

Psychological interventions for children and young people affected by armed conflict or political violence: a systematic literature review

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Youths exposed to armed conflict have a higher prevalