") OR TS = ("nuclear accident*")) AND LANGUAGE: (English) <i>DocType=All document types; Language=All languages;</i>
#12	#11 OR #10 OR #9 OR #8 OR #7 OR #6 OR #5 OR #4 OR #3 OR #2 OR #1 <i>DocType=All document types; Language=All languages;</i>
#11	(TS = ("self-care") OR TS = ("self care") OR TS =homecare) AND LANGUAGE: (English) <i>DocType=All document types; Language=All languages;</i>
#10	(TS = ("creative art*") OR TS = ("art* therapy*") OR TS = ("relaxation intervention*") OR TS = (Sport AND recreation) OR TS = ("human rights advocacy") OR TS = ("legal service*") OR TS = ("vocational training") OR TS = ("mentoring") OR TS = ("resettlement assessment") OR TS = outreach OR TS = ("self-help") OR TS = ("self help")) AND LANGUAGE: (English) <i>DocType=All document types; Language=All languages;</i>
#9	(TS = debriefing OR TS = ("crisis intervention*") OR TS = ("grief intervention*") OR TS = ("family-based intervention*")) AND LANGUAGE: (English) <i>DocType=All document types; Language=All languages;</i>

#8	(TS = ("creative art*") OR TS = ("art* therap*") OR TS = ("relaxation intervention*") OR TS = ("trauma focused intervention*") OR TS = ("trauma-focused intervention*") OR TS = ("school-based") OR TS = ("psychotherapeutic intervention*") OR TS = ("trauma healing") OR TS = reconciliation OR TS = ("psychopharmacological treatment*") OR TS = ("psychopharmacological intervention*") OR TS = ("psychopharmacological program*")) AND LANGUAGE: (English) <i>DocType=All document types; Language=All languages;</i>
#7	(TS = ("cognitive processing therap*") OR TS = ("exposure therap*") OR TS = ("eyes movement desensitization and reprocessing therap*") OR TS = ("group therap*") OR TS = ("interpersonal therap*") OR TS = ("family therap*") OR TS = ("music therap*") OR TS = ("psychodynamic therap*") OR TS = ("thought field therap*") OR TS = ("dance and movement therap*") OR TS = ("dance therap*") OR TS = ("stress inoculation therap*") OR TS = "KIDNET" OR TS = ("testimony therap*") OR TS = Physiotherap* OR TS = ("implosive therap*") OR TS = ("flooding therap*") OR TS = ("imagine* flooding") OR TS = ("reminiscence therap*") OR TS = rehabilitation) AND LANGUAGE: (English) <i>DocType=All document types; Language=All languages;</i>
#6	(TS = counselling OR TS = counselling) AND LANGUAGE: (English) <i>DocType=All document types; Language=All languages;</i>
#5	(TS = ("cognitive behaviour* therap*") OR TS = ("cognitive behavior* therap*") OR TS = ("behaviour* therap*") OR TS = ("behavior* therap*") OR TS = "CBT") AND LANGUAGE: (English) <i>DocType=All document types; Language=All languages;</i>
#4	(TS = psychotherapy OR TS = ("social support") OR TS = ("economic support") OR TS = ("psychological support")) AND LANGUAGE: (English) <i>DocType=All document types; Language=All languages;</i>
#3	(TS = psychiatric OR TS = ("psychological treatment*") OR TS = ("psychological intervention*") OR TS = ("psychological program*") OR TS = ("psychological care treatment*") OR TS = ("psychological care intervention*") OR TS = ("psychological care program*") OR TS = ("psychological first Aid")) AND LANGUAGE: (English) <i>DocType=All document types; Language=All languages;</i>
#2	(TS = psychosocial OR TS = psychoeducation OR TS = ("safe space")) AND LANGUAGE: (English) <i>DocType=All document types; Language=All languages;</i>
#1	(TS = ("mental health")) AND LANGUAGE: (English) <i>DocType=All document types; Language=All languages;</i>

ERIC (EBSCOhost)

#	Query	Limiters/expanders
S214	S131 AND S132 AND S213	Search modes – Boolean/Phrase
S213	S135 OR S136 OR S137 OR S138 OR S139 OR S140 OR S141 OR S142 OR S143 OR S144 OR S145 OR S146 OR S147 OR S148 OR S149 OR S150 OR S151 OR S152 OR S153 OR S154 OR S155 OR S156 OR S157 OR S158 OR S159 OR S160 OR S161 OR S162 OR S163 OR S164 OR S165 OR S166 OR S167 OR S168 OR S169 OR S170 OR S171 OR S172 OR S173 OR S174 OR S175 OR S176 OR S177 OR S178 OR S179 OR S180 OR S181 OR S182 OR S183 OR S184 OR S185 OR S186 OR S187 OR S188 OR S189 OR S190 OR S191 OR S192 OR S193 OR S194 OR S195 OR S196 OR S197 OR S198 OR S199 OR S200 OR S201 OR S202 OR S203 OR S204 OR S205 OR S206 OR S207 OR S208 OR S209 OR S210 OR S211 OR S212	Search modes – Boolean/Phrase
S212	constructivism	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S211	cost-benefit analysis	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S210	impact evaluation OR impact assessment	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S209	participation engagement	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S208	dose delivered	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase

#	Query	Limiters/expanders
S207	accessibility	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S206	affordability	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S205	framework analysis	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S204	thematic analysis	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S203	acceptability	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S202	needs assessment	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S201	perception	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S200	participant engagement	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S199	adaptation	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S198	fidelity	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S197	intervention delivery	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S196	participatory research	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S195	implementation science	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S194	facilitator	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S193	barrier	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S192	stakeholder views	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S191	social construction	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S190	feminis*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S189	realis*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S188	pragmatis*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S187	mixed methods	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S186	inductive	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S185	constructionist	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S184	theoretical saturation	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S183	conversation analysis	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase

#	Query	Limiters/expanders
S182	field research	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S181	constant compar*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S180	grounded theory OR grounded research OR grounded studies	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S179	phenomenology OR phenomenological research	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S178	framework synthesis	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S177	case study	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S176	interview	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S175	qualitative methods OR qualitative study OR qualitative analysis	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S174	narration	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S173	focus group	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S172	ethnopsychology OR ethno psychology	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S171	monitoring and evaluation	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S170	process evaluation	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S169	field notes	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S168	participant observation	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S167	observational methods	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S166	content analysis	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S165	ethnography	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S164	regression discontinuity OR regression discontinuity analysis	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S163	propensity score or propensity matching	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S162	social experiment	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S161	natural experiment	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S160	comparative analysis	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S159	quasi experiment*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S158	double blind* method	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase

#	Query	Limiters/expanders
S157	cross over trial OR cross-over trial	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S156	performance assessment	Limiters – Date Published: 19800101-20151231 Search modes – SmartText Searching
S155	repeated measure	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S154	comparison study	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S153	comparison group	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S152	control group OR experimental group	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S151	controlled trial	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S150	process assessment	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S149	outcome assessment	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S148	effectiveness intervention	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S147	program* scheme	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S146	multi cent* study	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S145	feasibility study	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S144	pilot study	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S143	randomi?ed controlled trials OR randomi?ed controlled study OR randomi?ed trial OR randomi?ed experiment*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S142	clinical trial	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S141	outcome evaluation OR outcome measur*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S140	pilot scheme	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S139	program* evaluation	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S138	pragmatic clinical trial	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S137	controlled before and after study	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S136	interrupted time series design OR interrupted time series analysis	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S135	non-randomi?ed controlled trial	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S134	traditional heal* OR traditional cleansing ritual	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S133	S131 AND S132	Search modes – Boolean/Phrase

#	Query	Limiters/expanders
S132	S50 OR S51 OR S52 OR S53 OR S54 OR S55 OR S56 OR S57 OR S58 OR S59 OR S60 OR S61 OR S62 OR S63 OR S64 OR S65 OR S66 OR S67 OR S68 OR S69 OR S70 OR S71 OR S72 OR S73 OR S74 OR S75 OR S76 OR S77 OR S78 OR S79 OR S80 OR S81 OR S82 OR S83 OR S84 OR S85 OR S86 OR S87 OR S88 OR S89 OR S90 OR S91 OR S92 OR S93 OR S94 OR S95 OR S96 OR S97 OR S98 OR S99 OR S100 OR S101 OR S102 OR S103 OR S104 OR S105 OR S106 OR S107 OR S108 OR S109 OR S110 OR S111 OR S112 OR S113 OR S114 OR S115 OR S116 OR S117 OR S118 OR S119 OR S120 OR S121 OR S122 OR S123 OR S124 OR S125 OR S126 OR S127 OR S128 OR S129 OR S130 OR S134	Search modes – Boolean/Phrase
S131	S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR 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 S24 OR S25 OR S26 OR S27 OR S28 OR S29 OR S30 OR S31 OR S32 OR S33 OR S34 OR S35 OR S36 OR S37 OR S38 OR S39 OR S40 OR S41 OR S42 OR S43 OR S44 OR S45 OR S46 OR S47 OR S48 OR S49	Search modes – Boolean/Phrase
S130	social work	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S129	social support	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S128	reintegration OR reinsertion	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S127	life skills training	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S126	rehabilitation	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S125	referral and consultation	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S124	implosive therap* OR flooding therap* OR imaginal flooding	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S123	psychological first aid	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S122	risk communication	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S121	surveillance	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S120	psychotherap* intervention	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S119	self help OR self-help	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S118	outreach	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S117	resettlement assessment	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S116	community oriented public mental health services	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S115	mentor*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase

#	Query	Limiters/expanders
S114	vocational training	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S113	legal services	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S112	human rights advoca*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S111	case manage*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S110	sport and recreation	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S109	acute patient care	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S108	community based psychological support	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S107	psychological care	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S106	psychotherap*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S105	psychopharmacological treatment OR psychopharmacological intervention OR psychopharmacological therap* OR psychopharmacological medication	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S104	reconciliation OR (reconciliation and forgiveness) OR (reconciliation and conflict)	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S103	trauma heal*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S102	testimony therap*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S101	interpersonal psychotherap*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S100	speciali?ed psychotherap* intervention	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S99	KIDNET	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S98	stress inoculation therap*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S97	prolonged exposure therap*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S96	school based	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S95	dance and movement therap* OR dance therap* OR movement therap*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S94	individual prevention	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S93	trauma focussed intervention OR trauma focused intervention	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S92	family support	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S91	safe space OR safe space/ classroom	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase

#	Query	Limiters/expanders
S90	psychoeducation OR psychoeducation therap* OR psychoeducation intervention OR psychoeducational groups OR psychoeducational group therap* OR psychoeducational programs	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S89	skill based group OR skill based approach	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S88	psychodynamic therap*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S87	home care services OR homecare services	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S86	self care OR self-care	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S85	preventive psychosocial intervention	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S84	relaxation	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S83	psychosocial care intervention	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S82	psychological intervention	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S81	pharmacotherap*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S80	gender based violence	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S79	music therap*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S78	narrative exposure therap*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S77	family based therap* OR family based interventions OR family based services	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S76	family therap*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S75	individual therap* or individual treatment	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S74	grief intervention	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S73	interpersonal therap*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S72	group therap* OR group counsel#ing	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S71	eclectic OR eclectic therap*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S70	eye movement desensitization and reprocessing OR eye movement desensitization and reprocessing therap*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S69	exposure therap*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S68	economic support	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S67	crisis intervention OR crisis intervention model	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase

#	Query	Limiters/expanders
S66	debriefing OR debriefing after critical incident	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S65	creative arts OR (creative arts and trauma) OR creative arts therap* services	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S64	cognitive processing therap*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S63	counsel#ing	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S62	community- based psychosocial support	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S61	cognitive behavioral therap*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S60	primary care	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S59	speciali?ed care OR speciali?ed care units OR speciali?ed service OR speciali?ed care	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S58	acute patient care	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S57	social support OR (social support and health) OR (social support and stress)	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S56	mental health services OR (mental health services or health care) OR mental health counsel* OR mental health treatment OR mental health care	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S55	psychological treatment	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S54	psychotherap*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S53	psychiatric OR psychiatric care OR psychiatric disorders OR psychiatric rehabilitation	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S52	mental health disorders	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S51	psychosocial OR psychosocial interventions OR psychosocial support OR psychosocial rehabilitation	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S50	mental health	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S49	nuclear accident	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S48	environmental crisis	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S47	oil spill	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S46	war crime	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S45	war and gender	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S44	torture OR torture victims	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S43	famine OR (famine or food shortage) OR (famine or hunger or food scarcity)	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase

#	Query	Limiters/expanders
S42	tropical storm	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S41	terror*	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S40	terrorist attack	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S39	extreme temperature	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S38	wildfire	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S37	infestation	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S36	epidemic	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S35	cyclone	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S34	tornado	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S33	storm surge	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S32	explosion	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S31	tsunami	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S30	avalanche OR avalanche survival	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S29	landslide	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S28	volcano	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S27	industrial accidents	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S26	mass adversity	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S25	displaced populations OR displaced persons OR displaced persons camp OR displaced people	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S24	hurricane	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S23	humanitarian setting OR humanitarian crisis	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S22	political violence	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S21	industrial disaster	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S20	flood	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S19	drought	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S18	typhoon	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase

#	Query	Limiters/expanders
S17	earthquake	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S16	natural disaster	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S15	disaster OR disaster recovery	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S14	Genocide OR genocide holocaust	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S13	mass killing	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S12	refugee OR refugee crisis OR refugee resettlement OR (refugee and asylum seekers) OR refugee children OR refugee camps	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S11	Displace* OR (displace* and migra*)	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S10	post war	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S9	war affected OR war-affected children	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S8	war exposed	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S7	civil war OR civil war reconstruction	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S6	war	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S5	conflict related OR conflict related stress	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S4	mass conflict	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S3	conflict affected	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S2	post conflict OR post conflict society	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase
S1	armed conflict OR (armed conflicts: international or non-international)	Limiters – Date Published: 19800101-20151231 Search modes – Boolean/Phrase

SCOPUS (26/11/15) Result 3305

- TITLE-ABS ((“psychopharmacological treatment”) OR (“psychopharmacological intervention”) OR (“psychopharmacological program”) OR debriefing OR (“crisis intervention”) OR (“grief intervention”) OR (“family-based intervention”) OR (“Sport”) OR recreation OR (“human rights advocacy”) OR (“legal service”) OR (“vocational training”) OR (“mentoring”) OR (“resettlement assessment”) OR outreach OR (“self help”) OR (“self care”) OR homecare) AND TITLE-ABS ((terrorist) OR (terrorism) OR (“environmental crisis”) OR (“nuclear accident”) OR (“mass killing*”) OR (“ethnic cleansing”) OR (genocide) OR (“displaced person”) OR (“displaced population”) OR (refugee) OR (“War”) OR (postwar) OR (“armed conflict*”) OR (“conflict* affected”) OR (“post conflict*”) OR (“postconflict*”) OR (“mass conflict*”) OR (“conflict* related”)) AND TITLE-ABS ((ethnography) OR (“content analysis”) OR (“participant observation”) OR (“field note*”) OR (“process evaluation”) OR (“qualitative method*”) OR (“qualitative analysis”) OR (“qualitative stud*”) OR ethnopsychology OR (“focus group*”) OR narration OR (“thematic analysis”) OR (“framework analysis”) OR (“thematic synthesis”) OR (“framework synthesis”) OR interview* OR (“grounded theory”) OR (“theoretical saturation”) OR (“realist evaluation”) OR (“constructivist*”)

) OR ("constructivism") OR ("mixed-methods") OR ("feminism") OR ("social construction") OR ("implementation science") OR ("fidelity") OR ("intervention delivery") OR ("acceptability") OR ("affordability") OR ("accessibility") OR ("randomised controlled trial*") OR ("randomized controlled trial*") OR ("interrupted time series") OR ("controlled before and after stud*") OR ("controlled before and after trial*") OR ("clinical trial*") OR ("program* evaluation") OR ("pilot stud*") OR ("pilot scheme*") OR ("pilot project*") OR ("outcome evaluation") OR ("outcome measure*") OR ("feasibility stud*") OR ("effectiveness intervention*") OR ("effectiveness stud*") OR ("efficacy stud*") OR ("efficacy trial*") OR ("outcome assessment") OR ("process assessment") OR ("controlled trial*") OR ("controlled stud*") OR ("control group*") OR ("comparison group*") OR ("comparison stud*") OR ("repeated measure*") OR ("performance assessment") OR ("double blinded") OR ("quasi experiment*") OR ("quasi-experiment*") OR ("policy experiment*") OR ("natural experiment*") OR ("social experiment*"))

● Result 7

- TITLE-ABS (("psychopharmacological treatment") OR ("psychopharmacological intervention") OR ("psychopharmacological program") OR debriefing OR ("crisis intervention") OR ("grief intervention") OR ("family-based intervention") OR ("Sport") OR recreation OR ("human rights advocacy") OR ("legal service") OR ("vocational training") OR ("mentoring") OR ("resettlement assessment") OR outreach OR ("self help") OR ("self care") OR homecare) AND TITLE-ABS ((disaster) OR (earthquake) OR (typhoon) OR (drought) OR (famine) OR ("food shortage*") OR ("food scarcity") OR (starvation) OR (flood) OR ("political violence") OR (humanitarian) OR (hurricane) OR ("mass adversity") OR ("industrial accident") OR (volcano) OR (landslide) OR (avalanche) OR (tsunami) OR ("storm surge*") OR (tornado) OR (cyclone) OR (wildfire) OR ("extreme temperature")) AND TITLE-ABS ((ethnography) OR ("content analysis") OR ("participant observation") OR ("field note*") OR ("process evaluation") OR ("qualitative method*") OR ("qualitative analysis") OR ("qualitative stud*") OR ethnopsychology OR ("focus group*") OR narration OR ("thematic analysis") OR ("framework analysis") OR ("thematic synthesis") OR ("framework synthesis") OR interview* OR ("grounded theory") OR ("theoretical saturation") OR ("realist evaluation") OR ("constructivist*") OR ("constructivism") OR ("mixed-methods") OR ("feminism") OR ("social construction") OR ("implementation science") OR ("fidelity") OR ("intervention delivery") OR ("acceptability") OR ("affordability") OR ("accessibility") OR ("randomised controlled trial*") OR ("randomized controlled trial*") OR ("interrupted time series") OR ("controlled before and after stud*") OR ("controlled before and after trial*") OR ("clinical trial*") OR ("program* evaluation") OR ("pilot stud*") OR ("pilot scheme*") OR ("pilot project*") OR ("outcome evaluation") OR ("outcome measure*") OR ("feasibility stud*") OR ("effectiveness intervention*") OR ("effectiveness stud*") OR ("efficacy stud*") OR ("efficacy trial*") OR ("outcome assessment") OR ("process assessment") OR ("controlled trial*") OR ("controlled stud*") OR ("control group*") OR ("comparison group*") OR ("comparison stud*") OR ("repeated measure*") OR ("performance assessment") OR ("double blinded") OR ("quasi experiment*") OR ("quasi-experiment*") OR ("policy experiment*") OR ("natural experiment*") OR ("social experiment*")))

● Result 6

- TITLE-ABS ("KIDNET" OR ("testimony therapy") OR physiotherapy OR ("implosive therapy") OR ("flooding therapy") OR ("imagine flooding") OR ("reminiscence therapy") OR rehabilitation OR ("creative art") OR ("art therapy") OR ("relaxation intervention") OR ("trauma focused intervention") OR ("trauma-focused intervention") OR ("school-based") OR ("psychotherapeutic intervention") OR ("trauma healing") OR reconciliation) AND TITLE-ABS ((terrorist) OR (terrorism) OR ("environmental crisis") OR ("nuclear accident") OR ("mass killing*") OR ("ethnic cleansing") OR (genocide) OR ("displaced person") OR ("displaced population") OR (refugee) OR ("War") OR (postwar) OR ("armed conflict*") OR ("conflict* affected") OR ("post conflict*") OR ("postconflict*") OR ("mass conflict*") OR ("conflict* related")) AND TITLE-ABS ((ethnography) OR ("content analysis") OR ("participant observation") OR ("field note*") OR ("process evaluation") OR (

“qualitative method*”) OR (“qualitative analysis”) OR (“qualitative stud*”) OR (“ethnopsychology”) OR (“focus group*”) OR (“narration”) OR (“thematic analysis”) OR (“framework analysis”) OR (“thematic synthesis”) OR (“framework synthesis”) OR (“interview*”) OR (“grounded theory”) OR (“theoretical saturation”) OR (“realist evaluation”) OR (“constructivist*”) OR (“constructivism”) OR (“mixed-methods”) OR (“feminism”) OR (“social construction”) OR (“implementation science”) OR (“fidelity”) OR (“intervention delivery”) OR (“acceptability”) OR (“affordability”) OR (“accessibility”) OR (“randomised controlled trial*”) OR (“randomized controlled trial*”) OR (“interrupted time series”) OR (“controlled before and after stud*”) OR (“controlled before and after trial*”) OR (“clinical trial*”) OR (“program evaluation”) OR (“pilot stud*”) OR (“pilot scheme*”) OR (“pilot project*”) OR (“outcome evaluation”) OR (“outcome measure*”) OR (“feasibility stud*”) OR (“effectiveness intervention*”) OR (“effectiveness stud*”) OR (“efficacy stud*”) OR (“efficacy trial*”) OR (“outcome assessment”) OR (“process assessment”) OR (“controlled trial*”) OR (“controlled stud*”) OR (“control group*”) OR (“comparison group*”) OR (“comparison stud*”) OR (“repeated measure*”) OR (“performance assessment”) OR (“double blinded”) OR (“quasi experiment*”) OR (“quasi-experiment*”) OR (“policy experiment*”) OR (“natural experiment*”) OR (“social experiment*”))

● Result 5

- TITLE-ABS (“KIDNET”) OR (“testimony therapy”) OR (“physiotherapy”) OR (“implosive therapy”) OR (“flooding therapy”) OR (“imagine flooding”) OR (“reminiscence therapy”) OR (“rehabilitation”) OR (“creative art”) OR (“art therapy”) OR (“relaxation intervention”) OR (“trauma focused intervention”) OR (“trauma-focused intervention”) OR (“school-based”) OR (“psychotherapeutic intervention”) OR (“trauma healing”) OR (“reconciliation”) AND TITLE-ABS ((“terrorist”) OR (“terrorism”) OR (“environmental crisis”) OR (“nuclear accident”) OR (“mass killing*”) OR (“ethnic cleansing”) OR (“genocide”) OR (“displaced person”) OR (“displaced population”) OR (“refugee”) OR (“War”) OR (“postwar”) OR (“armed conflict*”) OR (“conflict* affected”) OR (“post conflict*”) OR (“postconflict*”) OR (“mass conflict*”) OR (“conflict* related”)) AND TITLE-ABS ((“ethnography”) OR (“content analysis”) OR (“participant observation”) OR (“field note*”) OR (“process evaluation”) OR (“qualitative method*”) OR (“qualitative analysis”) OR (“qualitative stud*”) OR (“ethnopsychology”) OR (“focus group*”) OR (“narration”) OR (“thematic analysis”) OR (“framework analysis”) OR (“thematic synthesis”) OR (“framework synthesis”) OR (“interview*”) OR (“grounded theory”) OR (“theoretical saturation”) OR (“realist evaluation”) OR (“constructivist*”) OR (“constructivism”) OR (“mixed-methods”) OR (“feminism”) OR (“social construction”) OR (“implementation science”) OR (“fidelity”) OR (“intervention delivery”) OR (“acceptability”) OR (“affordability”) OR (“accessibility”) OR (“randomised controlled trial*”) OR (“randomized controlled trial*”) OR (“interrupted time series”) OR (“controlled before and after stud*”) OR (“controlled before and after trial*”) OR (“clinical trial*”) OR (“program evaluation”) OR (“pilot stud*”) OR (“pilot scheme*”) OR (“pilot project*”) OR (“outcome evaluation”) OR (“outcome measure*”) OR (“feasibility stud*”) OR (“effectiveness intervention*”) OR (“effectiveness stud*”) OR (“efficacy stud*”) OR (“efficacy trial*”) OR (“outcome assessment”) OR (“process assessment”) OR (“controlled trial*”) OR (“controlled stud*”) OR (“control group*”) OR (“comparison group*”) OR (“comparison stud*”) OR (“repeated measure*”) OR (“performance assessment”) OR (“double blinded”) OR (“quasi experiment*”) OR (“quasi-experiment*”) OR (“policy experiment*”) OR (“natural experiment*”) OR (“social experiment*”)))

● Result 4

- TITLE-ABS ((“economic support”) OR (“psychological support”) OR (“cognitive behaviour* therapy”) OR (“cognitive behaviour* therapy”) OR (“behaviour* therapy”) OR (“behaviour* therapy”) OR (“counselling”) OR (“counselling”) OR (“cognitive processing therapy”) OR (“exposure therapy”) OR (“eyes movement desensitization and reprocessing therapy”) OR (“group therapy”) OR (“interpersonal therapy”) OR (“family therapy”) OR (“music therapy”) OR (“psychodynamic therapy”) OR (“thought field therapy”) OR (“dance and movement therapy”) OR (“dance therapy”) OR (“stress inoculation therapy”)) AND TITLE-ABS ((“terrorist”) OR (

terrorism) OR ("environmental crisis") OR ("nuclear accident") OR ("mass killing*") OR ("ethnic cleansing") OR (genocide) OR ("displaced person") OR ("displaced population") OR (refugee) OR ("War") OR (postwar) OR ("armed conflict*") OR ("conflict* affected") OR ("post conflict*") OR ("postconflict*") OR ("mass conflict*") OR ("conflict* related")) AND TITLE-ABS ((ethnography) OR ("content analysis") OR ("participant observation") OR ("field note*") OR ("process evaluation") OR ("qualitative method*") OR ("qualitative analysis") OR ("qualitative stud*") OR ethnopsychology OR ("focus group*") OR narration OR ("thematic analysis") OR ("framework analysis") OR ("thematic synthesis") OR ("framework synthesis") OR interview* OR ("grounded theory") OR ("theoretical saturation") OR ("realist evaluation") OR ("constructivist*") OR ("constructivism") OR ("mixed-methods") OR ("feminism") OR ("social construction") OR ("implementation science") OR ("fidelity") OR ("intervention delivery") OR ("acceptability") OR ("affordability") OR ("accessibility") OR ("randomised controlled trial*") OR ("randomized controlled trial*") OR ("interrupted time series") OR ("controlled before and after stud*") OR ("controlled before and after trial*") OR ("clinical trial*") OR ("program* evaluation") OR ("pilot stud*") OR ("pilot scheme*") OR ("pilot project*") OR ("outcome evaluation") OR ("outcome measure*") OR ("feasibility stud*") OR ("effectiveness intervention*") OR ("effectiveness stud*") OR ("efficacy stud*") OR ("efficacy trial*") OR ("outcome assessment") OR ("process assessment") OR ("controlled trial*") OR ("controlled stud*") OR ("control group*") OR ("comparison group*") OR ("comparison stud*") OR ("repeated measure*") OR ("performance assessment") OR ("double blinded") OR ("quasi experiment*") OR ("quasi-experiment*") OR ("policy experiment*") OR ("natural experiment*") OR ("social experiment*"))

● Result 3

- TITLE-ABS (("economic support") OR ("psychological support") OR ("cognitive behaviour* therapy") OR ("cognitive behaviour* therapy") OR ("behaviour* therapy") OR ("behaviour* therapy") OR counselling OR counselling OR ("cognitive processing therapy") OR ("exposure therapy") OR ("eyes movement desensitization and reprocessing therapy") OR ("group therapy") OR ("interpersonal therapy") OR ("family therapy") OR ("music therapy") OR ("psychodynamic therapy") OR ("thought field therapy") OR ("dance and movement therapy") OR ("dance therapy") OR ("stress inoculation therapy")) AND TITLE-ABS ((disaster) OR (earthquake) OR (typhoon) OR (drought) OR (famine) OR ("food shortage*") OR ("food scarcity") OR (starvation) OR (flood) OR ("political violence") OR (humanitarian) OR (hurricane) OR ("mass adversity") OR ("industrial accident") OR (volcano) OR (landslide) OR (avalanche) OR (tsunami) OR ("storm surge*") OR (tornado) OR (cyclone) OR (wildfire) OR ("extreme temperature")) AND TITLE-ABS ((ethnography) OR ("content analysis") OR ("participant observation") OR ("field note*") OR ("process evaluation") OR ("qualitative method*") OR ("qualitative analysis") OR ("qualitative stud*") OR ethnopsychology OR ("focus group*") OR narration OR ("thematic analysis") OR ("framework analysis") OR ("thematic synthesis") OR ("framework synthesis") OR interview* OR ("grounded theory") OR ("theoretical saturation") OR ("realist evaluation") OR ("constructivist*") OR ("constructivism") OR ("mixed-methods") OR ("feminism") OR ("social construction") OR ("implementation science") OR ("fidelity") OR ("intervention delivery") OR ("acceptability") OR ("affordability") OR ("accessibility") OR ("randomised controlled trial*") OR ("randomized controlled trial*") OR ("interrupted time series") OR ("controlled before and after stud*") OR ("controlled before and after trial*") OR ("clinical trial*") OR ("program* evaluation") OR ("pilot stud*") OR ("pilot scheme*") OR ("pilot project*") OR ("outcome evaluation") OR ("outcome measure*") OR ("feasibility stud*") OR ("effectiveness intervention*") OR ("effectiveness stud*") OR ("efficacy stud*") OR ("efficacy trial*") OR ("outcome assessment") OR ("process assessment") OR ("controlled trial*") OR ("controlled stud*") OR ("control group*") OR ("comparison group*") OR ("comparison stud*") OR ("repeated measure*") OR ("performance assessment") OR ("double blinded") OR ("quasi experiment*") OR ("quasi-experiment*") OR ("policy experiment*") OR ("natural experiment*") OR ("social experiment*")))

● Result 2

- TITLE-ABS (("mental health") OR psychosocial OR psychoeducation OR ("safe space") OR psychiatric OR ("psychological treatment") OR ("psychological intervention") OR ("psychological program*") OR ("psychological care treatment") OR ("psychological care intervention") OR ("psychological care program*") OR ("psychological first Aid") OR psychotherapy OR ("social support")) AND TITLE-ABS ((terrorist) OR (terrorism) OR ("environmental crisis") OR ("nuclear accident") OR ("mass killing*") OR ("ethnic cleansing") OR (genocide) OR ("displaced person") OR ("displaced population") OR (refugee) OR ("War") OR (postwar) OR ("armed conflict*") OR ("conflict* affected") OR ("post conflict*") OR ("postconflict*") OR ("mass conflict*") OR ("conflict* related")) AND TITLE-ABS ((ethnography) OR ("content analysis") OR ("participant observation") OR ("field note*") OR ("process evaluation") OR ("qualitative method*") OR ("qualitative analysis") OR ("qualitative stud*") OR ethnopsychology OR ("focus group*") OR narration OR ("thematic analysis") OR ("framework analysis") OR ("thematic synthesis") OR ("framework synthesis") OR interview* OR ("grounded theory") OR ("theoretical saturation") OR ("realist evaluation") OR ("constructivist*") OR ("constructivism") OR ("mixed-methods") OR ("feminism") OR ("social construction") OR ("implementation science") OR ("fidelity") OR ("intervention delivery") OR ("acceptability") OR ("affordability") OR ("accessibility") OR ("randomised controlled trial*") OR ("randomized controlled trial*") OR ("interrupted time series") OR ("controlled before and after stud*") OR ("controlled before and after trial*") OR ("clinical trial*") OR ("program* evaluation") OR ("pilot stud*") OR ("pilot scheme*") OR ("pilot project*") OR ("outcome evaluation") OR ("outcome measure*") OR ("feasibility stud*") OR ("effectiveness intervention*") OR ("effectiveness stud*") OR ("efficacy stud*") OR ("efficacy trial*") OR ("outcome assessment") OR ("process assessment") OR ("controlled trial*") OR ("controlled stud*") OR ("control group*") OR ("comparison group*") OR ("comparison stud*") OR ("repeated measure*") OR ("performance assessment") OR ("double blinded") OR ("quasi experiment*") OR ("quasi-experiment*") OR ("policy experiment*") OR ("natural experiment*") OR ("social experiment*"))

● Result 1

- TITLE-ABS (("mental health") OR psychosocial OR psychoeducation OR ("safe space") OR psychiatric OR ("psychological treatment") OR ("psychological intervention") OR ("psychological program*") OR ("psychological care treatment") OR ("psychological care intervention") OR ("psychological care program*") OR ("psychological first Aid") OR psychotherapy OR ("social support")) AND TITLE-ABS ((disaster) OR (earthquake) OR (typhoon) OR (drought) OR (famine) OR ("food shortage*") OR ("food scarcity") OR (starvation) OR (flood) OR ("political violence") OR (humanitarian) OR (hurricane) OR ("mass adversity") OR ("industrial accident") OR (volcano) OR (landslide) OR (avalanche) OR (tsunami) OR ("storm surge*") OR (tornado) OR (cyclone) OR (wildfire) OR ("extreme temperature")) AND TITLE-ABS ((ethnography) OR ("content analysis") OR ("participant observation") OR ("field note*") OR ("process evaluation") OR ("qualitative method*") OR ("qualitative analysis") OR ("qualitative stud*") OR ethnopsychology OR ("focus group*") OR narration OR ("thematic analysis") OR ("framework analysis") OR ("thematic synthesis") OR ("framework synthesis") OR interview* OR ("grounded theory") OR ("theoretical saturation") OR ("realist evaluation") OR ("constructivist*") OR ("constructivism") OR ("mixed-methods") OR ("feminism") OR ("social construction") OR ("implementation science") OR ("fidelity") OR ("intervention delivery") OR ("acceptability") OR ("affordability") OR ("accessibility") OR ("randomised controlled trial*") OR ("randomized controlled trial*") OR ("interrupted time series") OR ("controlled before and after stud*") OR ("controlled before and after trial*") OR ("clinical trial*") OR ("program* evaluation") OR ("pilot stud*") OR ("pilot scheme*") OR ("pilot project*") OR ("outcome evaluation") OR ("outcome measure*") OR ("feasibility stud*") OR ("effectiveness intervention*") OR ("effectiveness stud*") OR ("efficacy stud*") OR ("efficacy trial*") OR ("outcome assessment") OR ("process assessment") OR ("controlled trial*") OR ("controlled stud*") OR ("control group*") OR ("comparison group*") OR ("comparison stud*") OR ("repeated measure*") OR ("performance assessment") OR ("double blinded") OR ("quasi experiment*") OR ("quasi-experiment*") OR ("policy experiment*") OR ("natural experiment*") OR ("social experiment*"))

PsychINFO OVID

1. ("armed conflict*or conflict zone*" or "conflict region*").ti,ab.
2. ("post conflict*" or "postconflict*").ti,ab.
3. ("Conflict affected" or "conflicts affected").ti,ab.
4. "mass conflict*".ab,ti.
5. "conflict-related".ab,ti.
6. exp Nuclear War/ or exp War/
7. "civil war*".ab,ti.
8. ("war-exposed" or "war-affected").ab,ti.
9. postwar.ab,ti.
10. "displaced person".ab,ti.
11. "displaced population*".ab,ti.
12. exp Refugees/ or refugee*.ti.
13. ("Mass killing" or "Ethnic cleansing").ab,id,ti.
14. Genocide.ab,ti. or exp Genocide/
15. exp Disasters/ or disaster*.ti.
16. exp Natural Disasters/ or "Natural disaster*".ti.
17. Earthquake*.ti.
18. typhoon*.ti.
19. draught*.ti.
20. famine.ab,ti. or exp Starvation/
21. "food shortage".ab,ti.
22. "food scarcity".ab,ti.
23. Flood*.ti.
24. ("Industrial disaster*" or "industrial accident*").ab,ti.
25. "Political N1 violence".ti.
26. Humanitarian.ab,id,ti.
27. Hurricane*.ti.
28. "mass adversity".mp.
29. (Volcano* or Landslide* or avalanche*).ti.
30. (Tsunami* or "storm surge*").ti.
31. (Cyclone* or wildfire*).ti.
32. "extreme temperature".ab,ti.
33. exp Terrorism/ or terrorist*.ab,ti.
34. exp Industrial Accidents/ or "nuclear accident*".ab,ti.
35. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34
36. "Mental health*".ab,ti. or exp Mental Health/
37. Psychosocial.ti. or exp Psychosocial Rehabilitation/
38. exp Humanistic Psychotherapy/ or exp Experiential Psychotherapy/ or exp Analytical Psychotherapy/ or exp Adolescent Psychotherapy/ or exp Supportive Psychotherapy/ or exp Integrative Psychotherapy/ or exp Psychotherapy/ or exp Brief Psychotherapy/ or exp Individual Psychotherapy/ or exp Psychodynamic Psychotherapy/ or exp Interpersonal Psychotherapy/ or exp Expressive Psychotherapy/ or exp Child Psychotherapy/ or exp Group Psychotherapy/ or psychotherapy.ab,ti. or exp Eclectic Psychotherapy/
39. "Psychological treatment*".ab,ti.
40. exp Mental Health Services/ or "mental health service*".ab,ti.
41. "community mental health".ab,ti. or exp Community Mental Health/
42. "Social support".ti. or exp Social Support/
43. exp Cognitive Therapy/ or exp Cognitive Behavior Therapy/ or "Cognitive Behavioural Therapy".ab,ti. or "Cognitive behavioural therapies".ab,ti.
44. ("cognitive behavioral therapy" or "cognitive behavioral therapies").ab,ti.
45. ("cognitive therapy" or "cognitive therapies").ab,ti.
46. "Community-based psychosocial support".ab,ti.
47. "psychosocial rehabilitation".ab,ti. or exp Psychosocial Rehabilitation/
48. exp Counseling/ or Counselling.ab,ti.
49. exp Group Counseling/ or exp Community Counseling/ or exp School Counseling/ or counseling.ab,ti. or exp Psychotherapeutic Counseling/ or exp Rehabilitation Counseling/
50. ("Cognitive processing therapy" or "Cognitive processing therapies").ab,ti.
51. exp Creative Arts Therapy/ or exp Art Therapy/ or "Creative arts".ab,ti.
52. exp "Debriefing (Psychological)"/ or Debriefing.ab,ti.

53. "Crisis intervention*".ab,ti. or exp Crisis Intervention/
54. "Economic support".ab,ti.
55. "Exposure therapy".ab,ti. or exp Exposure Therapy/ or "Exposure therapies".ab,ti.
56. exp Eye Movement Desensitization Therapy/ or "Eye movement Desensitization and Reprocessing".ab,ti.
57. ("Group therapy" or "Group therapies").ab,ti.
58. ("interpersonal therapy" or "interpersonal therapies").ab,ti.
59. "grief intervention*".ab,ti.
60. "Family therapy".ab,ti. or exp Family Therapy/ or "Family therapies".ab,ti.
61. exp Family Intervention/ or "family-based intervention*".ab,ti.
62. ("Narrative exposure therapy" or "Narrative exposure therapies").ab,ti.
63. "Music therapy".mp. or exp Music Therapy/ or "Music therapies".ab,ti.
64. "Psychological intervention*".ab,ti.
65. "Psychosocial care intervention*".ab,ti.
66. "Psychosocial care program*".ab,ti.
67. "Psychological program*".ab,ti.
68. exp Progressive Relaxation Therapy/ or exp Relaxation Therapy/ or exp Relaxation/
69. "Preventive psychosocial intervention*".ab,ti.
70. "Preventive psychosocial program*".ab,ti.
71. "primary mental health prevention".ab,ti. or exp Primary Mental Health Prevention/
72. "Self care".ab,ti.
73. exp Home Care/
74. ("Psychodynamic therapy" or "Psychodynamic therapies").ab,ti.
75. psychoeducation.ab,ti. or exp Psychoeducation/
76. "safe space*".ab,ti.
77. "Trauma focused intervention*".ab,ti.
78. "Trauma focused program*".ab,ti.
79. ("Thought field therapy" or "Thought field therapies").ab,ti.
80. exp Movement Therapy/ or exp Dance Therapy/ or "Dance and movement therapy".ti.
81. ("dance therapy" or "movement therapy" or "dance therapies" or "movement therapies").ab,ti.
82. exp School Based Intervention/
83. ("Prolonged exposure therapy" or "Prolonged exposure therapies").ab,ti.
84. ("Stress Inoculation Therapy" or "Stress Inoculation Therapies").ab,ti.
85. exp Narrative Therapy/ or KIDNET.ab.
86. ("narrative therapy" or "narrative therapies").ab,ti.
87. "psychotherapeutic intervention*".ab,ti.
88. ("Testimony Therapy" or "Testimony Therapies").ab,ti.
89. "Trauma healing".ab,ti.
90. Reconciliation.ab,ti. or exp Conflict Resolution/
91. exp Sports/ or exp Recreation/
92. "Legal service*".ab,ti.
93. Mentoring.ab,ti.
94. exp Mental Health Programs/ or "community oriented public mental health service*".ab,ti.
95. exp Outreach Programs/
96. "Self-help".ab,ti.
97. "Psychotherapeutic program*".ab,ti.
98. "Psychological first Aid".ab,ti.
99. ("implosive therapy" or "flooding therapy").ab,ti.
100. exp Rehabilitation/ or exp Rehabilitation Counseling/ or exp Cognitive Rehabilitation/ or Rehabilitation.ab,ti. or exp Psychosocial Rehabilitation/
101. "reminiscence therapy".ab,ti.
102. "behavior therapy".ab,ti. or exp Behavior Therapy/
103. ("behavioural therapy" or "behavioural therapies").ab,ti.
104. 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 or 48 or 49 or 50 or 51 or 52 or 53 or 54 or 55 or 56 or 57 or 58 or 59 or 60 or 61 or 62 or 63 or 64 or 65 or 66 or 67 or 68 or 69 or 70 or 71 or 72 or 73 or 74 or 75 or 76 or 77 or 78 or 79 or 80 or 81 or 82 or 83 or 84 or 85 or 86 or 87 or 88 or 89 or 90 or 91 or 92 or 93 or 94 or 95 or 96 or 97 or 98 or 99 or 100 or 101 or 102 or 103
105. Non-randomized controlled trial*.mp.
106. exp Intervention/ or Non-randomised trial*.mp.
107. (randomised trial* or randomized trial*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures]

108. exp Experimental Design/ or exp Time Series/ or "Interrupted time series".mp. or exp Quasi Experimental Methods/
109. ("experimental study" or "experimental design*" or "experimental studies").mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures]
110. "Controlled before and after".mp.
111. exp Clinical Trials/ or "clinical trial*".mp.
112. "treatment effectiveness evaluation".mp. or exp Treatment Effectiveness Evaluation/
113. "program evaluation".mp. or exp Program Evaluation/
114. "pilot studies".ab,ti.
115. exp Educational Program Evaluation/ or exp Treatment Outcomes/ or "Outcome evaluation".mp.
116. "outcome measure*".mp.
117. ("Feasibility study" or "Feasibility studies").ab,ti.
118. ("Effectiveness intervention*" or "outcome assessment").mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures]
119. "controlled trial*".mp.
120. ("controlled studies" or "controlled study").mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures]
121. exp Experiment Controls/ or "Control group*".mp.
122. "Comparison group*".mp.
123. ("Comparison study" or "comparison studies").mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures]
124. "Repeated measure".mp. or exp Repeated Measures/
125. "Cross over trial*".mp.
126. exp Placebo/ or "Double blinded".mp.
127. "Quasi experiment*".mp.
128. ("Policy experiment*" or "natural experiment*" or "social experiment*").mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures]
129. Ethnography.ab,ti. or exp Ethnography/
130. "content analysis".ab,ti. or exp Content Analysis/
131. "Participant observation".ab,ti.
132. "Process evaluation".mp.
133. Ethnopsychology.ab,ti.
134. exp Group Discussion/ or "focus group*".ab,ti.
135. exp Narratives/ or Narration.ab,ti.
136. exp Qualitative Research/ or ("qualitative studies" or "qualitative study" or "qualitative research" or "qualitative investigation" or "qualitative analysis").ab,ti.
137. Interviews.it.
138. exp Interviews/
139. ("Thematic synthesis" or "framework synthesis" or "thematic analysis" or "framework synthesis").ab,ti.
140. "Grounded theory".ti. or exp Grounded Theory/
141. "Constant comparative".ab,ti.
142. "realist evaluation".ti,ab.
143. "Mixed-methods".ab,ti.
144. "Stakeholder views".ti,ab.
145. "Implementation science".ab,ti.
146. "Intervention delivery".ab,ti.
147. fidelity.ab,ti.
148. "acceptability n1 (intervention* or program*)".ab,ti.
149. ("doses delivered" or accessibility).ab.
150. 105 or 106 or 107 or 108 or 109 or 110 or 111 or 112 or 113 or 114 or 115 or 116 or 117 or 118 or 119 or 120 or 121 or 122 or 123 or 124 or 125 or 126 or 127 or 128 or 129 or 130 or 131 or 132 or 133 or 134 or 135 or 136 or 137 or 138 or 139 or 140 or 141 or 142 or 143 or 144 or 145 or 146 or 147 or 148 or 149
151. 35 and 104 and 150
152. limit 151 to (human and english language and yr="1980 -Current")

APPENDIX 1.5: CODING TOOLS: DATA EXTRACTION FOR SYNTHESIS

1.5.1 Process evaluations: methodological characteristics and study findings

Section A: Administrative details	
Identification of report (or reports) <i>Please use as many keywords as apply</i>	<ul style="list-style-type: none"> • Citation <i>Please use this keyword if the report was identified from the bibliographic list of another report.</i> • Contact <i>Please use this keyword if the report was found through a personal/professional contact.</i> • Handsearch a journal <i>Please use this keyword if the report was found through handsearching a journal.</i> • Unknown <i>Please use this keyword if it is unknown how the report was found.</i> • Electronic database <i>Please specify</i> • Websites
Type of documents <i>Please use ONE keyword only</i>	<ul style="list-style-type: none"> • Journal articles • Research reports • Programme documents (e.g. monitoring and evaluation reports) • Needs assessments • Conferences • Dissertations/thesis • Other unpublished documents
Section B: Study aims and descriptive details	
What are the aims of the study?	<ul style="list-style-type: none"> • Not stated • Details
What is the objective of the study?	<ul style="list-style-type: none"> • To evaluate the effectiveness of an intervention • To evaluate the delivery or receipt of participating in an intervention
When was the study conducted? (e.g. including how long after the emergency and/or the delivery of the intervention)	<ul style="list-style-type: none"> • Not stated • Details
In which country/countries was the study carried out? (please specify)	<ul style="list-style-type: none"> • Not stated • Details
Type of humanitarian emergency	<ul style="list-style-type: none"> • Not stated • Details
Funding details	<ul style="list-style-type: none"> • Not stated • Details
Was ethical approval gained?	<ul style="list-style-type: none"> • Not stated • Details
Are there any ethical concerns about the study?	<ul style="list-style-type: none"> • Not stated • Details

Section C: Population	
Age group (sample focus of the study if specified – for trials, specify who data is collected on. For process evaluations, specify the same, e.g. adults or children providing views as recipients. If the sample is collecting data from children – as peer deliverers of MHPSS still apply children and young people only)	<ul style="list-style-type: none"> Children and young people only (children and young people aged 0–25 years or as specified in the paper) Adults only (as specified in the paper) Older people only (as specified in the paper) No specific age group focus (if there is no age group focus or stated in the paper)
Other marginalized groups (as reported in the paper)	<ul style="list-style-type: none"> Not applicable Details
Gender	<ul style="list-style-type: none"> Female only Male only No specific focus on gender
Section D: Sample details	
Study design	<ul style="list-style-type: none"> Quantitative (please specify) Qualitative (please specify) Mixed-methods (please specify)
Sample focus	<ul style="list-style-type: none"> Programme implementers/providers Programme recipients
Sampling and recruitment methods (including recruitment) <i>How were the subjects selected for the study?</i>	<ul style="list-style-type: none"> Not stated Details
Sample size	<ul style="list-style-type: none"> Not stated Details
Socio-demographic characteristics of participants	<ul style="list-style-type: none"> Not stated Details
Section E: Data collection and analysis	
Methods of data collection (please specify based on description in the paper)	<ul style="list-style-type: none"> Not stated Unclear Survey In-depth interviews Semi-structured interviews Participant observation Focus groups Diary study Document analysis Others (please specify)
Methods of data analysis (please specify based on description in the paper)	<ul style="list-style-type: none"> Not stated Unclear Statistical analysis Grounded theory Framework analysis Thematic analysis Interpretative phenomenological analysis (IPA) Others (please specify)
Section F: Findings on process	
Data/findings on contextual/facilitators/barriers to intervention processes (extract findings including page numbers and if participation quotes, author description or author conclusions)	<ul style="list-style-type: none"> Add themes/sub-themes Feasibility Fidelity Accessibility Acceptability Satisfaction Intensity/dose Cultural sensitivity

1.5.2 Outcome evaluations: details of the intervention, methodological characteristics and findings

Section G: Details of the intervention	
What is the objective of the study?	<ul style="list-style-type: none"> To evaluate the effectiveness of an intervention To evaluate the delivery or receipt of participating in an intervention
When was the study conducted? (e.g. including how long after the emergency and/or the delivery of the intervention)	<ul style="list-style-type: none"> Not stated Details
In which country/countries was the study carried out? (please specify)	<ul style="list-style-type: none"> Not stated Details
Population sampled	<ul style="list-style-type: none"> Details
Section H: Details of the intervention	
Type of humanitarian emergency	<ul style="list-style-type: none"> Not stated Details
Intervention names	<ul style="list-style-type: none"> Not stated Details
Types of MHPSS intervention (as reported in the paper)	<ul style="list-style-type: none"> Not stated Details
Description of intervention(s)/components	<ul style="list-style-type: none"> Not stated Details
Key intervention strategies and approaches used in the intervention	<ul style="list-style-type: none"> Not stated Details
Format of the intervention	<ul style="list-style-type: none"> Group Individual
Intervention duration: (e.g. two weeks, two months, two years)	<ul style="list-style-type: none"> Not stated Details
Intervention intensity (e.g. number of 'sessions')	<ul style="list-style-type: none"> Not stated Details
Timing of the programme delivery (e.g. in relation to the emergency)	<ul style="list-style-type: none"> Not stated Details
Delivery setting	<ul style="list-style-type: none"> Not stated Details
Who provided/delivered intervention?	<ul style="list-style-type: none"> Not stated Details
Was special training given to people providing the intervention?	<ul style="list-style-type: none"> Not stated Details
Was information provided on fidelity?	<ul style="list-style-type: none"> Not stated Details
Was information provided on core components of the intervention?	<ul style="list-style-type: none"> Not stated Details
Description of how the intervention was designed or developed, including any theory of change and/or how intervention was developed	<ul style="list-style-type: none"> Not stated Details
Details of any contextual adaption to MHPSS (e.g. did the programme consider the setting, population, language, culture or other contextual factors?)	<ul style="list-style-type: none"> Not stated Details
Any incentive offered to participate in the intervention?	<ul style="list-style-type: none"> Not stated Details
Other: please provide any other details relevant to the intervention	<ul style="list-style-type: none"> Not stated Details

Section I: Study design and actual sample	
Unit of allocation	<ul style="list-style-type: none"> Not stated Unclear Individuals Family Group Institution/organization (e.g. school, hospital, company) Region (specify) e.g. district, local authority, country
Type of control group	<ul style="list-style-type: none"> Wait-list/delayed treatment Attention placebo/alternative intervention (please specify) Usual treatment/care, with assignment Matched group from target population or other inactive, without assignment
Number of people in sample at baseline <i>Number of participants in each intervention and control/comparison group at baseline</i>	<ul style="list-style-type: none"> Not stated Please specify
Number of respondents when intervention finishes <i>Number of participants in each intervention and control/comparison group at the time intervention finishes (NOT at last evaluation)</i>	<ul style="list-style-type: none"> Not stated Please specify
Number of respondents at follow-up <i>Number of participants in each intervention and control/comparison group at follow-up</i>	<ul style="list-style-type: none"> Not applicable Not stated Please specify
Section J: data collection and analysis	
What type of measurement tool(s) is/are used to collect outcome data?	<ul style="list-style-type: none"> Details
Was the instrument used to assess outcomes piloted/validated?	<ul style="list-style-type: none"> Not stated Yes No
Timing(s) of post-intervention measurement(s) <i>Choose all that apply and indicate the exact timings if specified in the report</i>	<ul style="list-style-type: none"> Post-three months follow-up 4–6 months 7–12 months 13–24 months More than two years
Did the study discuss or report any mediators or moderators in their analysis?	<ul style="list-style-type: none"> Yes, please specify No
Any discussion about data collection process and context?	<ul style="list-style-type: none"> Yes No
Did the study discuss treatment adherence?	<ul style="list-style-type: none"> Yes No
Did the study use an 'intention to treat'?	<ul style="list-style-type: none"> Unclear Yes No
Section K: Selection bias	
Were the participants recruited from the same population and over the same period of time?	<ul style="list-style-type: none"> Yes No
How were the participants recruited?	<ul style="list-style-type: none"> Not stated Details
How were participants allocated to intervention and control/comparison groups?	<ul style="list-style-type: none"> Other/not applicable: non randomly Unclear Random, information given (specify) Not stated
Were major prognostic factors at baseline values reported on?	<ul style="list-style-type: none"> Not stated Details

Which major prognostic factors were baseline values reported for?	<ul style="list-style-type: none"> Please specify
Were baseline values of major prognostic factors reported for each group as allocated (e.g. intervention and control group)?	<ul style="list-style-type: none"> No, values not reported by group Yes, for all individuals in study at baseline measurement
How did the authors assess equivalence of the groups?	<ul style="list-style-type: none"> Not assessed Unclear Yes
Was group equivalence in the trial at the baseline?	<ul style="list-style-type: none"> Yes No
Did the study identify possible confounding variables?	<ul style="list-style-type: none"> Yes No
Did the analysis adjust for baseline imbalances in major prognostic factors between groups?	<ul style="list-style-type: none"> Not relevant (groups were balanced/equivalent) Unclear because analysis is poorly described Yes (specify)
Section L: Detection bias	
Did the study describe allocation concealment or blinding procedure during enrolment? <i>e.g. participants and investigators enrolling participants could not foresee assignment because one of the following, or an equivalent method, was used to conceal allocation: central allocation; sequentially numbered, opaque, sealed envelopes</i>	<ul style="list-style-type: none"> Yes No Not stated
Were participants aware which group they were in for intervention?	<ul style="list-style-type: none"> Yes No Not stated
Was outcome measurement done blind? <i>i.e. were those assessing the outcomes aware whether the participant had been in a control/comparison group or intervention group? (Usually described as a 'double blind' study)</i>	<ul style="list-style-type: none"> Not stated Yes No
Section M: Attrition bias	
Is the attrition rate reported separately according to allocation group?	<ul style="list-style-type: none"> Yes, reported separately for all groups No (specify which group(s) are not reported)
What was the attrition rate?	<ul style="list-style-type: none"> Not stated Please specify Own calculation
Was any information provided on those who dropped out of the study?	<ul style="list-style-type: none"> No, not stated Yes, reported (specify)
How did the study address the potential bias arising from attrition?	<ul style="list-style-type: none"> Not stated Details Not applicable
Section N: Selective reporting bias	
Were all outcome measures reported at the post-intervention/follow-up?	<ul style="list-style-type: none"> Yes No
Section O: Findings and conclusions	
Outcomes	<ul style="list-style-type: none"> Details
Overall findings	<ul style="list-style-type: none"> Details
Sub-group analysis	<ul style="list-style-type: none"> Yes, please specify No
Author conclusions or reflections on delivery or implementation	<ul style="list-style-type: none"> Details

APPENDIX 1.6: QUALITY APPRAISAL TOOLS

1.6.1 Quality appraisal tool for outcome evaluation studies

Table 1: Risk of bias tool for assessing risk of bias

(Julian P.T. Higgins, Douglas G. Altman and Jonathan A.C. Sterne on behalf of the Cochrane Statistical Methods Group and the Cochrane Bias Methods Group)

Domain 1: Selection bias	
Selection bias (biased allocation to interventions) due to inadequate generation of a randomized sequence and inadequate concealment of allocations prior to assignment	
Random sequence generation Describe the method used to generate the allocation sequence in sufficient detail to allow an assessment of whether it should produce comparable groups.	Criteria for a judgement of 'low risk' of bias: The investigators describe a random component in the sequence generation process such as: <ul style="list-style-type: none"> referring to a random number table using a computer random number generator coin tossing shuffling cards or envelopes throwing dice drawing of lots minimization*. *Minimization may be implemented without a random element, and this is considered to be equivalent to being random.
	Criteria for the judgement of 'high risk' of bias: The investigators describe a non-random component in the sequence generation process. Usually, the description would involve some systematic, non-random approach, for example: <ul style="list-style-type: none"> sequence generated by odd or even date of birth sequence generated by some rule based on date (or day) of admission sequence generated by some rule based on hospital or clinic record number. Other non-random approaches occur much less frequently than the systematic approaches mentioned above and tend to be obvious. They usually involve judgement or some method of non-random categorization of participants, for example: <ul style="list-style-type: none"> allocation by judgement of the clinician allocation by preference of the participant allocation based on the results of a laboratory test or a series of tests allocation by availability of the intervention.
	Criteria for the judgement of 'unclear risk' of bias: Insufficient information is available about the sequence generation process to permit judgement of 'low risk' or 'high risk'.
Allocation concealment Describe the method used to conceal the allocation sequence in sufficient detail to determine whether intervention allocations could have been foreseen in advance of, or during, enrolment.	Criteria for a judgement of 'low risk' of bias: Participants and investigators enrolling participants could not foresee assignment because one of the following, or an equivalent method, was used to conceal allocation: <ul style="list-style-type: none"> central allocation (including telephone, web-based and pharmacy-controlled randomization) sequentially numbered drug containers of identical appearance sequentially numbered, opaque, sealed envelopes.
	Criteria for the judgement of 'high risk' of bias: Participants or investigators enrolling participants could possibly foresee assignments and thus introduce selection bias, such as allocation based on: <ul style="list-style-type: none"> using an open random allocation schedule (e.g. a list of random numbers) assignment envelopes were used without appropriate safeguards (e.g. if envelopes were unsealed or not opaque or not sequentially numbered) alternation or rotation date of birth case record number any other explicitly unconcealed procedure.
	Criteria for the judgement of 'unclear risk' of bias: Insufficient information to permit judgement of 'low risk' or 'high risk'. This is usually the case if the method of concealment is not described or not described in sufficient detail to allow a definite judgement – for example, if the use of assignment envelopes is described but it remains unclear whether envelopes were sequentially numbered, opaque and sealed.

Domain 2: Performance bias

Performance bias due to knowledge of the allocated interventions by participants and personnel during the study

Blinding of participants and personnel

Describe all measures used, if any, to blind study participants and personnel from knowledge of which intervention a participant received. Provide any information relating to whether the intended blinding was effective.

Criteria for a judgement of 'low risk' of bias:

Any one of the following:

- No blinding or incomplete blinding, but the review authors judge that the outcome is not likely to be influenced by lack of blinding;
- Blinding of participants and key study personnel ensured, and unlikely that the blinding could have been broken.

Criteria for the judgement of 'high risk' of bias:

Any one of the following:

- No blinding or incomplete blinding, and the outcome is likely to be influenced by lack of blinding;
- Blinding of key study participants and personnel attempted, but likely that the blinding could have been broken, and the outcome is likely to be influenced by lack of blinding.

Criteria for the judgement of 'unclear risk' of bias:

Any one of the following:

- Insufficient information to permit judgement of 'low risk' or 'high risk';
- The study did not address this outcome.

Domain 3: Detection bias

Detection bias due to knowledge of the allocated interventions by outcome assessors

Blinding of outcome assessment

Describe all measures used, if any, to blind outcome assessors from knowledge of which intervention a participant received. Provide any information relating to whether the intended blinding was effective.

Criteria for a judgement of 'low risk' of bias:

Any one of the following:

- No blinding of outcome assessment, but the review authors judge that the outcome measurement is not likely to be influenced by lack of blinding;
- Blinding of outcome assessment ensured, and unlikely that the blinding could have been broken.

Criteria for the judgement of 'high risk' of bias:

Any one of the following:

- No blinding of outcome assessment, and the outcome measurement is likely to be influenced by lack of blinding;
- Blinding of outcome assessment, but likely that the blinding could have been broken, and the outcome measurement is likely to be influenced by lack of blinding.

Criteria for the judgement of 'unclear risk' of bias:

Any one of the following:

- Insufficient information to permit judgement of 'low risk' or 'high risk';
- The study did not address this outcome.

Domain 4: Attrition bias

Attrition bias due to amount, nature or handling of incomplete outcome data

Incomplete outcome data

Describe the completeness of outcome data for each main outcome, including attrition and exclusions from the analysis. State whether attrition and exclusions were reported, the numbers in each intervention group (compared with total randomized participants), reasons for attrition/exclusions where reported, and any re-inclusions in analyses performed by the review authors.

Criteria for a judgement of 'low risk' of bias:

Any one of the following:

- No missing outcome data
- Reasons for missing outcome data unlikely to be related to true outcome (for survival data, censoring unlikely to be introducing bias)
- Missing outcome data balanced in numbers across intervention groups, with similar reasons for missing data across groups
- For dichotomous outcome data, the proportion of missing outcomes compared with observed event risk not enough to have a clinically relevant impact on the intervention effect estimate
- For continuous outcome data, plausible effect size (difference in means or standardized difference in means) among missing outcomes not enough to have a clinically relevant impact on observed effect size
- Missing data has been imputed using appropriate methods.

Criteria for the judgement of 'high risk' of bias:

Any one of the following:

Reason for missing outcome data likely to be related to true outcome, with either imbalance in numbers or reasons for missing data across intervention groups;

For dichotomous outcome data, the proportion of missing outcomes compared with observed event risk enough to induce clinically relevant bias in intervention effect estimate;

- For continuous outcome data, plausible effect size (difference in means or standardized difference in means) among missing outcomes enough to induce clinically relevant bias in observed effect size
- 'As treated' analysis done with substantial departure of the intervention received from that assigned at randomization
- Potentially inappropriate application of simple imputation.

Criteria for the judgement of 'unclear risk' of bias:

- Any one of the following:
- Insufficient reporting of attrition/exclusions to permit judgement of 'low risk' or 'high risk' (e.g. number randomized not stated, no reasons for missing data provided);
- The study did not address this outcome.

Domain 5: Reporting bias

Reporting bias due to selective outcome reporting

Selective reporting State how the possibility of selective outcome reporting was examined by the review authors, and what was found.

Criteria for a judgement of 'low risk' of bias:

Any of the following:

- The study protocol is available and all of the study's pre-specified (primary and secondary) outcomes that are of interest in the review have been reported in the pre-specified way
- The study protocol is not available but it is clear that the published reports include all expected outcomes, including those that were pre-specified (convincing text of this nature may be uncommon).

Criteria for the judgement of 'high risk' of bias:

Any one of the following:

- Not all of the study's pre-specified primary outcomes have been reported
- One or more primary outcomes is reported using measurements, analysis methods or sub-sets of the data (e.g. sub-scales) that were not pre-specified
- One or more reported primary outcomes were not pre-specified (unless clear justification for their reporting is provided, such as an unexpected adverse effect)
- One or more outcomes of interest in the review are reported incompletely so that they cannot be entered in a meta-analysis
- The study report fails to include results for a key outcome that would be expected to have been reported for such a study.

Criteria for the judgement of 'unclear risk' of bias:

- Insufficient information to permit judgement of 'low risk' or 'high risk'. It is likely that the majority of studies will fall into this category.

1.6.2 Quality appraisal (QA) tools for process evaluations

Quality criteria	Guidance and criteria for informing judgements
QAQ1: Were steps taken to strengthen rigour in the sampling?	Consider whether: <ul style="list-style-type: none"> the sampling strategy was appropriate to the questions posed in the study (e.g. was the strategy well reasoned and justified?) attempts were made to obtain a diverse sample of the population in question (think about who might have been excluded who might have had a different perspective to offer) characteristics of the sample critical to the understanding of the study context and findings were presented (i.e. do we know who the participants were in terms of e.g. basic socio-demographics, and characteristics relevant to the context of the study?).
QAQ2: Were steps taken to strengthen rigour in the data collected?	Consider whether: <ul style="list-style-type: none"> data collection was comprehensive, flexible and/or sensitive enough to provide a complete and/or vivid and rich description of people's perspectives and experiences (e.g. did the researchers spend sufficient time at the site/with participants? Did they keep 'following up'? Was more than one method of data collection used?) steps were taken to ensure that all participants were able and willing to contribute (e.g. processes for consent – language barriers, power relations between adults and children/young people).
QAQ3: Were steps taken to strengthen the rigour of the analysis of data?	Consider whether: <ul style="list-style-type: none"> data analysis methods were systematic (e.g. was a method described/can a method be discerned?) diversity in perspective was explored the analysis was balanced in the extent to which it was guided by preconceptions or by the data quality analysis in terms of inter-rater reliability/agreement the analysis sought to rule out alternative explanations for findings (in qualitative research this could be done by e.g. searching for negative cases/exceptions, feeding back preliminary results to participants, asking a colleague to review the data, or reflexivity).
QAQ4: Were the findings of the study grounded in/supported by the data?	Consider whether: <ul style="list-style-type: none"> enough data is presented to show how the authors arrived at their findings the data presented fits the interpretation/supports the claims about patterns in data the data presented illuminates/illustrates the findings (for qualitative studies) quotes are numbered or otherwise identified and the reader can see they do not come from just one or two people.
QAQ5: Please rate the findings of the study in terms of their breadth and depth.	Consider whether (NB it may be helpful to consider 'breadth' as the extent of description and 'depth' as the extent to which data has been transformed/analysed): <ul style="list-style-type: none"> a range of issues are covered the perspectives of participants are fully explored in terms of breadth (contrast of two or more perspectives) and depth (insight into a single perspective) richness and complexity have been portrayed (e.g. variation explained, meanings illuminated) there has been theoretical/conceptual development.
QAQ6: Privileges participants' perspectives/experiences?	Consider: <ul style="list-style-type: none"> whether there was a balance between open-ended and fixed response questions whether participants were involved in designing the research whether there was a balance between the use of an a priori coding framework and induction in the analysis the position of the researchers (did they consider it important to listen to the perspectives of children?) whether steps were taken to ensure confidentiality and put young people at ease.
Reliability (rigour) and usefulness	
QAQ7: Reliability	Guidance: think (mainly) about the answers you have given to questions 1–4 and rate studies as: low reliability, medium reliability, high reliability.
QAQ8: Usefulness	Guidance: think (mainly) about the answers you have given to questions 4–6 above and consider: the match between the study aims and findings and the aims and purpose of the synthesis and its conceptual depth/explanatory power. Rate studies as low usefulness, medium usefulness or high usefulness.

APPENDIX 2: PROCESS EVALUATION

Table 2.1: Characteristics of studies included in the process synthesis (n=13)

Study	Details of the setting and programme				Details of the study			
	Humanitarian crises	Programme recipients	Intervention/ components	Programme timing	Aim of the study	Study population	Data collection/ analysis	Study quality
Baingana and Onyango (2011) <i>Tier 4: Specialized services</i>	Civil war: Northern Uganda; until 2006	Adults Children	Primary mental health and community outreach service: <ul style="list-style-type: none"> Monthly psychiatric hospital clinic visits Village health patient support groups 	Post-conflict: March 2008–December 2010	Evaluate: <ul style="list-style-type: none"> i) the capacity of health workers to recognize, assess and manage mental health (MH); ii) the strengthening of capacity to deliver and supervise MH outreach services; and iii) community capacity to appropriately respond to the MHPSS needs of individuals 	Programme providers: n=not stated Programme recipients: n=not stated	Data collection: <ul style="list-style-type: none"> Document review Key informant interviews Patient focus groups Clinical field observations Data analysis: <ul style="list-style-type: none"> Not stated 	Reliability: Low Usefulness: Medium
Boothby et al. (2006) <i>Tier 2: Community and family support</i>	Civil war: Mozambique; 1977–1992	Former male-child soldiers	Children and War Rehabilitation psychological and social programme sought to: <ul style="list-style-type: none"> Establish safety and appropriate codes of conduct Re-establish self-regulatory processes (activities included team sports to dance, music and group art) Promote security versus survival-seeking appraisal and behaviour Support meaning-making. Personal narratives, via drawing and child/adult talks Traditional ceremonies and apprenticeships Family tracing and reunification programme Community sensitization campaigns 	Ongoing to post-conflict: 1988–2004	To gain an understanding of how former male child soldiers have adapted over time, paying attention to their individual well-being and their roles as husbands, fathers and neighbours	Programme recipients: n=23	Data collection: <ul style="list-style-type: none"> Interviews Focus groups Data analysis: <ul style="list-style-type: none"> Not stated 	Reliability: Medium Usefulness: High
Budosan and Bruno (2011) <i>Tier 4: Specialized services</i>	Earthquake: Haiti; 2010	Adults affected by earthquake	Various models of providing MHPSS were applied, including: <ul style="list-style-type: none"> Local and foreign mental health professionals providing short-term direct clinical care for mental health problems, including psychiatric disorders, and training lay volunteers, local psychologists and primary healthcare (PHC) physicians on MHPSS issues organization of child-friendly spaces individual and group psychological therapy recreational activities for beneficiaries 	Immediately after crisis	To describe the strategy developed by Dutch NGO Cordaid for providing integrated mental health and psychosocial support in Haiti after the earthquake	Programme providers: n=not stated Programme recipients: n=not stated	Data collection: <ul style="list-style-type: none"> Document review Semi-structured interviews Patient focus groups Data analysis: <ul style="list-style-type: none"> Not stated 	Reliability: Low Usefulness: Medium
Chauvin et al. (1998) <i>Tier 3: Focused, non-specialized support</i>	Genocide: Rwanda; 1994–1995	Children and care-givers	Psychosocial trauma recovery programme included: <ul style="list-style-type: none"> Capacity building and clinical support through the National Trauma Centre Trauma seminars to raise public awareness about issues of trauma and psychosocial adjustment among key decision makers, local citizens and international agencies 	Immediately after conflict	To evaluate and collect information that would facilitate decision making for the next phase of the programme	Programme providers: n=not stated	Data collection: <ul style="list-style-type: none"> Document review Semi-structured interviews Patient focus groups Clinical field observations Data analysis: <ul style="list-style-type: none"> Not stated 	Reliability: Low Usefulness: Low
Christensen and Edward (2015) <i>Tier 1: Basic services and security</i>	Civil war: Burundi; 1972 and 1994	Children and adults	Village health worker clinic integrating health delivery with other community development initiatives, e.g.: <ul style="list-style-type: none"> food security and agricultural training economic co-operatives early childhood education and after-school programmes; and music and other cultural programmes, and women's 'listening' support groups 	Post-conflict	To identify drivers of social tension and reconciliation for those delivering and receiving Village Health Works, an integrated health services organization	Programme providers: n=37 Community members: n=80	Data collection: <ul style="list-style-type: none"> Open-ended interviews Focus groups Data analysis: <ul style="list-style-type: none"> Phenomenological analysis 	Reliability: High Usefulness: High

Study	Details of the setting and programme				Details of the study			
	Humanitarian crises	Programme recipients	Intervention/ components	Programme timing	Aim of the study	Study population	Data collection/ analysis	Study quality
Hogwood (2014) <i>Tier 3: Focused, non-specialized support</i>	Genocide: Rwanda; 1994–1995	Adult women	Four community counselling groups with 10 members each. The groups supported women to: <ul style="list-style-type: none"> provide resources for each other offer each other support to build social networks provide a supportive, safe place to share experiences learn psychological strategies for dealing with painful emotional events with knowledge disclosure and to assist them in their decisions around this painful subject, as well as to help the women realize their responsibilities as mothers. 	Post-conflict	To describe a pilot community group counselling programme for women who bore children as a result of rapes during the 1994 Rwandan genocide	Programme recipients: n=40	Data collection: <ul style="list-style-type: none"> Rating scale Focus groups Data analysis: <ul style="list-style-type: none"> Statistical analysis Thematic analysis 	Reliability: Medium Usefulness: High
King (2014) <i>Tier 3: Focused, non-specialized support</i>	Genocide: Rwanda; 1994–1995	Adults	The Healing of Life Wounds programme ran small group workshops. The three modules aimed to support dialogue on: <ul style="list-style-type: none"> living and sharing bereavement dealing with emotions and forgiveness and reconciliation. 	Post-conflict	To explore key factors facilitating inter-group dialogue and mutual healing between Hutus and Tutsis through Healing of Life Wounds, a community-based mental health programme	Programme recipients: n=23	Data collection: <ul style="list-style-type: none"> Rating scale Focus groups Data analysis: <ul style="list-style-type: none"> Narrative analysis 	Reliability: Medium Usefulness: High
Kunz (2009) <i>Tier 2: Community and family support</i>	Earthquake: Iran; December 2003	Girls and boys aged 6–18 years old	Sport and play for traumatized children and youth programme included: <ul style="list-style-type: none"> sport and other game-based activities, daily recreational activities e.g. information and education on health, nutrition and drugs, as well as conflict management and violence prevention programmes. 	Post-conflict	To discuss the experiences gained and lessons learned and to indicate the advantages and limitations of using sport and play as tools to support psychosocial rehabilitation in a post-disaster situation	Programme providers: n=not stated Programme recipient parents: n=15	Data collection: <ul style="list-style-type: none"> Semi-structured interviews Questionnaires Data analysis: <ul style="list-style-type: none"> Not stated 	Reliability: Medium Usefulness: High
Lykes (2014) <i>Tier 2: Community and family support</i>	Guatemala: armed conflict	Mayan women	Creative arts project with Mayan women adopting psychosocial strategies and feminist rights-based interventions and participatory research methods.	Post-conflict	To explore the potential of creativity, including the creative arts, embodied practices and Mayan storytelling and rituals	Programme recipients: n=105	Data collection: <ul style="list-style-type: none"> Participatory research workshops Data analysis: <ul style="list-style-type: none"> Thematic analysis 	Reliability: Medium Usefulness: High
Nakkash (2012) <i>Tier 2: Community and family support</i>	Palestinian/Israeli conflict; ongoing	Refugees	Qaderoon' (We Are Capable) social skills building intervention for children (11–14 years). The intervention was informed by three evidence-based programmes: <ul style="list-style-type: none"> stress inoculation training improving social awareness/social problem-solving and positive youth development programme. 	Ongoing	To evaluate the process of a community-based mental health promotion intervention for children living in a Palestinian refugee camp in Beirut	Programme providers: n=not stated Programme recipients: n=150	Data collection: <ul style="list-style-type: none"> Interviews Clinical field observations forms Recipient satisfaction form Data analysis: <ul style="list-style-type: none"> Statistical Thematic/ Descriptive 	Reliability: High Usefulness: Medium
Nastasi et al. (2011) <i>Tier 2: Community and family support</i>	Tsunami: Sri Lanka; December 2004	School students aged 11+	The post-tsunami after-school programme delivered: <ul style="list-style-type: none"> the curriculum in a cooperative learning format to enable facilitation of peer support, although all sessions included opportunities for individual, small and large group formats curriculum activities that incorporated individual and collaborative drawing and writing, group discussion and problem-solving, and group role-plays. 	Post-crisis	To evaluate a psychological well-being curriculum provided to children and adolescents to support them in discussing tsunami-specific and developmentally and contextually relevant stressors as they engaged in activities to facilitate identification and practice of coping responses to personal, cultural and contextual stressors	Programme providers: n=not stated Programme recipients: n=120	Data collection: <ul style="list-style-type: none"> Curriculum feedback activities Student evaluation forms Teacher evaluation forms Data analysis: <ul style="list-style-type: none"> Thematic analysis 	Reliability: High Usefulness: Medium
Song et al. (2013) <i>Tier 4: Specialized services</i>	Civil war: Sierra Leone; 1991–2002	Former child soldiers	Primary mental healthcare including psychiatric hospitals and community mental health services	Post-conflict	To understand the barriers and facilitators to mental healthcare for former child soldiers	Programme providers: n=24	Data collection: <ul style="list-style-type: none"> Semi-structured interviews Data analysis: <ul style="list-style-type: none"> Thematic analysis 	Reliability: High Usefulness: High

Study	Details of the setting and programme				Details of the study			
	Humanitarian crises	Programme recipients	Intervention/ components	Programme timing	Aim of the study	Study population	Data collection/ analysis	Study quality
Sahin (2011) <i>Tier 2: Community and family support</i>	Earthquake: Marmara, Turkey; 1999	Children and parents	A school-based psycho-educational programme held seminars with aims to provide: <ul style="list-style-type: none"> information on normal psychological reactions after natural disasters opportunities to share reactions with others and to form or strengthen bonds between the two systems of school and the family effective coping mechanisms and ensure their use among the attendees an environment in which the reactions of the children are normalized so that their learning and development capacities are enhanced. 	Immediately after	To assess the impact and ascertain satisfaction survey of the parents and children who attended psycho-educational seminars	Programme recipients: Children: 593 Parents n=137	Data collection: <ul style="list-style-type: none"> Questionnaires Data analysis: <ul style="list-style-type: none"> Correlational analysis 	Reliability: High Usefulness: Medium

Table 2.2 Overview of dimensions to assess quality of process evaluations

	Steps taken to increase rigour in sampling?	Steps taken to increase rigour in data collection?	Steps taken to increase rigour in data analysis?	Findings grounded in the data?	Reliability	Breadth and/or depth in the findings?	Participants' perspectives were privileged?	Usefulness
Baingana (2011)	• No	• Yes	• No	• No	Low	• Yes	• No	Medium
Boothby (2006)	• Yes	• Yes	• No	• Yes	Medium	• Yes	• Yes	High
Budosan (2011)	• No	• Yes	• No	• No	Low	• Yes	• No	Medium
Chauvin (1998)	• No	• Yes	• No	• No	Low	• No	• No	Low
Christensen (2015)	• Yes	• Yes	• Yes	• Yes	High	• Yes	• Yes	High
Hogwood (2014)	• No	• Yes	• Yes	• Yes	Medium	• Yes	• Yes	High
King (2014)	• No	• Yes	• Yes	• Yes	Medium	• Yes	• Yes	High
Kunz (2009)	• No	• Yes	• No	• Yes	Medium	• Yes	• Yes	High
Lykes (2014)	• No	• Yes	• Yes	• Yes	Medium	• Yes	• Yes	High
Nakkash (2012)	• Yes	• Yes	• Yes	• Yes	High	• Yes	• No	Medium
Nastasi (2011)	• Yes	• Yes	• Yes	• Yes	High	• Yes	• No	Medium
Sahin (2011)	• Yes	• Yes	• Yes	• Yes	High	• No	• Yes	Medium
Song (2013)	• Yes	• Yes	• Yes	• Yes	High	• Yes	• Yes	High

Table 2.3: Themes

Study			Baingana and Onyango (2011)	Boothby (2006)	Budosan and Bruno (2011)	Chauvin (1998)	Christensen and Edwards (2015)	Hogwood (2014)	King (2014)	Kunz (2009)	Lykes (2014)	Nakkash (2012)	Nastasi (2011)	Song (2013)	Sahin (2011)
Quality: reliability and usefulness (H: High; M: Medium; L: Low)			L/M	M/H	L/M	L/L	H/H	M/H	M/H	M/H	M/H	H/M	H/M	H/M	H/H
Themes	Theme 1: Engagement with local communities and government agencies	Community mobilization and sensitization	✓	✓			✓								
		Establishing good relationships with parents to support uptake of MHPSS								✓		✓			
		Developing effective local community and government partnerships	✓		✓	✓								✓	
	Theme 2: Sufficient number of trained MHPSS programme providers	<i>Challenge of recruiting and retaining providers</i>	✓			✓								✓	
		Ensuring providers were trained to deliver MHPSS programmes	✓		✓	✓								✓	
	Theme 3: Experience of programme activities	Increasing meaningful and enjoyable engagement through the provision of varied and creative activities									✓		✓		✓
		Culturally relevant activities		✓							✓				
	Theme 4: Benefits of group-based programmes	A resource and source of support					✓	✓			✓		✓		
		Safe space to tell their story						✓	✓						
	Theme 5: Quality and nature of relationships with programme providers	Building trusting and supportive relationships								✓	✓				
		Personal qualities and providers acting as role models		✓					✓	✓					

APPENDIX 3: THE IMPACT OF MHPSS ON CHILDREN AND YOUNG PEOPLE

Table 3.1: Key characteristics of MHPSS for CYP (n=26)

Study	Setting	Population	Format	Delivery setting	Dose/Intensity/duration	Person who delivered	Training for staff	Intervention	Control
Berger (2009)	Sri Lanka Tsunami	Elementary school students; age 9–14 years Female 41.7% Sample size: n=166 INT: n=84 CON: n=82	Group	School – classroom	12 x 90 min sessions	Teachers	Y	CBT– classroom-based psychosocial intervention	Wait-list
Betancourt (2014)	Sierra Leone Armed conflict	Youth; mean age =18 y; Female 45.6% Sample size: n=436 INT: n=222 CON: n=214	Group	Community sites	10–12 x 90 min sessions, over 10 weeks	Local lay counsellors	Y	CBT	No intervention
Bolton (2007)	Uganda Armed conflict	Acholi adolescents aged 14–17 years from two IDP camps: Female 57.3% Sample size: n=314 INT 1(IPT): n=105 INT 2 (Creative art): n=105 CON: n=104	Group	Camps	16 x 90–120 min sessions	Facilitators	Y	INT 1= Interpersonal Psychotherapy (IPT-G) INT 2 = Psychosocial (Creative play)	Wait-list
Catani (2009)	Sri Lanka Tsunami and war	Children aged 8–14 years, Female 45.16% Sample size: n=31 INT: n=16 CON: n=15	Individual	Refugee camps	6 x 60–90 min sessions over two weeks	Local teacher counsellors	Y	KIDNET	Active intervention (meditation/relaxation)
Chen (2014)	China Earthquake	Adolescents from two secondary schools; mean age = 14.50 y; female 68% Sample size: n=40 INT 1 (CBT): n=16 INT 2 (Support group): n=12 CON: n=12	Group	INT 1 = not stated, INT2: home	6 x 60 min sessions, weekly	School staff	CBT= Unclear Support – local volunteers received training	INT1 = CBT INT2 = Support group	No treatment
Cluver (2015)	Haiti Earthquake	Children living in orphanages; mean age = 11.23 y; Female 42% Sample size: n=61 INT: n=34 CON 1: n=27 CON 2: n=15	Group	School room	8 weeks, twice 45 mins weekly	Not stated	Not stated	Yoga	CON 1: Aerobic dance control CON 2: Wait-list group (non-random)
Dybdahl (2001)	Bosnia and Herzegovina Armed conflict	Bosnian displaced mothers; Female only (mothers) child (mean age = 5.5 y; Female =55.17%) Sample size: n=87 INT: n=42 CON: n=45	Group	Not stated for the main intervention component; home visit	Weekly group meeting for five months; 60 min, home visit	School teachers for intervention s, also physician for medication group	Y	Psychosocial intervention	TAU (basic medical care)
Ertl (2011)	Uganda Civil war	Child soldiers; Female 67.1% Sample size: n=85 INT1 (NET): n=29 (m=18.66 y) INT2 (academic catch-up): n =28 (m =18.32 y) CON: n=28 (m=18.07 y)	Individual	IDP camp	8 sessions, 90–120 mins, 3 times a week	Local lay counsellors	Y	NET	Wait-list
Gordon (2008)	Kosovo Armed conflict	Children; mean age = 16.3 y; Female = 75.60% Sample size: n=82 INT: n=41 CON: n=41	Group	School	12 x 120 min, session, twice weekly for 6 weeks	Teachers	Y	Mind-body technique	Wait-list
Jordans (2010)	Nepal Armed conflict	Schoolchildren; mean age = 12.7 y; female 48.6% Sample size: n=325 INT: n=164 CON: n=161	Group	Classroom	15 x 60 min sessions over 5 weeks	Research assistants	Y	CBT: Classroom based intervention (CBI)	Wait-list

Study	Setting	Population	Format	Delivery setting	Dose/ Intensity/ duration	Person who delivered	Training for staff	Intervention	Control
Kalantari (2012)	Iran Armed conflict	Afghan refugees in school; Female 55% Sample size: n=64 INT: n=32 (m=14.58 y) CON: n=32 (m=15.03 y)	Group	School	3 consecutive days: two 15 min sessions a day	Not stated	Not stated	NET: Writing for Recovery	No intervention
Khamis (2004)	Palestine Armed conflict	Children age 6–16 years, Female 43.37% Sample size: n=664 6–11 y INT: n=244 CON: n=162 12–16 y INT: n=136 CON: n=122	Group	School or camp	15 sessions over 5 weeks	Social workers, school counsellors, other psychological support personnel	Y	CBT: Classroom-based intervention	Wait-list
Lange-Nelsen (2012)	Gaza Armed conflict	Adolescents; mean age = 14.54 y; Female 50% Sample size: n=124 INT: n=66 CON: n=58	Group	School	2 x 15 min sessions per day for 3 days	Psychologists	Y	NET: Writing intervention	Wait-list
Layne (2008)	Bosnia Armed conflict	War-exposed secondary school students from 10 schools; Muslim Sample size: n=127 INT: n=61 (Female 63%; mean age = 15.9 y) CON: n=61 (Female 66%, mean age = 16 y)	Group	School	17–20 weekly group sessions for 7 months (school year), between 60 to 90 mins	School counsellors (psychologists, pedagogues)	Y	Psychotherapy and psycho education programme	Psycho-education and skill interventions
McMullen (2013)	Congo Armed conflict	39 former soldiers and 11 war-affected boys; mean age = 15.8 y Sample size: n=50 INT: n=25 CON: n=25	Group	School	15 sessions	Researchers and counsellors	Y	CBT	Wait-list (vocational training)
O'Callaghan (2013)	Congo Armed conflict	Girls who had witnessed or had personal experience of rape or sexual abuse; mean age = 16 y Sample size: n=52 INT: n=24 CON: n=28	Group	School	15 x 120 min sessions, 3 days a week over five weeks	Social workers	Y	CBT	Wait-list (vocational training)
O'Callaghan (2014)	Uganda Armed conflict	Children: mean age = 13.42 y; females 45% Sample size: n=159 INT: n=79 CON: n=80	Group	Church	3 times weekly, 8 x 120 min sessions over 4 weeks	Local lay facilitators	Y	Family-focused-psychosocial interventions	Wait-list
O'Callaghan (2015)	Congo Armed conflict	War-affected youth; mean age = 14.88 y Sample size: n=50 INT1 (CBT): n=26 INT2 (CFS): n=24 CON: n=22	Individual	Field attached to local schools	9 x 90 min sessions, three sessions per week plus two 90 min care-givers' sessions in group sessions	Local teachers as facilitators and social workers	Y	INT1: CBT INT2: Child-friendly spaces	Wait-list
Pityaratstian (2015)	Thailand Tsunami	Children; mean age = 12.25 y; Female = 72.2% Sample size: n=36 INT: n=18 CON: n=18	Group	School and outdoor	Daily, 120 mins, sessions for 3 days	Psychiatrists	Y	CBT	Wait-list
Quata (2012)	Palestine Armed conflict	Children; mean age = 11.29; Female 49.4% Sample size: n=482 INT: n=242 CON: n=240	Group	School	2 weekly 2hr sessions in total of 16 sessions, last for 4 weeks	Psychologists	Y	CBT: Teaching Recovery Techniques (TRT)	Wait-list
Richards (2014)	Uganda Armed conflict	Children; mean age = 9.83 y Sample size: n=1462 INT: Boys n=74; girls n=81 CON 1 (boys: n=72) CON 2 (boys: n=472; girls: n=763)	Group	Sports field	11 weeks – 45 mins per session	Local volunteers	Y	Psychosocial: sports for development	CON 1: Wait-list CON2: No intervention

Study	Setting	Population	Format	Delivery setting	Dose/ Intensity/ duration	Person who delivered	Training for staff	Intervention	Control
Schauer (2008)	Sri Lanka Armed conflict and tsunami	Children who suffered severe PTSD; mean age = 13.1 y Sample size: n=47 INT: n=25 CON: n=22	Group	School	6 x 60–90 mins, sessions	Teacher counsellors	Y	KIDNET	Meditation/ relaxation (adapted)
Shoaakazemi (2012)	Iran Earthquake	Girls with PTSD (15–18 y) Sample size: n=24 INT: n=12 CON: n=12	Individual	Not stated	8 x, 60 min sessions	Health professionals	Not stated	Psychotherapy: logotherapy	No intervention
Tol (2008)	Indonesia Political violence	Schoolchildren, mean age = 9.9 y, Girls 48.63%, Sample size: n=403 INT: n=182 CON: n=221	Group	Classroom	15 sessions, over 5 weeks	Local community workers	Y	CBT: classroom-based intervention	Wait-list
Tol (2012)	Sri Lanka Armed conflict	Children; mean age 12.29 y; Girls 48% Sample size: n=399 INT: n=199 CON: n=200	Group	School	15 sessions for 5 weeks	Local, trained, non-specialized staff	Y	CBT: classroom-based intervention	Wait-list
Tol (2014)	Burundi Armed conflict	Children, mean age 12.29 y; Female 48.02% Sample size: n=329	Group	School	15 sessions for five weeks	Local facilitators	Y	CBT: classroom-based intervention	Wait-list

Table 3.2: Key characteristics of studies evaluating MHPSS for CYP (n=26)

Study	Study design	Unit of allocation	Fidelity	Informed consent	Follow-ups	Test for MH	Attrition	Overall risk of bias	Outcome measures included in the synthesis
Berger (2009)	Clustered RCT	Classroom	Y	Y	3 months	No	No drop-out	High	PTSD Depression Somatic symptoms Functional impairment Hope
Betancourt (2014)	RCT stratified	Individual	Y	Y	Post and 6 months	No	Post: total 10% 6 months 15%	Moderate	PTSD Emotional problems Psychological distress Functional impairment Prosocial Social support School performance and attendance
Bolton (2007)	RCT	Individual	Y	Y	Post (one month)	Local depression symptom scale and function scale	Post: total =10%	Moderate	Depression Functional impairment
Catani (2009)	RCT	Individual	Y	Y	Post (4-5 weeks) and 6 months	Interview	one drop out	Low	PTSD Somatic symptoms Functional impairment
Chen (2014)	RCT	Individual	N	Y	Post and 3 months	CRIES-13	20% total INT=37.5%; support group = 16.67%	High	PTSD Depression Psychological resilience
Coer (2015)	RCT and non-random	Individual	N	By orphanage directors	Post	N	Post: total 60.65%: INT=55.9% CON=66.67%	High	PTSD Psychological distress
Dybdahl (2001)	RCT	Individual	N	Y	Post	N	Post: Total 13.8% 12 families dropped out; INT: 7 families CON: 5 families	Low	PTSD Depression Psychological distress Social support Well-being Physical health
Ertl (2011)	RCT	Individual	Y	Y	3, 6, 12 months	CAPS	12 months: INT 1: (NET)=13.7%; INT2=17.8% CONT=0%	Moderate	PTSD Depression Guilt Suicide risks Functional impairment Stigmatization
Gordon (2008)	RCT	Individual	Y	Y	Post	Y, interviewed using HTQ	INT=7.31% and CONT=2.5%	Moderate	PTSD
Jordans (2010)	Clustered RCT	District	Y	Y	Post	Generic psychosocial distress using the Child Psychosocial Distress Screener (CDS)	Post: Total 0.6%	Moderate	PTSD Depression Anxiety Psychological distress Conduct problems Functional impairment Prosocial Hope
Kalantari (2012)	RCT	Individual	N	Not stated	Post	Traumatic Grief Inventory for Children (TGIC)	Post: Total 9.3% (only experimental group drop-out)	Moderate	Grief
Khamis (2004)	RCT	Individual	N	Y	Post	N	Post: Total = 20.95%	High	PTSD Depression Emotional problems Anxiety Psychological distress Conduct problems Prosocial Coping Hope Family relationship Peer and sibling relationships School performance
Lange-Nelsen (2012)	RCT	Individual	N	Y	Post, one month, 5 months	No	Post: no drop-out	Low	PTSD Depression Anxiety

Study	Study design	Unit of allocation	Fidelity	Informed consent	Follow-ups	Test for MH	Attrition	Overall risk of bias	Outcome measures included in the synthesis
Layne (2008)	RCT	Individual	Y	Y	Post and 4 months	No	Post: INT=4.28% CON=25.60% 4 months: INT=53.24%; CON=63.41%	High	PTSD Depression Grief
McMullen (2013)	RCT	Individual	Y	Y	Post (7 weeks) and 3 months	No	Post: INT=4% CON=4%	Moderate	PTSD Emotional problems Psychological distress Conduct problems Prosocial
O'Callaghan (2013)	RCT	Individual	Y	Y	Post (7 weeks) and 3 months	No	Post: INT=16.67% CON=7.14%	Low	PTSD Emotional problems Conduct problems Prosocial
O'Callaghan (2014)	RCT	Individual	Y	Y	Post and 3 months	No	Post: INT=3.8% CON=3.75%	Low	PTSD Emotional problems Conduct problems Prosocial
O'Callaghan (2015)	RCT	Individual	Y	Y	Post and 6 months	No	Total 2% (only one drop-out from the TF-CBT intervention)	Low	PTSD Emotional problems Conduct problems Prosocial
Pityaratstian (2015)	RCT	Individual	N	Y	Post and 1 month	CRIS and PTSD-RI	No drop-out	Moderate	PTSD
Quata (2012)	cRCT	Class	Y	Y	Post and 6 months	Not stated	INT=14.4% CON=17.9%	Moderate	PTSD Depression Psychological distress Prosocial Family factor Peer and sibling relationships Well-being
Richards (2014)	RCT	Individual	Y	Y	Post	Unclear	Post: INT = boys 1.4%–4.1%; girls 2.5% CON 1 (Wait-list) boys = 1.4%–4.2%; CON 2: boys non-registered = 4.3%–8.7%; girls= 4.9%–9.2%	Low	Depression Anxiety Physical health
Schauer (2008)	cRCT	School	Y	Y	5 months post, and 13 months post-intervention	UCLA RI	No drop-out	Low	PTSD Depression School performance
Hoakazemi (2012)	Quasi-RCT	Individual	Not stated	Not stated	Post	PTSD inventory	No drop-out	Moderate	Psychological distress Social relationship Physical health
Tol (2008)	cRCT	School	Y	Y	Post and 6 months	Symptom checklists: Child Post-traumatic Scale and Depression Self-Rating scale	Post: INT=0% CON=4.5% 6 months: INT=2.7%, CON=13.57%	Moderate	PTSD Depression Anxiety Conduct problems Functional impairment Hope
Tol (2012)	cRCT	District	N	Y	Post (one week) and 3 months	Child Psychosocial Distress Screener (CPDS)	Post: No drop-outs 3 months: Total=2 drop-outs 0.5%	Moderate	PTSD Depression Anxiety Psychological distress Conduct problems Functional impairment Prosocial Coping
Tol (2014)	cRCT	School	N	Y	Post and 3 months	Y	Post: Total=12.2% 3 months Total=4.3%	Moderate	PTSD Depression Functional impairment Social support Coping Hope

Table 3.3: Scales and measurement tools used for each outcome measure in the studies (n=26)

Outcome	Scales or measures
PTSD	UCLA Posttraumatic Stress Reaction Index Self-rated Child Posttraumatic Stress Scale (CPSS) Clinician-Administered PTSD Scale (CAPS) Children's Revised Impact of Event Scales (CRIES) Harvard Trauma Questionnaire (HTQ)
Depression	Depression self-rating scale (Child rated scale) M.I.N.I depression symptom score Achoi Psychosocial Assessment Instrument (APAI) for assessing depression like symptoms Child Depression Inventory (CDI) Beck Depression Inventory (Birchfield reported) Centre for Epidemiologic studies, Depression scale
Anxiety	Self-rated Children's Anxiety Relation Emotional Disorders (SCARED) Achoi Psychosocial Assessment Instrument (APAI) for assessing anxiety like symptoms PENN State Worry Questionnaire for Children Revised Children's Manifest Anxiety Scale (RAMAS)
Psychological distress	Oxford measure of psychosocial adjustment using psychological distress sub-scale African Youth Psychosocial Assessment Instrument (AYPA) sub-scale for assessing psychological distress Strengths and Difficulties sub-scale for assessing psychological difficulties Child's problem checklist (mother-reported) assessing anxiety and sadness, withdrawal and psychosomatic complaints; concentration problems; and physical health) Psychological health using WHO sub-scale
Emotional problems	African Youth Psychosocial Assessment Instrument (AYPA) sub-scale for assessing depression/anxiety Strengths and Difficulties sub-scale for assessing emotional problems
Conduct problems	African Youth Psychosocial Assessment Instrument (AYPA) sub-scale for assessing conduct problems Locally developed conduct problem (e.g. use of violence, imitating soldiers) Aggression Questionnaire sub-scale Aggression scale for parents (parent-reported) Strengths and Difficulties sub-scale for assessing conduct problems
Functional impairment	Locally developed functional impairment scales assessing daily activities, playing, houses, studying and religious activities, social relationship, social life CAPS for functional impairment WHODAS Functional impairment assessing understanding and communicating, mobility, self-care, life activities and participatory in society Children's function impairment
Somatic complaints	Locally developed scale Diagnostic Predictive Scales assessing stomach, respiratory problems, headaches complaints
Prosocial	Strengths and Difficulties sub-scale for assessing prosocial behaviour African Youth Psychosocial Assessment Instrument (AYPA) sub-scale for prosocial behaviour Concerns for Others Scale for assessing child's feeling concern for and desire to help and prosocial behaviour Oxford measure of psychosocial adjustment using prosocial attitudes/behaviours sub-scale
Hope	Children's Hope Scale Self-reported questionnaire assessing children's dispositional hope
Social support	Family Social Support adapted from the A-SCAT Interviews for assessing the degree to which they felt they had someone whom they could trust, ask for advice and get help Social support Inventory Schemes
Well-being	Mental Health Continuum – Short Form (MHC-SF) for youth The Face Scale (Andrew and Withey, 1976)
Grief	Self reported UCLA Grief Inventory for Children Traumatic Grief Inventory for Children (TGIC)
Guilt	Clinician-Administered PTSD Scale (CAPS)
Stigmatization	The Perceived Stigmatization Questionnaire
Resilience	The Connor-Davidson Resilience Scale (CD-RISC)
Suicide	The Mini International Neuropsychiatric Interview (M.I.N.I)

3.4 Meta-analysis findings of MHPSS

Figure 3.1: Meta-analysis results: MHPSS on conduct problems (n=8)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 104$; $df = 10$; $p = 7.48E-18$; $I^2 = 90.4\%$; $\tau^2 = 0.31$.

Random effects model: -0.45 ($-0.81, -0.09$)

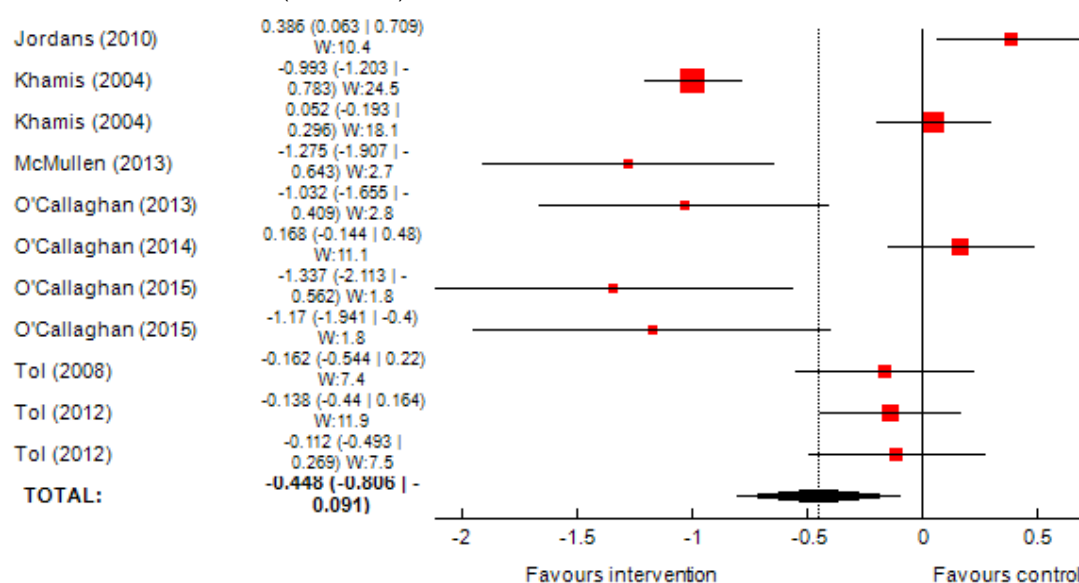


Figure 3.2: Meta-analysis results: MHPSS reporting functioning (n=8)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 21.8$; $df = 13$; $p = 0.0588$; $I^2 = 40.3\%$; $\tau^2 = 0.0279$.

Random effects model: -0.24 ($-0.39, -0.099$)

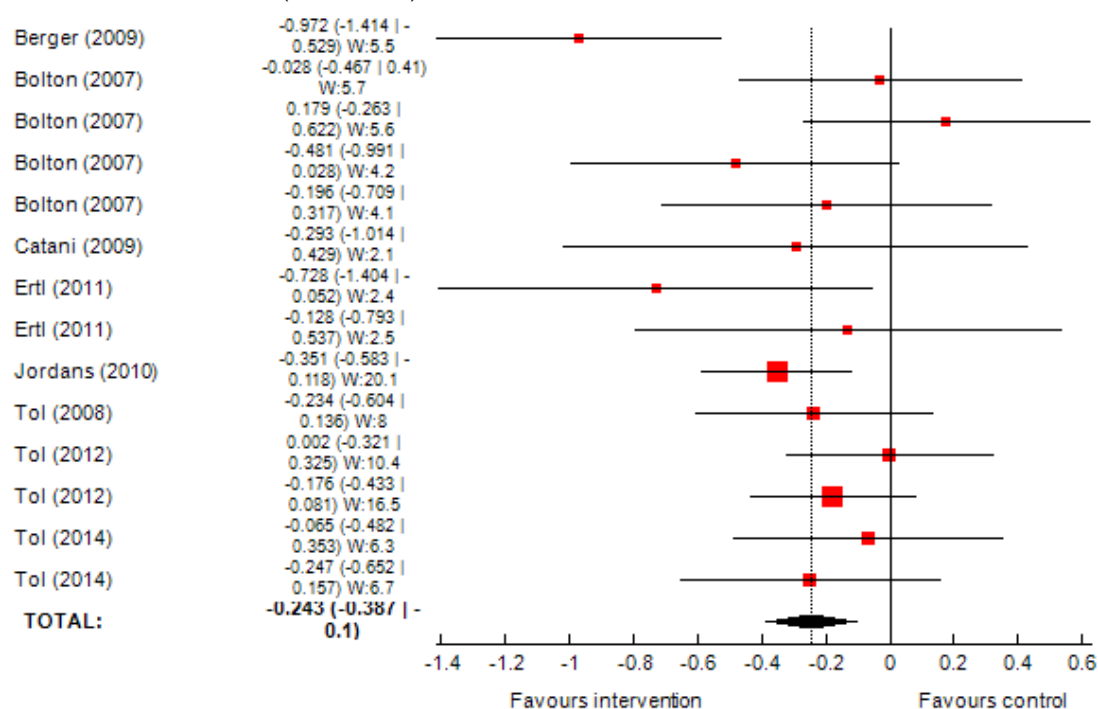
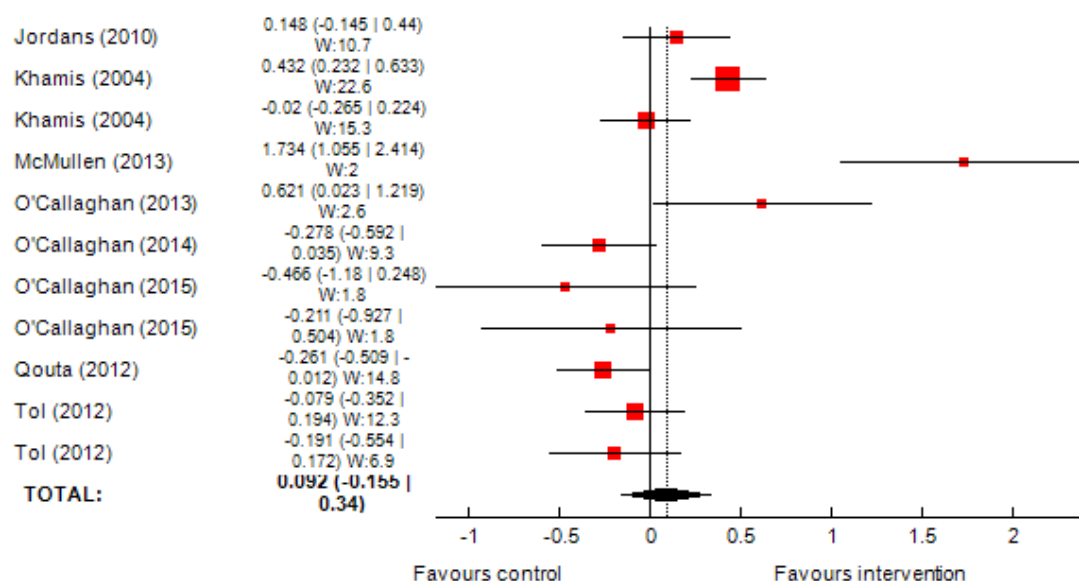


Figure 3.3: Meta-analysis results: MHPSS on prosocial behaviour (n=8)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 57$; $df = 10$; $p = 1.31E-8$; $I^2 = 82.5\%$; $\tau^2 = 0.13$.

Random effects model: 0.09 (-0.16, 0.34)

**Figure 3.4: Meta-analysis results: MHPSS reporting psychological distress (n=8)**

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 75.7$; $df = 10$; $p = 3.44E-12$; $I^2 = 86.8\%$; $\tau^2 = 0.171$.

Random effects model: -0.24 (-0.52, 0.03)

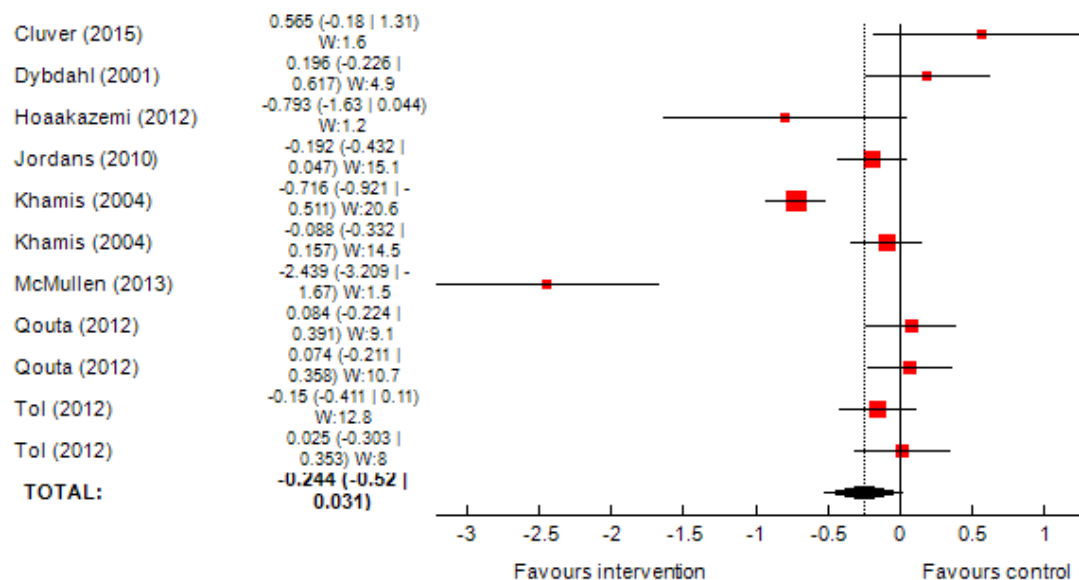
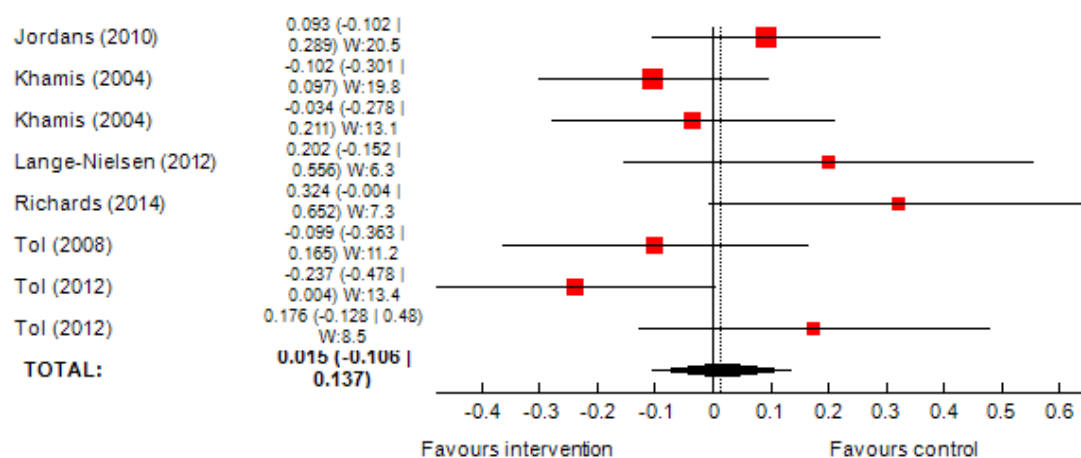


Figure 3.5: Meta-analysis results: MHPSS reporting anxiety (n=6)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 12.5$; $df = 7$; $p = 0.0851$; $I^2 = 44\%$; $\tau^2 = 0.0131$

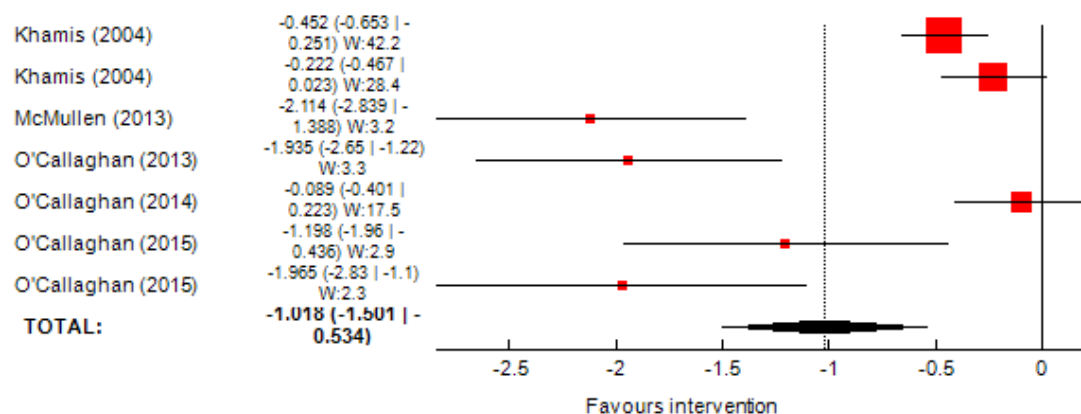
Random effects model: 0.02 (-0.11, 0.14)

**Figure 3.6: Meta-analysis results: MHPSS reporting emotional problems (n=5)**

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 60.5$; $df = 6$; $p = 3.55E-11$; $I^2 = 90.1\%$; $\tau^2 = 0.343$.

Random effects model: -1.02 (-1.5, -0.53)

**Figure 3.7: Meta-analysis results: MHPSS reporting hope (n=5)**

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 28.8$; $df = 6$; $p = 6.7E-5$; $I^2 = 79.2\%$; $\tau^2 = 0.0909$.

Random effects model: 0.45 (0.19, 0.71)

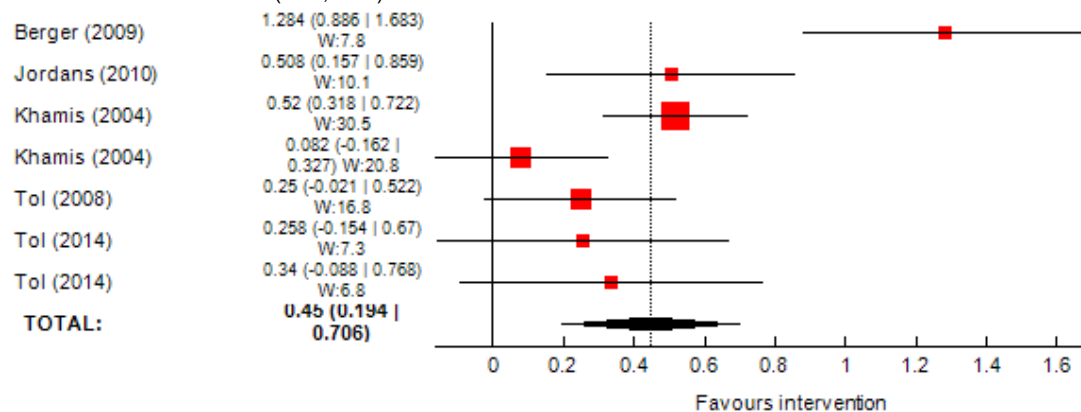
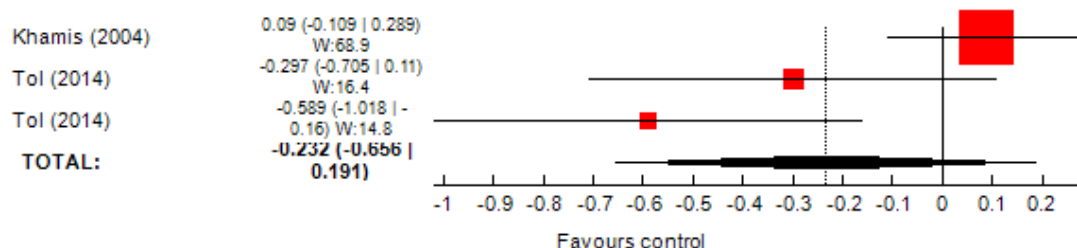


Figure 3.8: Meta-analysis results: MHPSS reporting coping (n=2)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 9.3$; $df = 2$; $p = 0.00955$; $I^2 = 78.5\%$; $\tau^2 = 0.108$.

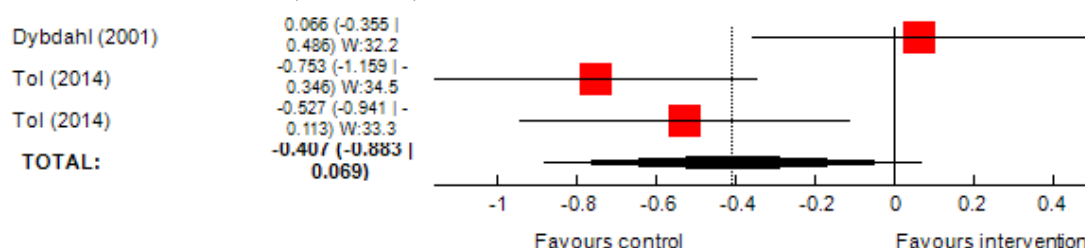
Random effects model: -0.23 ($-0.66, 0.19$)

**Figure 3.9: Meta-analysis results: MHPSS reporting social support (n=2)**

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 7.95$; $df = 2$; $p = 0.0187$; $I^2 = 74.9\%$; $\tau^2 = 0.133$.

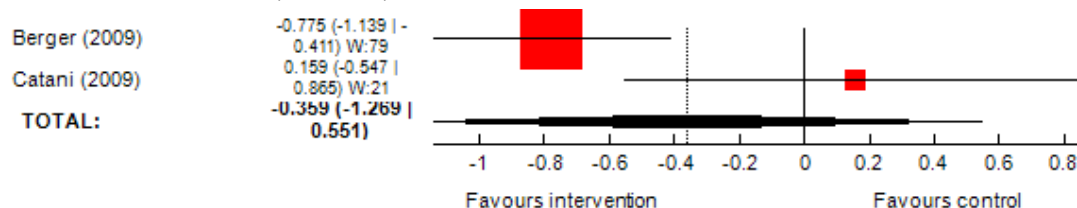
Random effects model: -0.407 ($-0.88, 0.069$)

**Figure 3.10: Meta-analysis results: MHPSS reporting somatic complaints (n=2)**

Measure: Continuous: d (Hedges g)

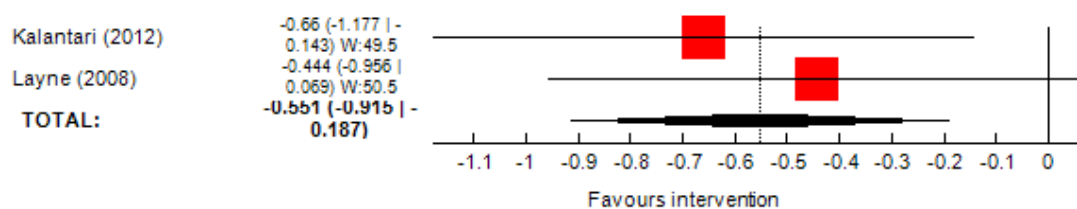
Heterogeneity: $Q = 5.31$; $df = 1$; $p = 0.0212$; $I^2 = 81.2\%$; $\tau^2 = 0.354$.

Random effects model: -0.36 ($-1.27, 0.55$)

**Figure 3.11: Meta-analysis results: MHPSS reporting grief (n=2)**

Heterogeneity: $Q = 0.34$; $df = 1$; $p = 0.56$; $I^2 = 0\%$; $\tau^2 = 0$.

Random effects model: -0.55 ($-0.92, -0.19$)



3.5 Meta-analysis findings of CBT studies

Figure 3.12: Meta-analysis results: CBT interventions reporting PTSD (n=12)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 161$; $df = 15$; $p = 0$; $I^2 = 90.7\%$; $\tau^2 =$

Random effects model: -0.561 (-0.872 , -0.251)

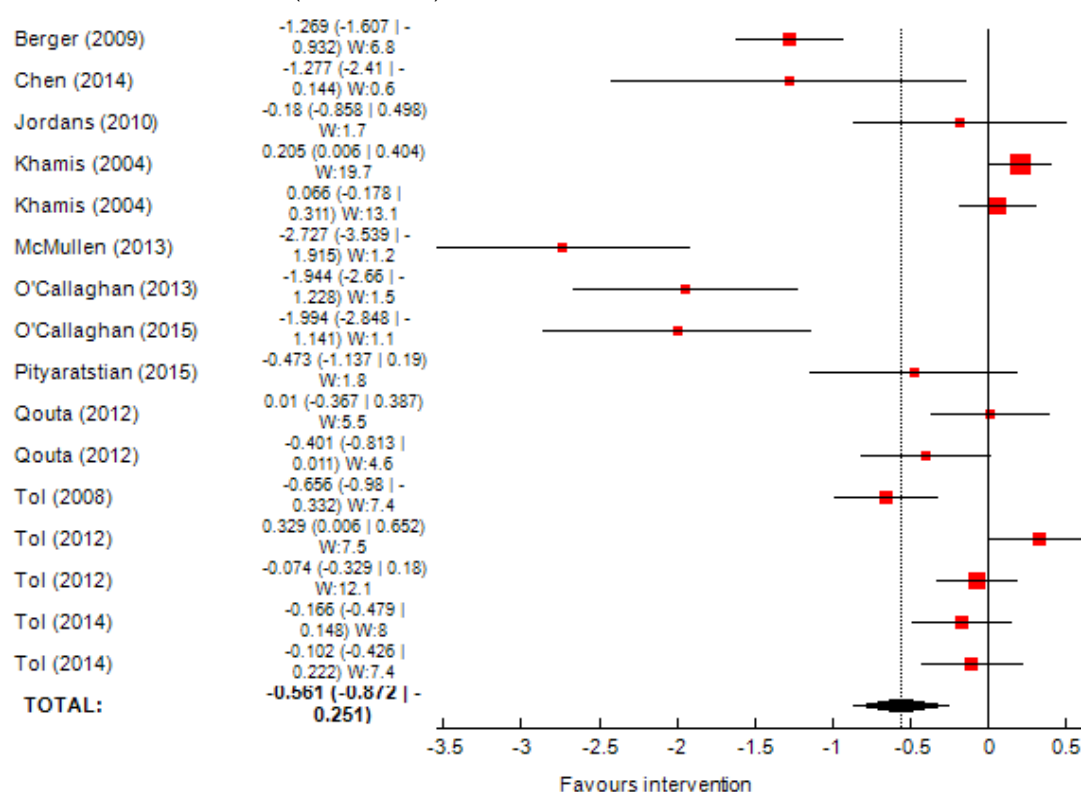


Figure 3.13: Meta-analysis results: CBT interventions reporting depression (n=8)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 35.8$; $df = 10$; $p = 9.1E-5$; $I^2 = 72.1\%$; $\tau^2 = 0.0645$.

Random effects model: -0.21 (-0.398 , -0.03)

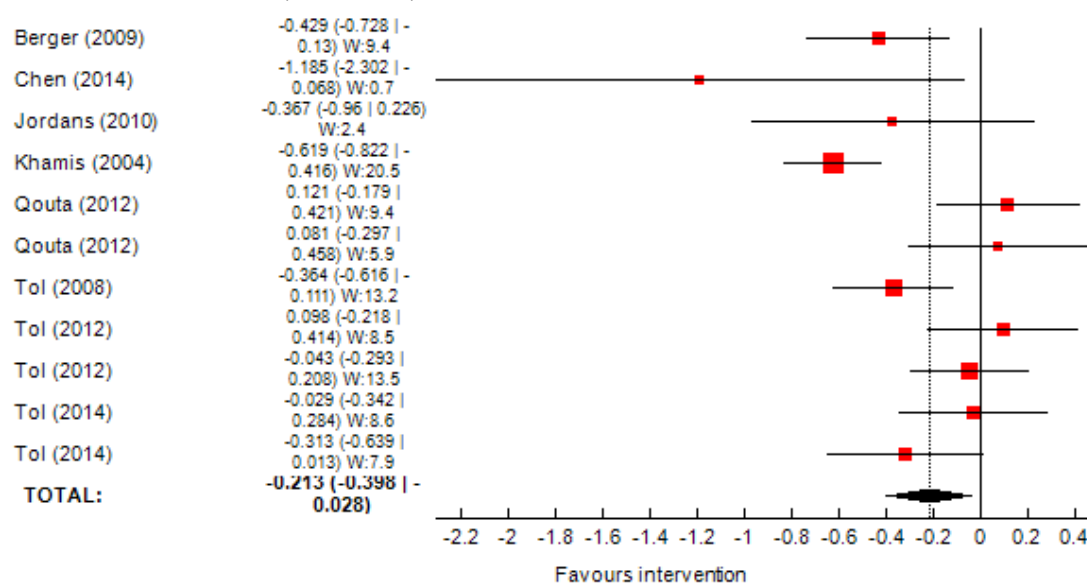
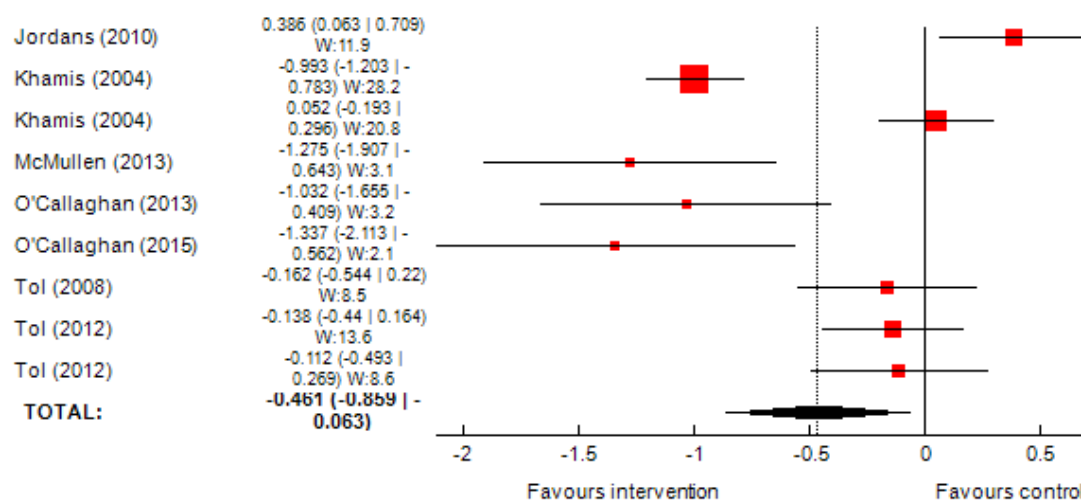


Figure 3.14: Meta-analysis results: CBT interventions on conduct problems (n=7)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 89.6$; $df = 8$; $p = 5.57E-16$; $I^2 = 91.1\%$; $\tau^2 = 0.319$.

Random effects model: -0.461 ($-0.859, -0.063$)

**Figure 3.15: Meta-analysis results: CBT interventions reporting prosocial behaviour (n=7)**

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 51.4$; $df = 8$; $p = 2.25E-8$; $I^2 = 84.4\%$; $\tau^2 = 0.139$.

Random effects model: 0.162 ($-0.12, 0.44$)

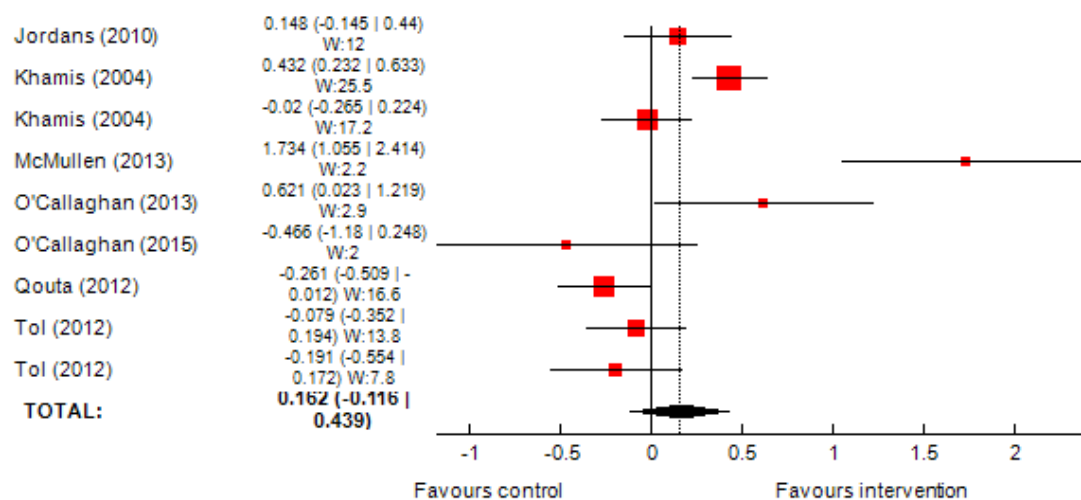
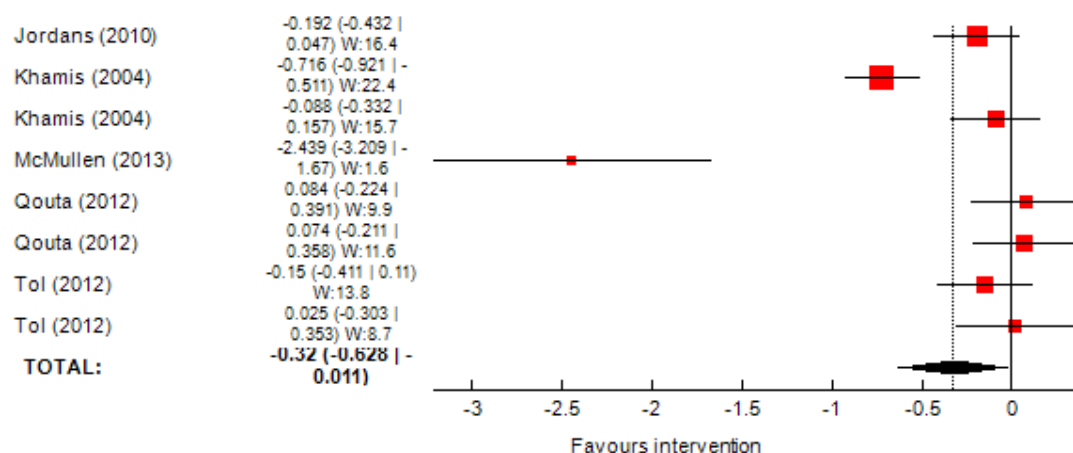
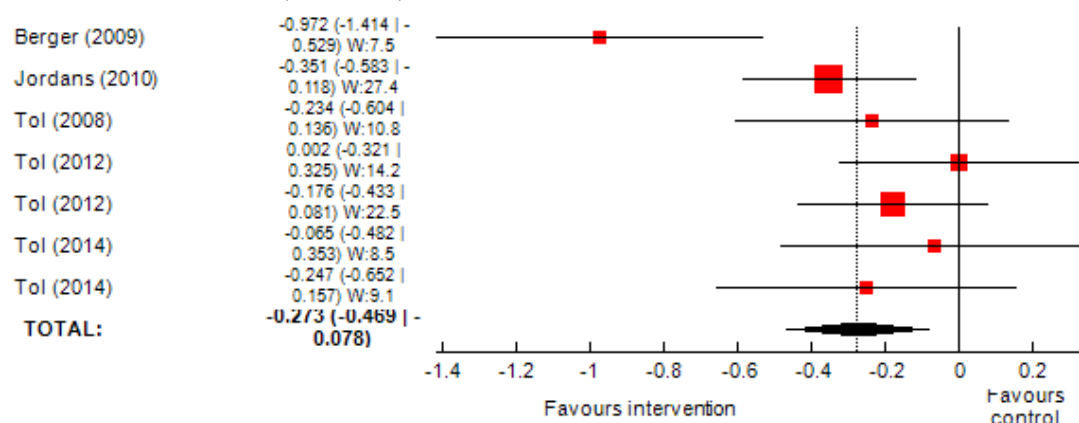


Figure 3.16: Meta-analysis results: CBT interventions reporting psychological distress (n=5)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 65.7$; $df = 7$; $p = 1.11E-11$; $I^2 = 89.3\%$; $\tau^2 = 0.169$.Random effects model: -0.32 ($-0.63, -0.01$)**Figure 3.17: Meta-analysis results: CBT interventions reporting functional impairment (n=5)**

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 14.3$; $df = 6$; $p = 0.0265$; $I^2 = 58\%$; $\tau^2 = 0.039$.Random effects model: -0.27 ($-0.47, -0.08$)**Figure 3.18: Meta-analysis results: CBT interventions reporting hope (n=5)**

Measure: Continuous: d (Hedges g)

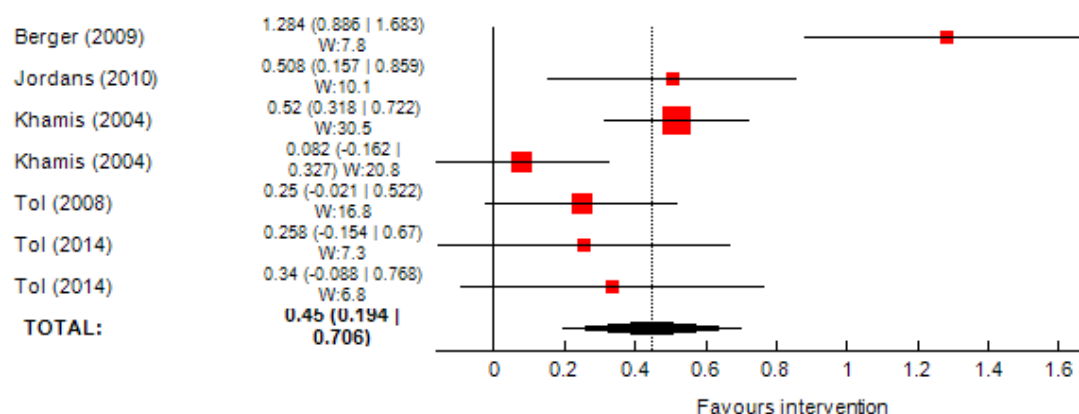
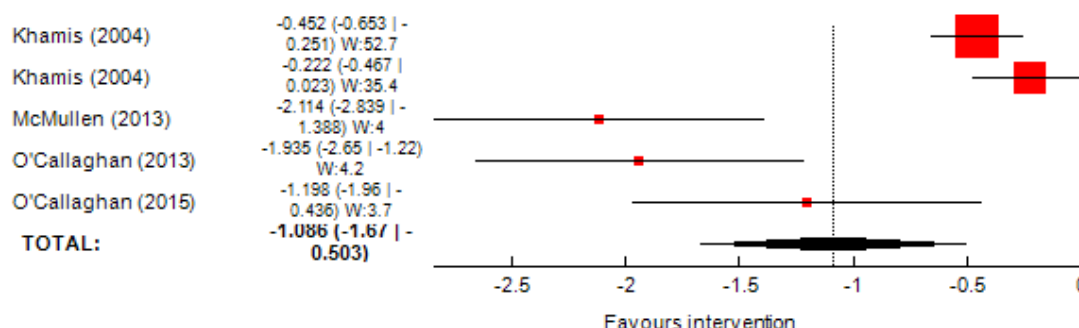
Heterogeneity: $Q = 28.8$; $df = 6$; $p = 6.7E-5$; $I^2 = 79.2\%$; $\tau^2 = 0.0909$.Random effects model: 0.45 ($0.19, 0.71$)

Figure 3.19: Meta-analysis results: CBT interventions reporting emotional problems (n=4)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 42.7$; $df = 4$; $p = 1.17E-8$; $I^2 = 90.6\%$; $\tau^2 = 0.369$.

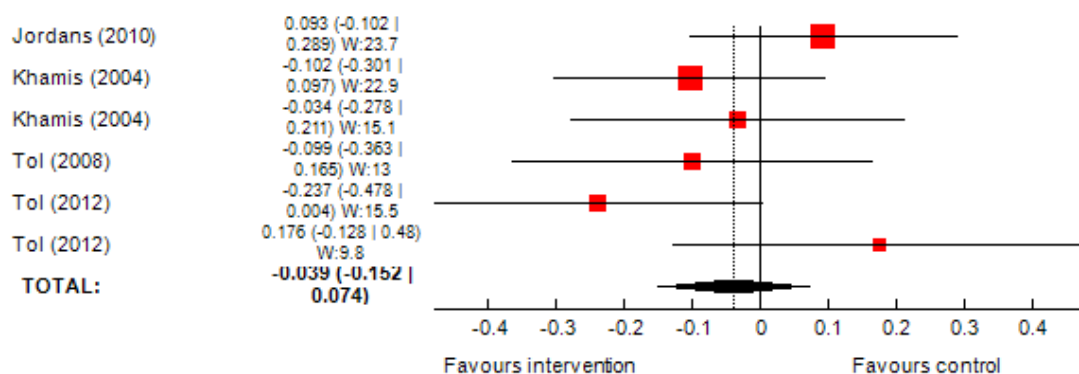
Random effects model: -1.09 ($-1.67, -0.50$)

**Figure 3.20: Meta-analysis results: CBT interventions reporting anxiety (n=4)**

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 6.86$; $df = 5$; $p = 0.231$; $I^2 = 27.2\%$; $\tau^2 = 0.00536$.

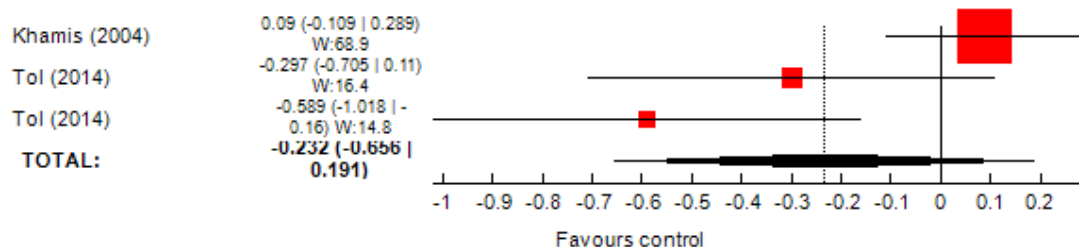
Random effects model: -0.039 ($-0.15, 0.07$)

**Figure 3.21: Meta-analysis results: CBT interventions reporting coping (n=2)**

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 9.3$; $df = 2$; $p = 0.00955$; $I^2 = 78.5\%$; $\tau^2 = 0.108$.

Random effects model: -0.232 ($-0.656, 0.191$)



3.5.1: Meta-analysis findings of CBT studies: TF-CBT

Figure 3.22: Meta-analysis results: TF-CBT interventions reporting conduct problems (n=3)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 0.453$; $df = 2$; $p = .2$; $I^2 = 0\%$; $\tau^2 = 0$.

Random effects model: -1.2 (-1.58 , -0.812)

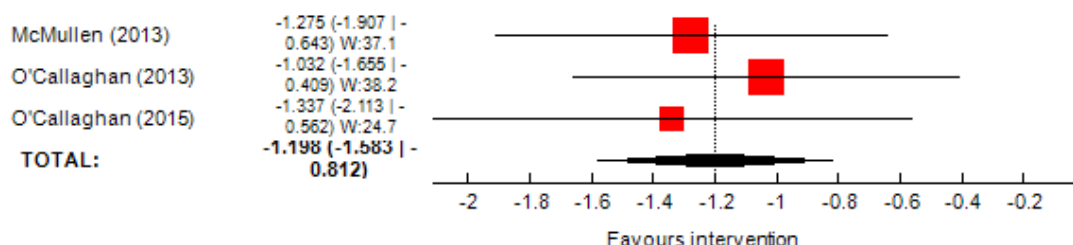


Figure 3.23: Meta-analysis results: TF-CBT interventions reporting prosocial behaviours (n=3)

Heterogeneity: $Q = 19.2$; $df = 2$; $p = 6.82E-5$; $I^2 = 89.6\%$; $\tau^2 = 0.98$.

Random effects model: 0.63 (-0.55 , 1.82)

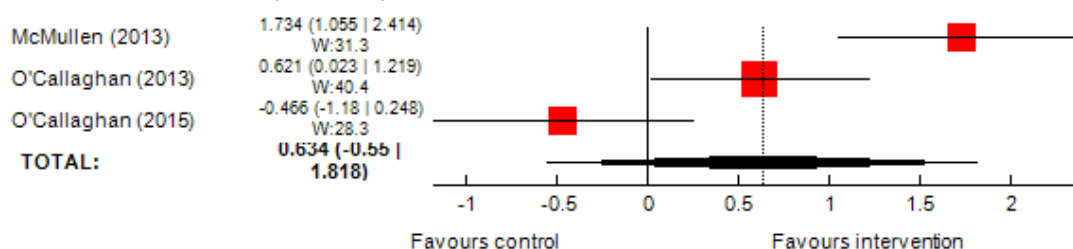
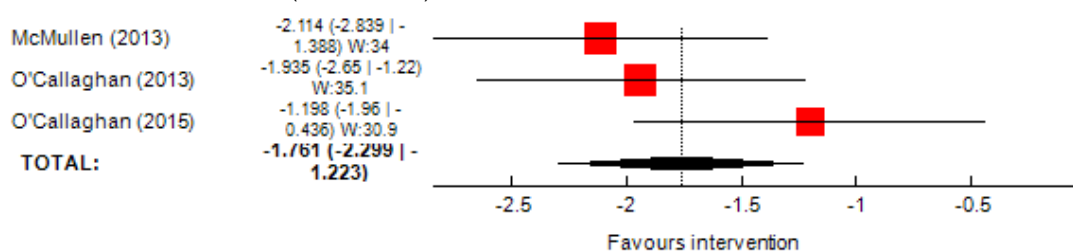


Figure 3.24: Meta-analysis results: TF-CBT interventions reporting emotional problems (n=3)

Heterogeneity: $Q = 3.23$; $df = 2$; $p = 0.199$; $I^2 = 38.1\%$; $\tau^2 = 0.0862$.

Random effects model: -1.781 (-2.209 , 1.223)



3.5.2: Meta-analysis findings of CBT studies: CBI

Figure 3.25: Meta-analysis results: CBI interventions reporting depression (n=6)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 23.5$; $df = 7$; $p = 0.00138$; $I^2 = 70.2\%$; $\tau^2 = 0.051$.

Random effects model: -0.261 ($-0.453, -0.0701$)

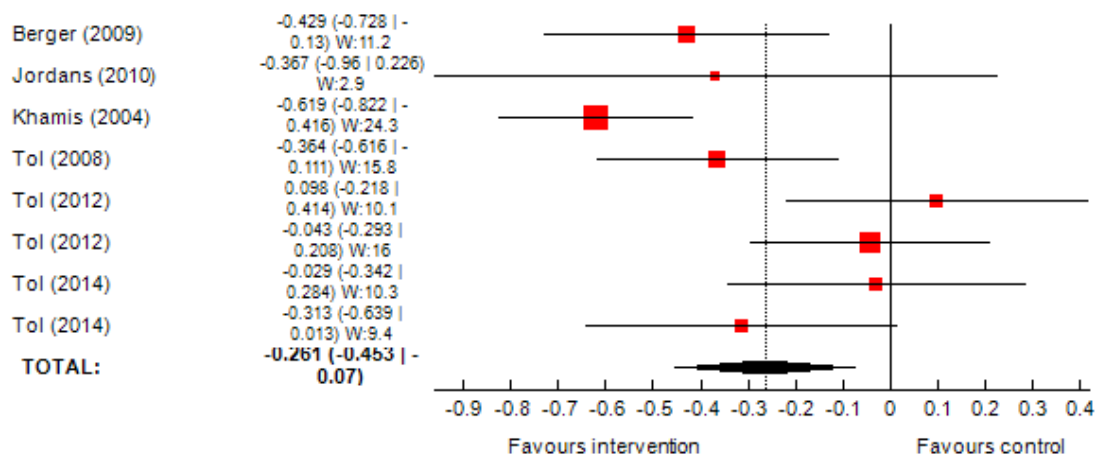


Figure 3.26: Meta-analysis results: CBI interventions reporting prosocial behaviours (n=3)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 15.4$; $df = 4$; $p = 0.00388$; $I^2 = 74.1\%$; $\tau^2 = 0.0521$.

Random effects model: 0.0757 ($-0.159, 0.31$)

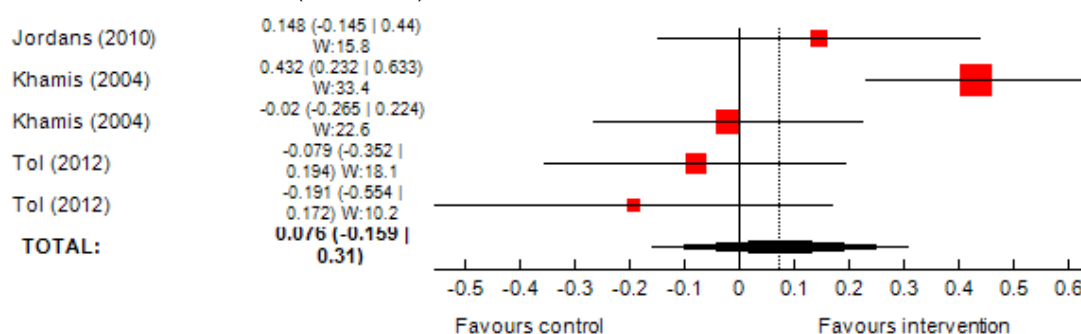


Figure 3.27: Meta-analysis results: CBI interventions reporting functional impairment (n=5)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 14.3$; $df = 6$; $p = 0.0265$; $I^2 = 58\%$; $\tau^2 = 0.039$.

Random effects model: -0.27 ($-0.47, -0.08$)

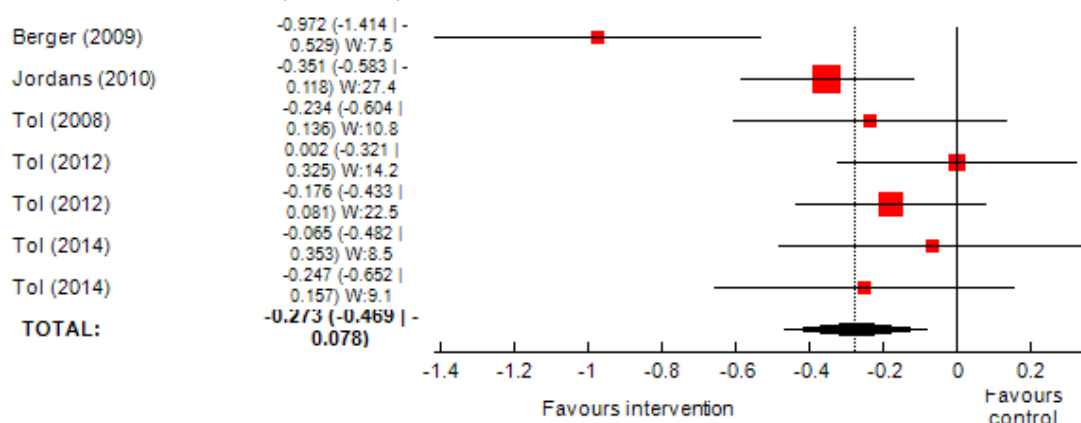
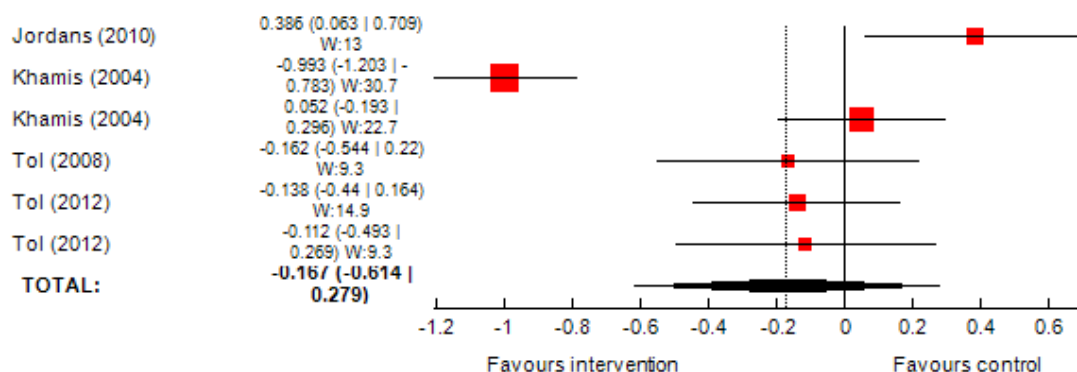
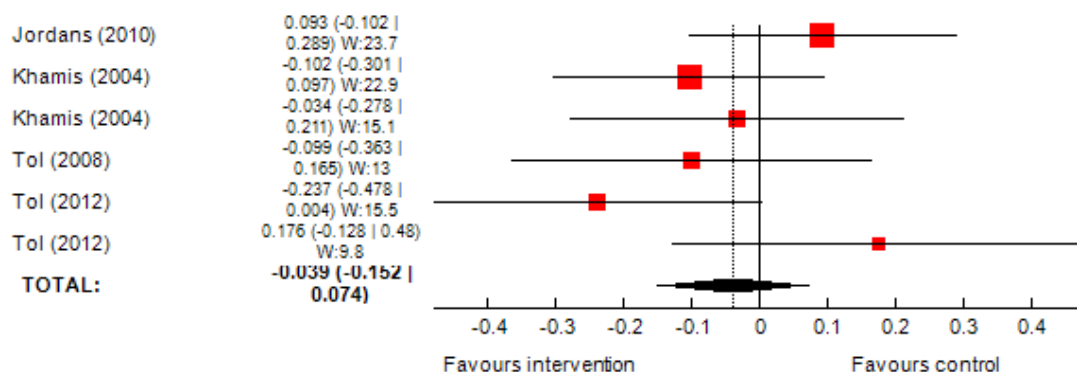


Figure 3.28: Meta-analysis results: CBI interventions reporting conduct problems (n=4)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 69.6$; $df = 5$; $p = 1.25E-13$; $I^2 = 92.8\%$; $\tau^2 = 0.286$.Random effects model: -0.17 ($-0.61, 0.28$)**Figure 3.29: Meta-analysis results: CBI interventions on anxiety (n=4)**

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 6.86$; $df = 5$; $p = 0.231$; $I^2 = 27.2\%$; $\tau^2 = 0.00536$.Random effects model: -0.039 ($-0.152, 0.0737$)**Figure 3.30: Meta-analysis results: CBI interventions on hope (n=5)**

Measure: Continuous: d (Hedges g)

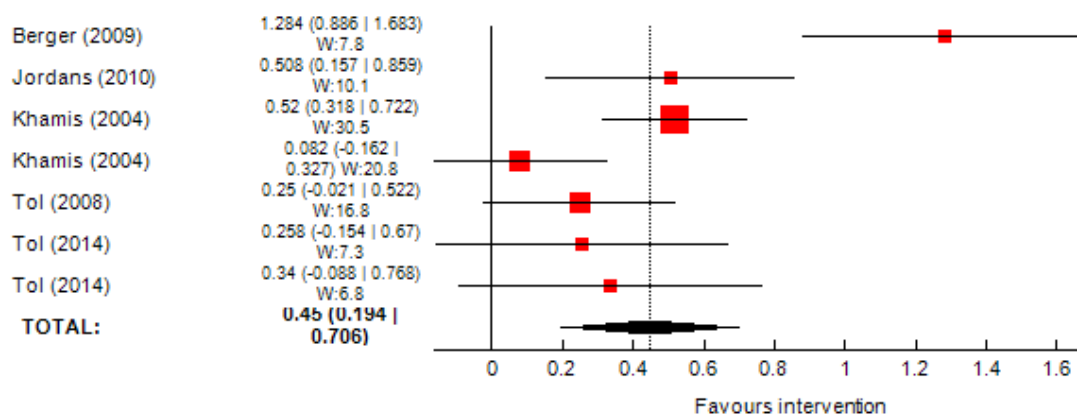
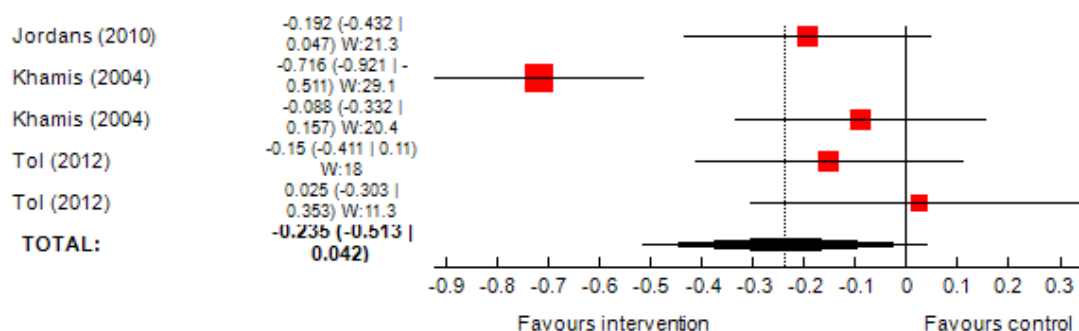
Heterogeneity: $Q = 28.8$; $df = 6$; $p = 6.7E-5$; $I^2 = 79.2\%$; $\tau^2 = 0.0909$.Random effects model: 0.45 ($0.194, 0.706$)

Figure 3.31: Meta-analysis results: CBI interventions on psychological distress (n=3)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 24.6$; $df = 4$; $p = 6.17E-5$; $I^2 = 83.7\%$; $\tau^2 = 0.0832$.

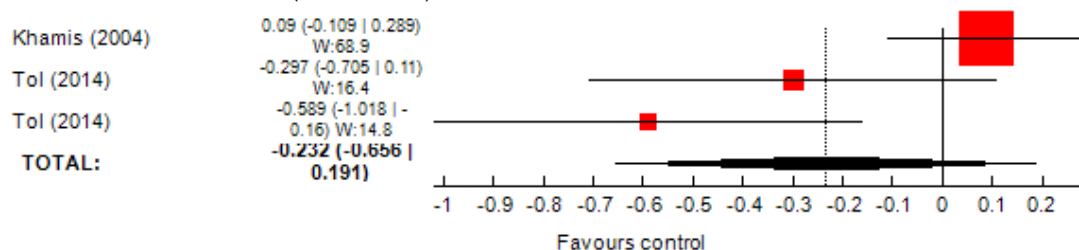
Random effects model: -0.235 ($-0.513, 0.0424$)

**Figure 3.32: Meta-analysis results: CBI interventions on coping (n=2)**

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 9.3$; $df = 2$; $p = 0.00955$; $I^2 = 78.5\%$; $\tau^2 = 0.108$.

Random effects model: -0.232 ($-0.656, 0.191$)



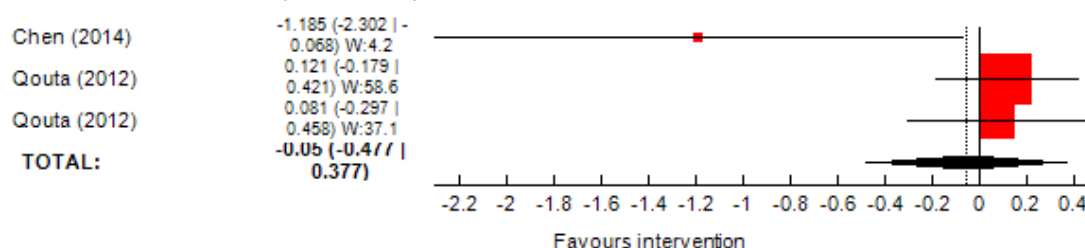
3.5.3: Meta-analysis findings of CBT studies: TRT

Figure 3.33: Meta-analysis results: TRT on depression (n=2)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 4.93$; $df = 2$; $p = 0.0849$; $I^2 = 59.5\%$; $\tau^2 = 0.0781$.

Random effects model: -0.05 ($-0.477, 0.377$)



3.6 Meta-analysis findings of NET studies

Figure 3.34: Meta-analysis results: NET reporting depression (n=2)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 9.93$; $df = 1$; $p = 0.00163$; $I^2 = 89.9\%$; $\tau^2 = 0.672$.

Random effects model: 0.662 ($-0.535, 1.86$)

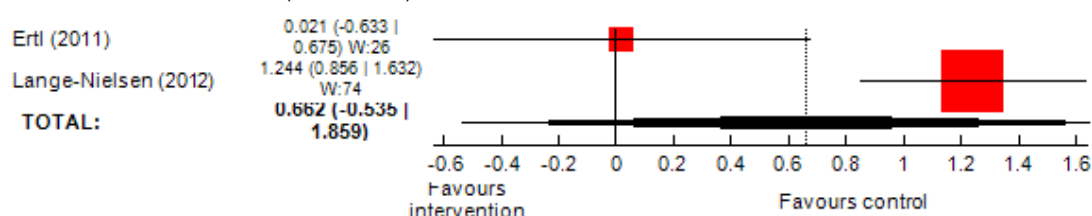
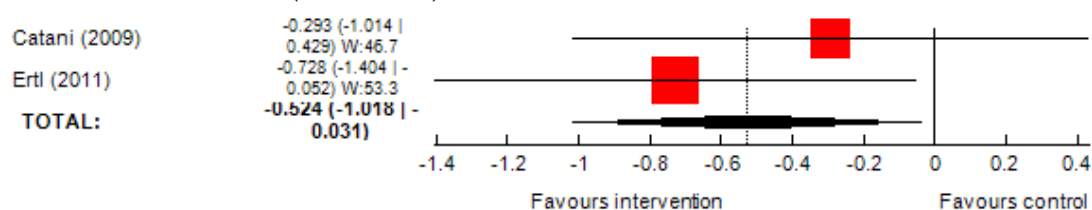


Figure 3.35: Meta-analysis results: NET reporting functional impairment (n=2)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 0.744$; $df = 1$; $p = 0.388$; $I^2 = 0\%$; $\tau^2 = 0$.

Random effects model: -0.524 ($-1.02, -0.0309$)



3.7 Meta-analysis findings of psychosocial studies

Figure 3.36: Meta-analysis results: psychosocial studies reporting depression (n=4)

Heterogeneity: $Q = 9.95$; $df = 1$; $p = 0.00161$; $I^2 = 89.9\%$; $\tau^2 = 0.806$

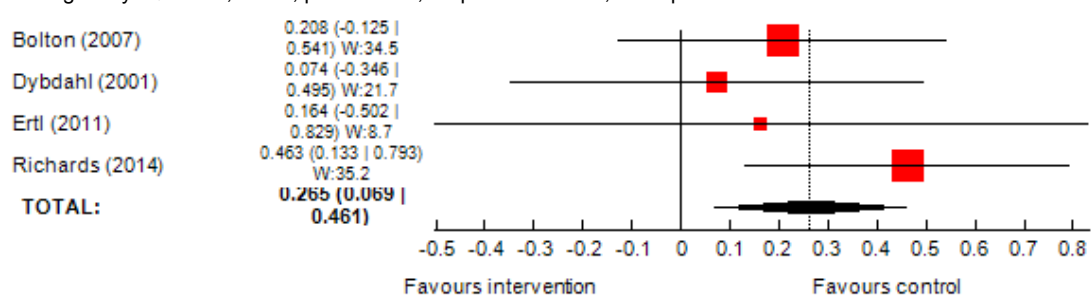
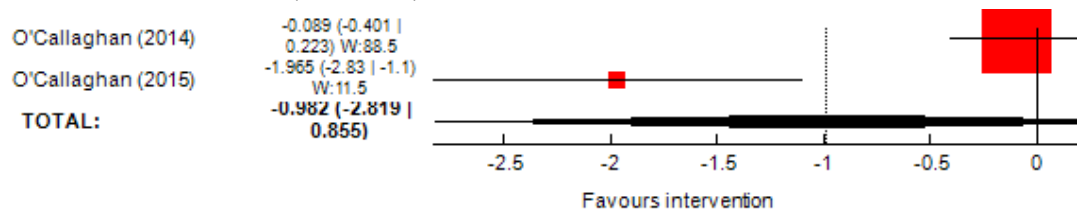
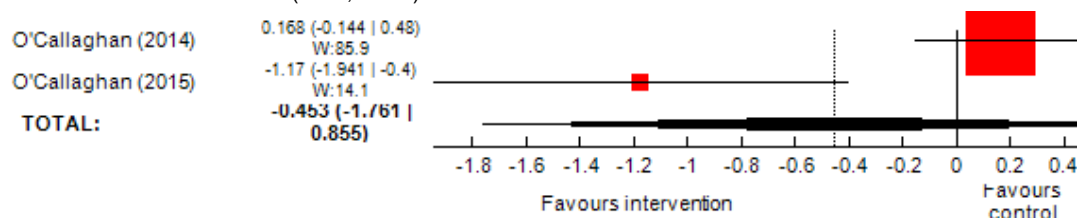


Figure 3.37: Meta-analysis results: psychosocial studies reporting emotional problems (n=2)

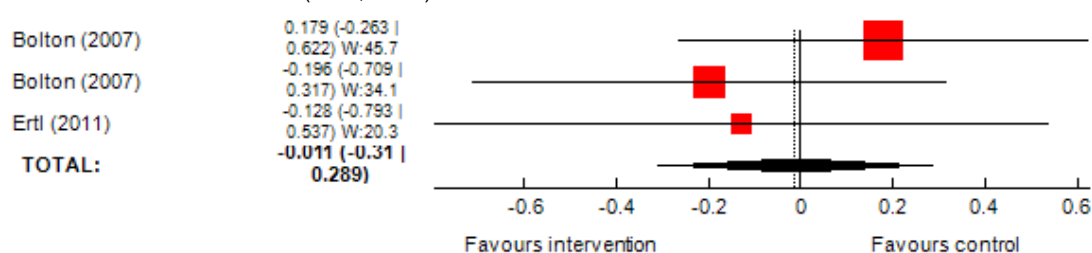
Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 16$; $df = 1$; $p = 6.33E-5$; $I^2 = 93.8\%$; $\tau^2 = 1.65$.Random effects model: -0.982 ($-2.82, 0.855$)**Figure 3.38: Meta-analysis results: psychosocial studies reporting conduct problems (n=2)**

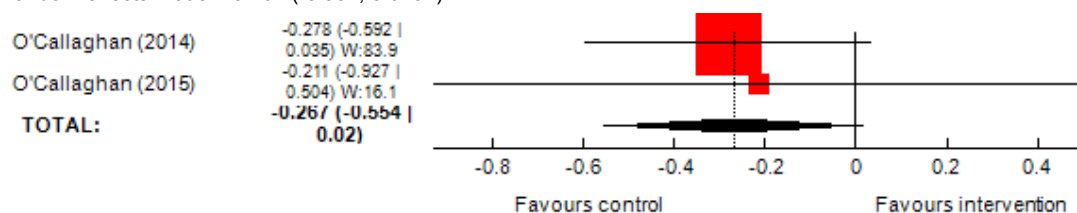
Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 9.95$; $df = 1$; $p = 0.00161$; $I^2 = 89.9\%$; $\tau^2 = 0.806$.Random effects model: -0.453 ($-1.76, 0.855$)**Figure 3.39: Meta-analysis results: psychosocial studies reporting functional impairment (n=2)**

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 1.33$; $df = 2$; $p = 0.514$; $I^2 = 0\%$; $\tau^2 = 0$.Random effects model: -0.0108 ($-0.31, 0.289$)**Figure 3.40: Meta-analysis results: psychosocial studies reporting prosocial behaviours (n=2)**

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 0.028$; $df = 1$; $p = 0.867$; $I^2 = 0\%$; $\tau^2 = 0$.Random effects model: -0.267 ($-0.554, 0.0197$)

3.8 Sensitivity analysis: quality of studies

Table 3.4: Sensitivity analysis: overall quality of studies

Outcomes	Study design, number of studies and participants (n) and summary risk of bias	Findings and heterogeneity of all MHPSS studies	Findings and heterogeneity of low and moderate risk of bias MHPSS studies
PTSD	RCTs and a quasi-RCT (21 studies; n=3,615) 16 low or medium risk of bias studies	ES = -0.46* 95% CI (-0.69, -0.24); Q = 206; df = 27; p = 0; I ² = 86.9%; tau-squared = 0.29. Moderate ++	ES = -0.53* 95% CI (-0.79, -0.27); Q = 136; df = 20; p = 0; I ² = 85.3%; tau-squared = 0.284. Moderate ++
Depression	RCTs (14 studies; n=3,516) 10 low or medium risk of bias studies	ES = -0.06; 95% CI (-0.27, 0.14); Q = 116; df = 19; p = 6.52E-16; I ² = 83.6%; tau-squared = 0.162. Moderate ++	ES = 0.05; 95% CI (-0.16, 0.26); Q = 73.7; df = 14; p = 4.1E-10; I ² = 81%; tau-squared = 0.134. Moderate ++
Conduct problems	RCTs (8 studies; n=1,918) 7 low or medium risk of bias studies	ES = -0.45*, 95% CI (-0.81, -0.09); Q = 104; df = 10; p = 7.48E-18; I ² = 90.4%; tau-squared = 0.31. Moderate ++	ES = -0.43*; 95%CI -0.79, -0.06); Q = 50.2; df = 8; p = 3.7E-8; I ² = 84.1%; tau-squared = 0.245. Moderate ++
Functional impairment	RCTs and a quasi-RCT (8 studies; n=574) 7 low or medium risk of bias studies	ES = -0.24*; 95% CI (-0.39, -0.09); Q = 21.8; df = 13; p = 0.0588; I ² = 40.3%; tau-squared = 0.0279 Strong +++	ES = -0.196*; 95% CI (-0.304, -0.98); Q = 10.7; df = 12; p = 0.558; I ² = 0%; tau-squared = 0. Strong +++
Prosocial behaviours	RCTs (8 studies; n=1,997) 7 low or medium risk of bias	ES = 0.09; 95% CI (-0.16, 0.34); Q = 57; df = 10; p = 1.31E-8; I ² = 82.5%; tau-squared = 0.13. Moderate ++	ES = 0.06; 95% CI (-0.23, 0.36); Q = 40; df = 8; p = 3.16E-6; I ² = 80%; tau-squared = 0.147. Moderate ++
Psychological distress	RCTs (8 studies; n=1,908) 6 low or medium risk of bias studies	ES = -0.24; 95% CI (-0.52, 0.0311); Q = 75.7; df = 10; p = 3.44E-12; I ² = 86.8%; tau-squared = 0.17. Moderate ++	ES = -0.26; 95% CI (-0.58, 0.05); Q = 44.1; df = 7; p = 2.07E-7; I ² = 84.1%; tau-squared = 0.159. Moderate ++
Anxiety	RCTs (6 studies; n=1,886) 5 low or medium risk of bias studies	ES = 0.02; 95% CI (-0.11, 0.14); Q = 12.5; df = 7; p = 0.0851; I ² = 44%; tau-squared = 0.0131. Strong +++	ES = 0.05 (-0.11, 0.22); Q = 10.9; df = 5; p = 0.0539; I ² = 54%; tau-squared = 0.0222. Moderate ++
Emotional problems	RCTs (5 studies; n=955) Four low or medium risk of bias studies	ES = -1.02*; 95% CI (-1.5, -0.53); Q = 60.5; df = 6; p = 3.55E-11; I ² = 90.1%; tau-squared = 0.343. Limited +	ES = -1.43*; 95% CI (-2.43, -0.43); Q = 50.2; df = 4; p = 3.22E-10; I ² = 92%; tau-squared = 1.16. Limited +
Hope	RCTs and a quasi-RCT (5 studies; n=1,703) 3 medium risk of bias studies	ES = 0.45*; 95% CI (0.19, 0.71); Q = 28.8; df = 6; p = 6.7E-5; I ² = 79.2%; tau-squared = 0.0909. Limited +	ES = 0.33*; 95% CI (0.16, 0.50) Q = 1.44; df = 3; p = 0.696; I ² = 0%; tau-squared = 0. Moderate ++

Outcomes	Study design, number of studies and participants (n) and summary risk of bias	Findings and heterogeneity of all MHPSS studies	Findings and heterogeneity of low and moderate risk of bias MHPSS studies
Coping	RCTs (2 studies; n=973) Two low or medium risk of bias studies	ES = -0.23; 95% CI Q = 9.3; df = 2; p = 0.00955; I^2 = 78.5%; tau-squared = 0.108. Limited +	N/A
Social support	Two RCTs (2 studies n=416) Two low or medium risk of bias studies	ES= -0.41; 95% CI (-0.88, 0.07); Q = 7.95; df = 2; p = 0.0187; I^2 = 74.9%; tau-squared = 0.133. Limited +	N/A
Somatic problems	One RCT and a quasi-RCT (2 studies; n=197) One low and one high risk of bias studies	ES= -0.36, 95% CI (-1.27, 0.55); Q = 5.31; df = 1; p = 0.0212; I^2 = 81.2%; tau-squared = 0.354. Limited +	N/A
Grief	RCTs (2 studies; n=191) One medium and one high risk of bias studies	ES = -0.55*; 95% CI (-0.91, -0.19); Q = 0.34; df = 1; p = 0.56; I^2 = 0%; tau-squared = 0. Limited +	N/A

N/A = data not available.

APPENDIX 4: THE IMPACT OF MHPSS ON ADULT POPULATIONS

Table 4.1: Key characteristics of MHPSS for adults (n=20)

Study	Setting	Population	Format	Delivery setting	Dose	Person who delivered	Training for staff	Intervention	Control
Acartuk (2015)	Turkey Armed conflict	Syrian refugees: Women 75.86% Sample size: n=29 INT: n=15 (m=35.27 y) CON: n= 4 (m= 37.92 y)	Individual	Clinic	7 sessions, 90 mins	Psychologists	Y	EMDR	Wait-list
Ayoughi (2012)	Afghanistan Armed conflict	Help-seeking Afghan women Sample size: n=61 INT: n=31 (m=31.2 y) CON: n=30 (m=35.3 y)	Individual	Clinic	5 x 45–60 min sessions for 5 weeks	Counsellors	Y	Counselling	TAU
Bagoglo (2007)	Turkey Earthquakes in 1999	Earthquake survivors; mean age = 34 y: Women 87% Sample size: n=31 INT: n=16 CON: n=15	Individual	N/S	1 session, on average 31 mins (range 9–70 mins)	Researcher	Y	CBT	Wait-list
Basoglo (2005)	Turkey Earthquake in 1999	Earthquake survivors; mean age = 36.3 y; Women 84.7% Sample size: n=59 INT: n=31 CON: n=28	Individual	N/S	1 x 60 min session	Psychologists	Y	CBT	Wait-list
Bass (2013)	Congo Armed conflict	Women Sample size: n=405 INT: n=157 (m=36.9 y) CON: n=248 (m=33.8 y)	Group and Individual	N/S	1 x 1 hr individual session and 11 x 2-hr group sessions	Paraprofessionals (psychosocial assistant)	Y	Cognitive Processing Therapy	Individual support
Bichescu (2007)	Romania Political violence	Former political detainees; female 5% Sample size: n=18 INT: n=9 (m=68.9 y) CON: n=9 (m=69.8 y)	Individual	N/S	4–5 x 2 hr sessions, weekly for 10 weeks	Psychology PhD student	Y	NET	Psycho-education
Bolton (2014)	Thailand Refugees	Burmese refugees in Thailand; Women 63% Sample size: n=347 INT: n=182 (m=26.5 y) CON: n=165 (m=34.3 y)	Individual	Home, clinics or community	Weekly, 1 hr session for 9 sessions	Local lay facilitators	Y	Trans-diagnostic Community-based mental health	Wait-list
Bryant (2011)	Thailand Terrorist attack	Terrorist attack survivors Women 96% Sample size: n=28 INT: n=16 (m=42.3 y) CON: n=12 (m=43.9 y)	Individual	N/S	8 x 1 hr session, weekly	Psychologists and psychiatric nurses	Y	CBT	TAU
Connolly (2011)	Rwanda Genocide in 1994	Survivors; mean age = 38.14 y; Women more than 80% Sample size: n=145 INT: n=71 CON: n=74	Individual	Private room	Mean duration 49 mins, single session	Therapists	Y	Thought Field Therapy	Wait-list
Hagl (2015)	Bosnia and Herzegovina Armed conflict	Women whose husbands were killed or missing; mean age = 38.6 y Sample size: n=119 INT: n=60 CON: n=59	Group	N/S	7 x weekly, 2 hr sessions over 8 weeks	Psychologists	Y	Dialogical exposure therapy	Supportive group
Igreja (2004)	Mozambique Armed conflict	Adults; mean age = 40.2 y; women 44% Sample size: n=206 INT: n=66 CON: n=71 NON Case group: n=69	Individual	Home	1 x 1 hr session	Local facilitators	N	Testimony	No intervention

Study	Setting	Population	Format	Delivery setting	Dose	Person who delivered	Training for staff	Intervention	Control
Jacob (2014)	Rwanda Genocide in 1994	Widows and orphans Female 92.1% Sample size: n=76 INT: n=38 (widows n=21, m=48.29 y; orphans n=17, m=25.06 y) CON: n=36 (widows n=22, m= 46.86 y; orphans n=16, m=24 y)	Individual	Home	8 x 90–150 mins, weekly	Clinical psychologists	Expert therapists	NET	Wait-list
Jiang (2014)	China Earthquake in 2008	Earthquake survivors Women 71.4% Sample size: n=49 INT: n=27 (m=24.79 y) CON: n=22 (m=36.05 y)	Individual	N/S	12 x 1 hr weekly for 12 weeks	Health professionals and teachers	Y	IPT	Treatment as usual (TAU)
Meffert (2014)	Egypt Genocide	Sudanese refugees; mean age = 31 y; Women 81% Sample size: n=22 INT: n=13 CON: n=9	Individual	Community office	6 sessions, twice a week for 3 weeks	Sudanese community members	Y	IPT	Wait-list
Neuner (2004)	Uganda Refugees	43 Sudanese refugees Female 60.46% Sample size: n=43 INT 1 (NET): n=17 (m=31.9 y) INT 2 (counselling) n=14 (m=33.8 y) CON: n=12 (m=34.2 y)	Individual	Huts or under trees around the settlement's medical centre	4 x 90–120 mins sessions for NET and counselling	Psychologist	Y	NET and support counselling	Psycho-education
Neuner (2008)	Uganda Refugees	Rwandan and Somalian refugees; female 51.26% Sample size: n=277 INT 1 (NET): n=111 (m=34.4 y) INT 2 (counselling): n=111 (m=35.2 y) CON: n=55 (m=35.6 y)	Individual	Refugee camps	6 x 1–2 hr sessions, two sessions per week	Refugee lay counsellors	Y	NET and counselling	No intervention
Tellies (2010)	India Flood	Males Age: not reported Sample size: n=22 INT: n=11 (m=32.1 y) CON: n=11 (m=30.8 y)	Individual Survivors	N/S	7 x 1 hr sessions for one week	Yoga teachers	Y	Yoga	Wait-list
Yeomans (2010)	Burundi Armed conflict	Participants; mean age = 38.6 y; women 44.4% Sample size: n=124 INT 1(WP): n=41 INT 2 (WNP): n=41 CON: n=42	Group	N/S	3 day workshops and one-day follow up one month later	Local facilitators	Y	Workshops with psycho-education (WP) and workshop without psycho-education (WNP)	Wait-list
Zang (2013)	China Earthquake in 2008	Earthquake survivors; mean age = 55.7 y; women 77% Sample size: n=22 INT: n=11 CON: n=11	Individual	N/S	4 sessions, 60–90 mins for 2 weeks	Psychologists	Y	NET	Wait-list
Zang (2014)	China Earthquake	Earthquake survivors; mean age = 53.63 y; Women 90% Sample size: n=30 INT 1(NET): n=10 INT 2 (NET-R): n=10 CON: n=10	Individual	N/S	NET 4 sessions or more, 60–90 mins over two weeks; NET-R 3 or more 60–120 sessions over one week	Counsellor psychologists	Y	NET and NET-R	Wait-list

Table 4.2: Key characteristics of studies evaluating MHPSS for adults (n=20)

Study	Study design	Unit of allocation	Fidelity	Informed consent	Follow-ups	Test for MH	Attrition	Overall risk of bias	Outcome measures included in the synthesis
Acartuk (2015)	RCT	Individual	Y	Y	Post (7 weeks)	IES for PTSD	No drop-out	Low	PTSD Depression
Ayoughi (2012)	Quasi-RCT	Individual	N	Y	3 months	Interview	3 months INT=8.8% CON=6.3%	High	Depression Anxiety Coping
Basoglo (2007)	RCT	Individual	Y	Y	Post at 1 month and 2 months	TSCC	2 months Total=6.4%	High	PTSD Depression
Basoglo (2005)	RCT	Individual	Y	Y	Post	TSCC	Post Total=16.9%	High	PTSD Depression Emotional problems Fear and avoidance Functional impairment
Bass (2013)	Clustered RCT	Village	Y	Y	Post (one month) and at 6 months	HSCL-25 for depression and anxiety; HTQ for PTSD; and functioning scores	6 months INT=12% CON =29%	High	PTSD Emotional problems Functional impairment
Bichescu (2007)	Quasi-RCT	Individual	Y	Y	6 months	MMSI	No drop-out	High	PTSD Depression
Bolton (2014)	RCT	Individual	Y	Y	Post	HSCL-25 and HTQ	Post Total=21.03%: INT=18.6%, CON=23.63%	High	PTSD Depression Anxiety Functional impairment Conduct problem Alcohol use
Bryant (2011)	RCT	Individual	Y	Y	Post (one month), 3 months and 6 months	PTSD diagnosis by PSS-I	No drop-out	Low	PTSD Depression Grief Fear and avoidance
Connolly (2011)	Quasi-RCT	Individual	Y	Y	Post (one week) and two years	MPSS	Total 14.6%	High	PTSD Depression Anxiety Anger Fear and avoidance
Hagl (2015)	Quasi-RCT	Individual	Y	N	Post and 12 months	No	At post ALL=5.8% INT=3.38% CON=8.33% AT 12 months ALL=37.8%	High	PTSD Grief Common mental health
Igreja (2004)	Quasi-RCT	Individual	N	Y	Post (2 months) and 11 months	Interview	Total=5%	High	PTSD Common mental health Nightmare
Jacob (2014)	RCT	Individual	Y	N/S	3 months and 12 months	PSS-I	3 months INT=2.63% CON=5.26%	Low	PTSD
Jiang (2014)	RCT	Individual	Y	Y	3 months and 6 months	CAPS for PTSD and SCID for depression	3 Months INT=18.52% CON=13.64%	Moderate	PTSD Depression Anger Functional impairment Quality of life Partner violence

Study	Study design	Unit of allocation	Fidelity	Informed consent	Follow-ups	Test for MH	Attrition	Overall risk of bias	Outcome measures included in the synthesis
Meffert (2014)	RCT	Individual	Y	Y	Post	Unclear	2 drop-out; 9% total	Moderate	PTSD Depression Anger Partner violence
Neuner (2004)	Quasi-RCT	Individual	Y	Y	Post, 4 months and 12 months	PTSD criteria DSM-IV using CIDI	1 year NET=17.64%; Counselling=7.14%; CON=8.33%	Low	PTSD Emotional problems Common mental health
Neuner (2008)	RCT	Individual	Y	Y	3 and 6 months	PTSD criteria DSM-IV using CIDI	3 months ALL=18.4%; 6 months=53.7%	High	PTSD
Tellies (2010)	RCT	Individual	N	Y	Post	No	No drop-out	Low	Anxiety Emotional problems
Yeomans (2010)	RCT	Individual	Y	Y	2 weeks	Interview	Post (weeks) WP=7.3% T WNP=9.75% WLC=9.5%	Low	PTSD Emotional problems
Zang (2013)	RCT	Individual	Y	Y	Post-intervention	IES-R and PDS for PTSD	No drop-out	Low	PTSD Depression Anxiety Common mental health Social support Coping
Zang (2014)	RCT	Individual	Y	Y	Post	PDS for PTSD	No drop-out	Moderate	PTSD Depression Anxiety Common mental health Social support

Table 4.3: Scales and measurement tools used for each outcome measures in the studies (n=20)

Outcome	Scales or measures
PTSD	Posttraumatic Stress Scale (PSS) Clinician-Administered PTSD Scale (CAPS) Impact of Event Scales – Revised (IES-R) Harvard Trauma Questionnaire (HTQ) SIFP Clinical Interview Composite International Diagnostic Interview (CIDI) Modified Posttraumatic Stress Scale (MPSS) Self-reported Post Traumatic Diagnostic Scale
Depression	Beck Depression Inventory (BDI) Hopkins Symptom Checklist (HSCL) for depression Trauma Symptom Inventory (TSI) – depression sub-scale Acholi Psychosocial Assessment (APAI) for depression-like symptoms Hospital Anxiety and Depression Scale (HADS) for depression
Anxiety	Hopkins Symptom Checklist (HSCL) for depression TSI – anxious arousal sub-scale Acholi Psychosocial Assessment (APAI) for anxiety-like symptoms Hospital Anxiety and Depression Scale (HADS) for anxiety Visual Analog Scale
Common mental health	Self-Report Questionnaire (SRQ-20) SF-12 for psychological health sub-scale General Health Questionnaire (GHQ-28) Hopkins Symptom Checklist (HSCL) total score
Emotional problems	Hopkins Symptom Checklist (HSCL) for depression and anxiety TSSC for depression and anxiety Visual dialogue
Fear and avoidance	Trauma Symptom Inventory for defensive avoidance sub-scale FAQ (locally developed) for fear and avoidance for every activities
Functional impairment	Locally developed scale for assessing functional impairment Work and Social Adjustment Scale SAS Social Adjustment Score
Anger	TSI Anger subscale State Trait Anger (STAXI) for trait anger
Coping	Locally developed coping scales asking how often people used strategies to cope (e.g. praying, earning money, sitting together to chat) or when they felt bad Simplified Coping Style Questionnaire SCSQ for coping style: active or passive

4.4 Meta-analysis findings of MHPSS

Figure 4.1: Meta-analysis results: MHPSS reporting depression (n=12)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 80.6$; $df = 12$; $p = 3.18E-12$; $I^2 = 85.1\%$; $\tau^2 = 0.571$

Random effects model: -1.18 (-1.65 , -0.71)

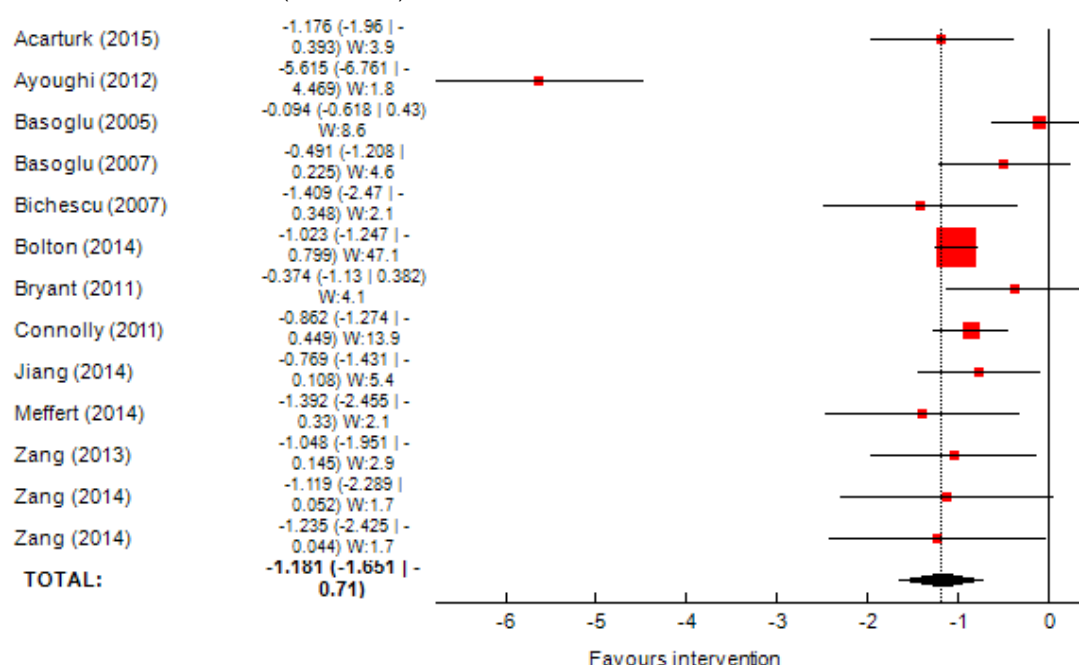


Figure 4.2: Meta-analysis results: MHPSS reporting anxiety (n=6)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 69.3$; $df = 6$; $p = 5.81E-13$; $I^2 = 91.3\%$; $\tau^2 = 0.98$

Random effects model: -1.41 (-2.21 , -0.606)

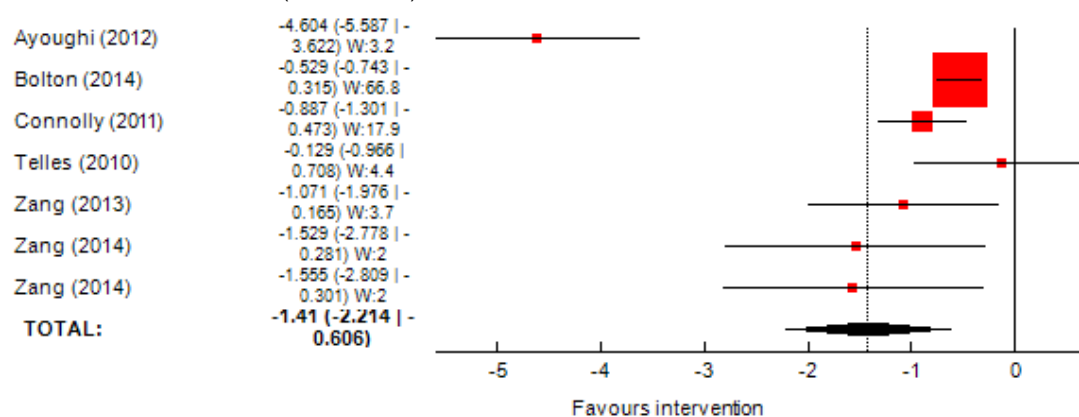
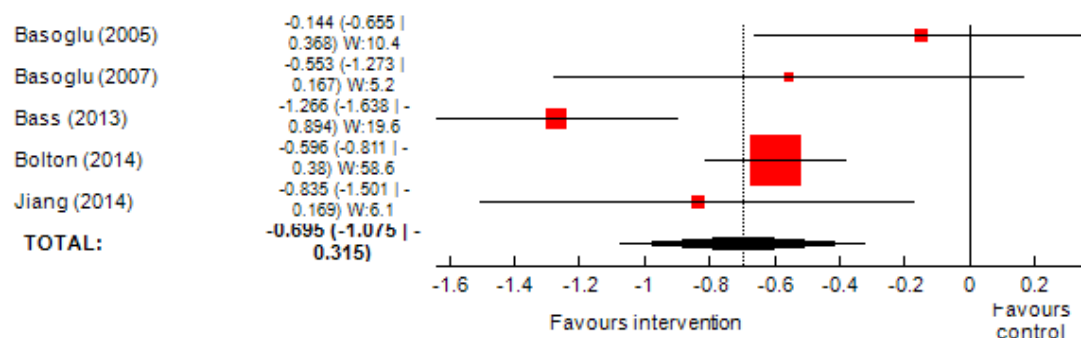


Figure 4.3: Meta-analysis results: MHPSS reporting functional impairment (n=5)

Heterogeneity: $Q = 14.6$; $df = 4$; $p = 0.0055$; $I^2 = 72.7\%$; $\tau^2 = 0.125$.

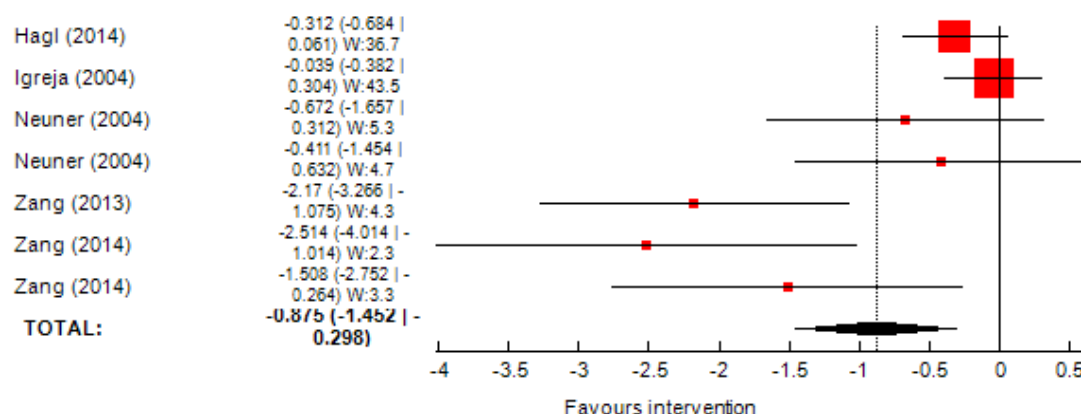
Random effects model: -0.695 ($-1.07, -0.315$)

**Figure 4.4: Meta-analysis results: MHPSS reporting common mental health problems (n=5)**

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 25.5$; $df = 6$; $p = 0.00028$; $I^2 = 76.4\%$; $\tau^2 = 0.387$.

Random effects model: -0.875 ($-1.45, -0.298$)

**Figure 4.5: Meta-analysis results: MHPSS reporting emotional problems (n=5)**

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 34.4$; $df = 6$; $p = 5.53E-6$; $I^2 = 82.6\%$; $\tau^2 = 0.421$.

Random effects model: -0.253 ($-0.796, 0.29$)

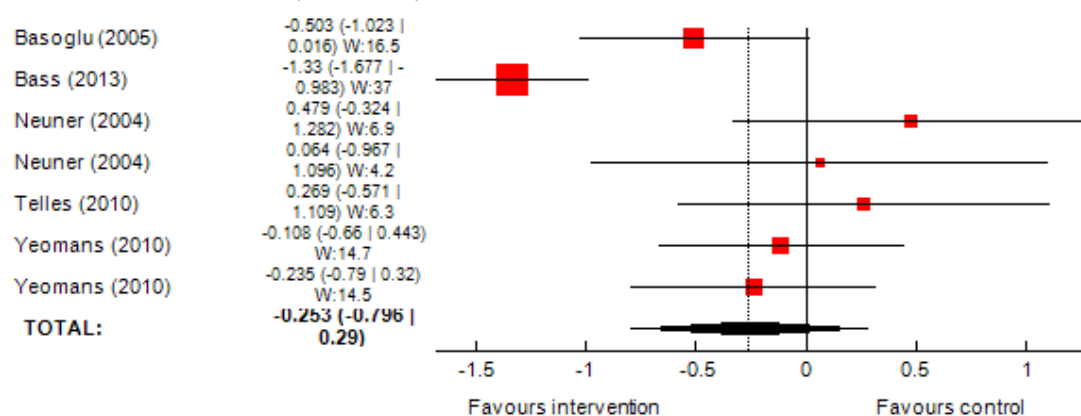
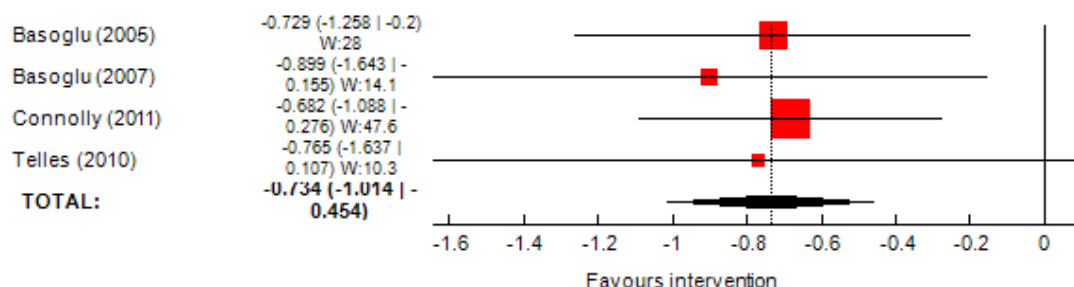


Figure 4.6: Meta-analysis results: MHPSS reporting fear and avoidance (n=4)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 0.256$; $df = 3$; $p = 0.968$; $I^2 = 0\%$; $\tau^2 = 0$.

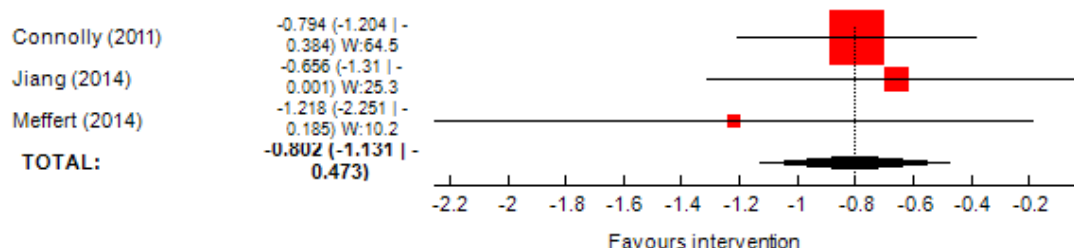
Random effects model: -0.734 (-1.01 , -0.454)

**Figure 4.7: Meta-analysis results: MHPSS on anger (n=3)**

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 0.817$; $df = 2$; $p = 0.665$; $I^2 = 0\%$; $\tau^2 = 0$.

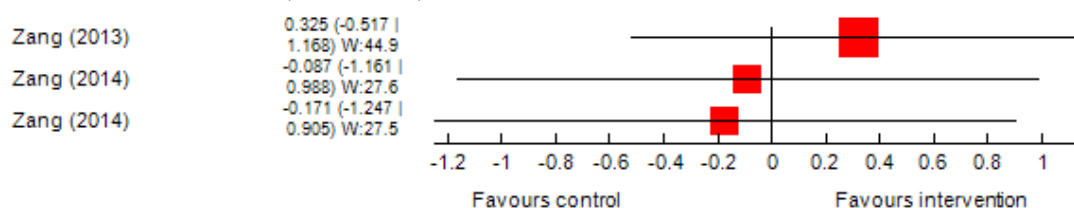
Random effects model: -0.802 (-1.13 , -0.473)

**Figure 4.8: Meta-analysis results: MHPSS on social support (n=2)**

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 0.627$; $df = 2$; $p = 0.731$; $I^2 = 0\%$; $\tau^2 = 0$.

Random effects model: 0.075 (-0.489 , 0.639)

**Figure 4.9: Meta-analysis results: MHPSS on partner violence (n=2)**

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 0.141$; $df = 1$; $p = 0.707$; $I^2 = 0\%$; $\tau^2 = 0$.

Random effects model: -0.442 (-0.974 , 0.0913)

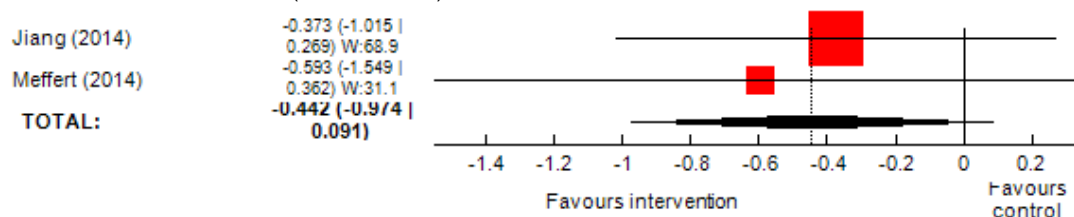
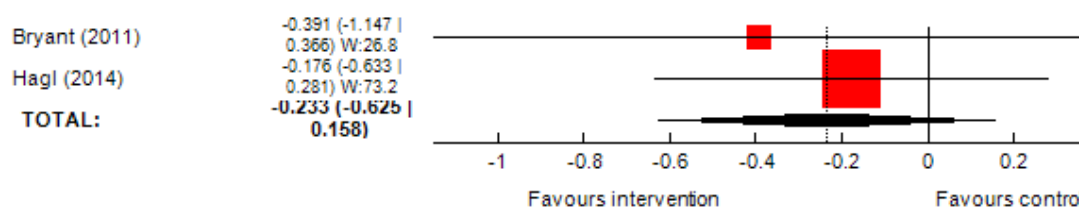


Figure 4.10: Meta-analysis results: MHPSS on grief (n=2)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 0.227$; $df = 1$; $p = 0.634$; $I^2 = 0\%$; $\tau^2 = 0$.

Random effects model: -0.233 ($-0.625, 0.158$)



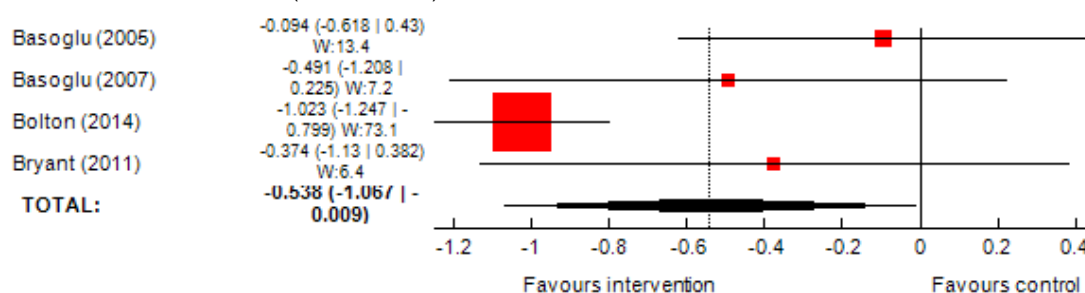
4.5 Meta-analysis findings of CBT studies

Figure 4.11: Meta-analysis results: CBT on depression (n=3)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 12.7$; $df = 3$; $p = 0.00542$; $I^2 = 76.3\%$; $\tau^2 = 0.21$.

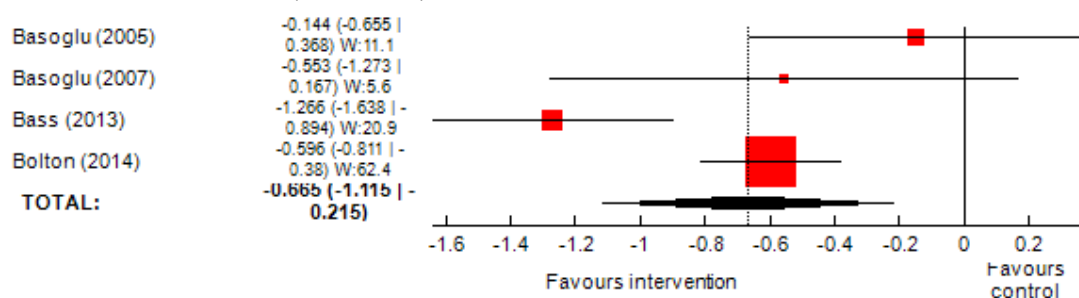
Random effects model: -0.538 ($-1.07, -0.0089$)

**Figure 4.12: Meta-analysis results: CBT on functional impairment (n=4)**

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 14.5$; $df = 3$; $p = 0.00234$; $I^2 = 79.3\%$; $\tau^2 = 0.157$.

Random effects model: -0.665 ($-1.11, -0.215$)

**Figure 4.13: Meta-analysis results: CBT on fear and avoidance (n=2)**

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 0.133$; $df = 1$; $p = 0.715$; $I^2 = 0\%$; $\tau^2 = 0$.

Random effects model: -0.786 ($-1.22, -0.355$)

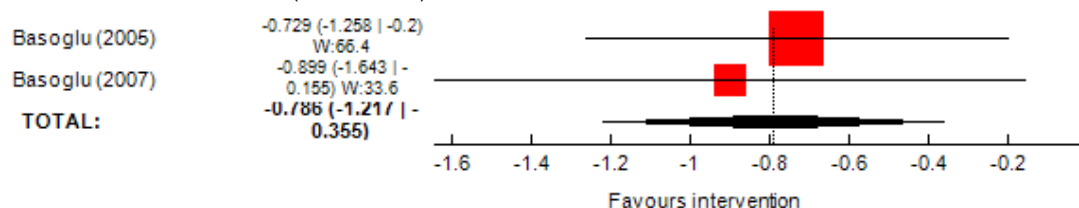
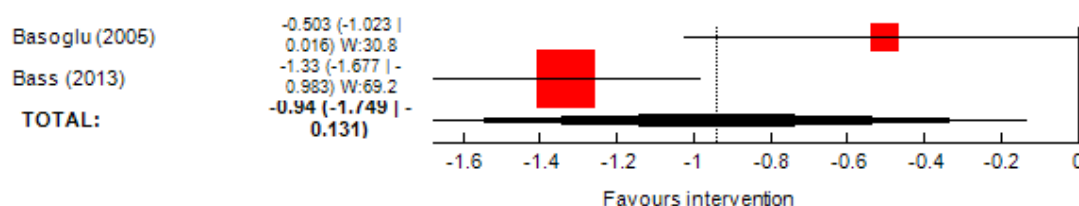


Figure 4.14: Meta-analysis results: CBT on emotional problems (n=2)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 6.73$; $df = 1$; $p = 0.0095$; $I^2 = 85.1\%$; $\tau^2 = 0.291$.

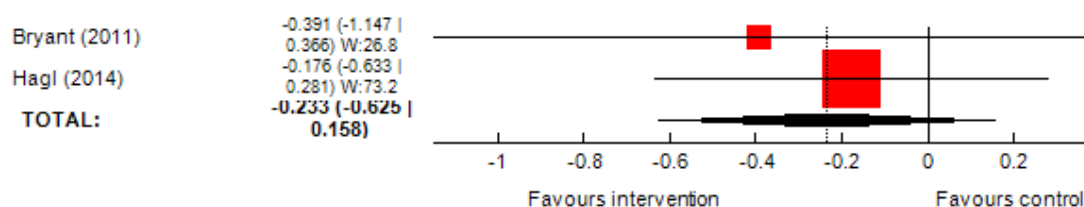
Random effects model: -0.94 ($-1.75, -0.131$)

**Figure 4.15: Meta-analysis results: CBT on grief (n=2)**

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 0.227$; $df = 1$; $p = 0.634$; $I^2 = 0\%$; $\tau^2 = 0$.

Random effects model: -0.233 ($-0.625, 0.158$)



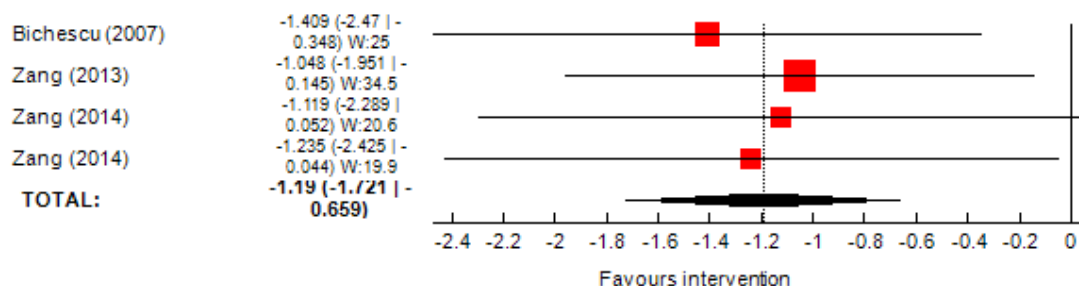
4.6 Meta-analysis findings of NET studies

Figure 4.16: Meta-analysis results: NET reporting depression (n=3)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 0.279$; $df = 3$; $p = 0.964$; $I^2 = 0\%$; $\tau^2 = 0$.

Random effects model: -1.19 ($-1.72, -0.659$)

**Figure 4.17: Meta-analysis results: NET reporting common mental health problems (n=3)**

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 25.2$; $df = 4$; $p = 4.53E-5$; $I^2 = 84.1\%$; $\tau^2 = 1.12$.

Random effects model: -1.27 ($-2.31, -0.231$)

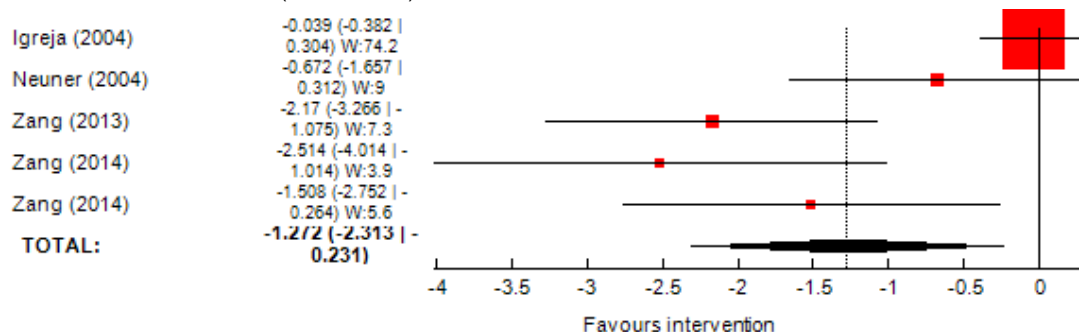
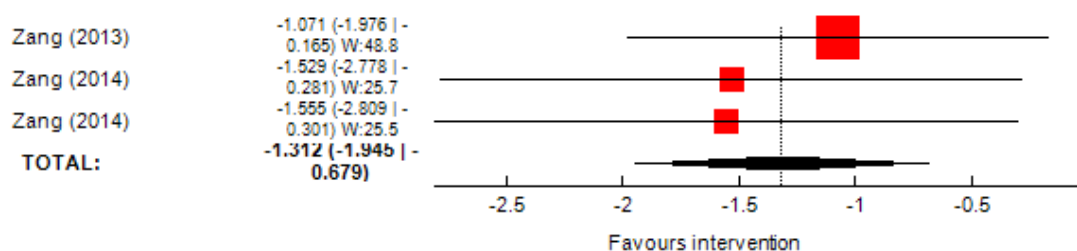


Figure 4.18: Meta-analysis results: NET reporting anxiety (n=2)

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 0.533$; $df = 2$; $p = 0.766$; $I^2 = 0\%$; $\tau^2 = 0$.

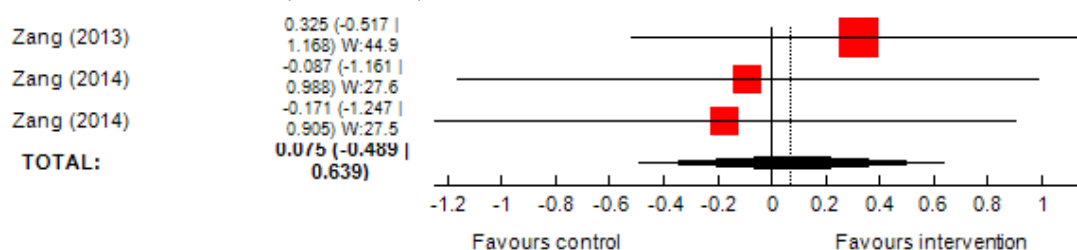
Random effects model: -1.31 (-1.94 , -0.679)

**Figure 4.19: Meta-analysis results: NET reporting social support (n=2)**

Measure: Continuous: d (Hedges g)

Heterogeneity: $Q = 0.627$; $df = 2$; $p = 0.731$; $I^2 = 0\%$; $\tau^2 = 0$.

Random effects model: 0.075 (-0.489 , 0.639)



4.7 Sensitivity analysis

Table 4.4: Sensitivity analysis by overall risk of bias

Outcomes	Study design, number of studies and participants (n) and summary risk of bias	Findings from all studies and strength of evidence	Findings from low and medium risk of bias studies and strength of evidence
PTSD	RCTs and quasi-RCTs (17 studies; n=1,924) Eight low or medium risk of bias studies	ES = -0.75*; 95% CI (-0.997, -0.5); Q = 76.5; df = 20; p = 1.54E-8; I ² = 73.8%; tau-squared = 0.204. Moderate ++	ES = -1.04*; 95% CI (-1.54, -0.54); Q = 40.7; df = 10; p = 1.29E-5; I ² = 75.4%; tau-squared = 0.479. Moderate ++
Depression	RCTs and quasi-RCTs (12 studies; n=841) 6 low or medium risk of bias studies	ES = -1.18*; 95% CI (-1.65, -0.71); Q = 80.6; df = 12; p = 3.18E-12; I ² = 85.1%; tau-squared = 0.571 Moderate ++	ES = -0.93*; 95% CI (-1.26, -0.597); Q = 3.83; df = 6; p = 0.699; I ² = 0%; tau-squared = 0. Strong +++
Anxiety	RCTs and quasi-RCTs (6 studies; n=630) 3 low risk of bias studies	ES = -1.41*; 95% CI (-2.21, -0.61); Q = 69.3; df = 6; p = 5.81E-13; I ² = 91.3%; tau-squared = 0.98. Limited +	ES = -0.97*; 95% CI (-1.66, -0.27); Q = 5.42; df = 3; p = 0.144; I ² = 44.6%; tau-squared = 0.223. Moderate ++
Functional impairment	RCTs (5 studies; n=888) 1 medium risk of bias studies	ES = -0.695*; 95% CI (-1.07, -0.32); Q = 14.6; df = 4; p = 0.0055; I ² = 72.7%; tau-squared = 0.125. Insufficient	N/A
Emotional problems	RCTs (5 studies; n=653) 3 low risk of bias studies	ES = -0.25; 95% CI (-0.796, 0.29); Q = 34.4; df = 6; p = 5.53E-6; I ² = 82.6%; tau-squared = 0.421. Limited +	ES = 0.01; 95% CI (-0.30, 0.32); Q = 2.62; df = 4; p = 0.624; I ² = 0%; tau-squared = 0. Moderate ++
Common mental health problems	RCTs and quasi-RCTs (5 studies; n=420) 3 low risk of bias studies	ES = -0.88*; 95% CI (-1.45, -0.30); Q = 25.5; df = 6; p = 0.00028; I ² = 76.4%; tau-squared = 0.387. Limited +	ES = -1.37*; 95% CI (-2.16, -0.58); Q = 9.4; df = 4; p = 0.0518; I ² = 57.4%; tau-squared = 0.462. Limited +
Fear and avoidance	RCTs and a quasi-RCT (4 studies; n=254) 1 low risk of bias study	ES = -0.73*; 95% CI (-1.01, -0.45); Q = 0.256; df = 3; p = 0.968; I ² = 0%; tau-squared = 0. Limited +	N/A
Anger	RCTs and a quasi-RCT (3 studies; n=197) 2 medium risk of bias studies	ES = -0.80*; 95% CI (-1.13, -0.47); Q = 0.817; df = 2; p = 0.665; I ² = 0%; tau-squared = 0. Moderate ++	ES = -0.81*; 95% CI (-1.37, -0.264); Q = 0.813; df = 1; p = 0.367; I ² = 0%; tau-squared = 0. Moderate ++
Social support	RCTs (2 studies; n=52) 2 low risk of bias studies	ES = 0.08; 95% CI (-0.49, 0.64); Q = 0.627; df = 2; p = 0.731; I ² = 0%; tau-squared = 0. Moderate ++	ES = 0.08; 95% CI (-0.49, 0.64); Q = 0.627; df = 2; p = 0.731; I ² = 0%; tau-squared = 0. Moderate ++
Partner violence	RCTs (2 studies; n=71) 2 medium risk of bias studies	ES = -0.44; 95% CI (-0.97, 0.09); Q = 0.141; df = 1; p = 0.707; I ² = 0%; tau-squared = 0. Moderate ++	ES = -0.44; 95% CI (-0.97, 0.09); Q = 0.141; df = 1; p = 0.707; I ² = 0%; tau-squared = 0. Moderate ++
Grief	1 RCT and 1 quasi-RCT (2 studies; n=147) 1 low risk of bias study	ES = -0.23; 95% CI (-0.63, 0.16) Q = 0.227; df = 1; p = 0.634; I ² = 0%; tau-squared = 0. Limited +	N/A
Conduct problems	1 high risk of bias RCT (1 study; n=347)	ES = -0.51*; 95% CI (-0.73, -0.297) Insufficient	N/A
Somatic complaints	1 high risk of bias quasi-RCT study (1 study; n=206)	ES = -0.06; 95% CI (-0.43, 0.31) Insufficient	N/A

N/A = insufficient effect size estimates.

APPENDIX 5: COMBINING THE EVIDENCE

Table 5.1: Association between hypotheses with pooled effect size estimates of PTSD in CYP

Hypothesis	Regression coefficient	Standard error	P value	95% CI
Community engagement	-0.15	0.43	0.74	(-1.07, 0.78)
Government partnership	-0.04	0.36	0.92	(-0.79, 0.72)
Trained providers	-1.73	0.71	0.026	(-3.24, -0.23)
Social and cultural sensitivity	-0.23	0.31	0.46	(-0.89, 0.42)
Group-based programme	-1.00	0.50	0.07	(-2.07, 0.73)
Establish good relationship	-1.65	0.46	0.003	(-2.62, -0.67)

Table 5.2: Association between hypotheses with pooled effect size estimates of depression in CYP

Hypothesis	Regression coefficient	Standard error	P value	95% CI
Community engagement	0.29	0.95	0.77	(-1.85, 2.43)
Government partnership	-0.25	0.896	0.78	(-2.28, 1.77)
Social and cultural sensitivity	-0.67	0.26	0.031	(-1.27, -0.08)
Group-based programme	1.32	1.85	0.495	(-2.88, 5.51)
Establish good relationship	0.54	0.83	0.53	(-1.34, 2.41)

Table 5.3: Meta-regression of effect sizes for PTSD outcome measures in adult MHPSS studies

Hypothesis	Regression coefficient	Standard error	P value	95% CI
Community engagement	0.02	0.97	0.99	(-2.68, 2.71)
Government partnership	-0.92	0.82	0.32	(-3.19, 1.34)
Trained providers	-1.14	1.35	0.44	(-4.89, 2.59)
Social and cultural sensitivity	-0.74	0.68	0.34	(-2.64, 1.16)
Group-based programme	0.93	1.22	0.49	(-4.32, 2.47)
Establish good relationship	-1.58	1.45	0.34	(-5.62, 2.45)

Table 5.4: Meta-regression of effect sizes for depression outcome measures in adult MHPSS studies

Hypothesis	Regression coefficient	Standard error	P value	95% CI
Community engagement	15.15	16.72	0.46	(-56.79, 87.09)
Government partnership	-3.68	2.19	0.24	(-13.14, 5.78)
Social and cultural sensitivity	-9.73	8.94	0.39	(-48.19, 28.74)
Establish good relationship	-6.69	8.32	0.51	(-42.48, 29.10)

Table 5.5: Adults cross-study matrix and effect size estimates of PTSD

Study by type of MHPSS	Community engagement	Government partnership	Trained providers	Socially/culturally meaningful	Group-based programme	Establish good relationships	Effect of MHPSS on PTSD Effect sizes (SMD)
Psychotherapy: CBT							
Basoglu (2005)	x	x	✓	x	x	x	-0.44
Basoglu (2007)	x	x	✓	x	x	x	-0.94
Bass (2013)†	x	x	✓	✓	✓	x	-1.21
Bolton (2014)	✓	x	✓	✓	x	✓	-0.83
Bryant (2011)	x	x	✓	✓	x	x	-0.62
Hagl (2014)	x	x	✓	x	✓	x	-0.23
Psychotherapy: NET							
Bichescu (2007)	x	x	✓	x	x	✓	-1.41
Igreja (2004)	x	x	x	x	x	x	-0.07
Jacob (2014)	x	x	✓	✓	x	x	-0.25
Neuner (2004)	x	x	✓	x	x	x	-1.33
Neuner (2008)	x	✓	✓	x	x	x	-0.56
Zang (2013)	x	✓	✓	✓	x	x	No data
Zang (2014)	x	✓	✓	✓	x	x	NET -4.33 NET-R -4.90
Psychotherapy: others							
Acarturk (2015)	x	✓	✓	✓	x	x	-1.65
Ayoughi (2012)	x	✓	✓	✓	x	x	n/a
Connolly (2011)	✓	x	✓	x	x	x	-0.27
Jiang (2014)	x	x	✓	✓	x	x	-0.99
Meffert (2014)	x	x	✓	✓	x	x	-1.44
Neuner (2004)	x	x	✓	x	x	x	-0.10
Neuner (2008)	x	✓	✓	x	x	x	-0.70
Telles (2010)	x	x	✓	✓	x	x	n/a
Yeomans (2010)	✓	x	✓	x	✓	x	WP -0.29 WnP -0.45

WP = workshop with psycho-education; WnP = workshop without psycho-education.

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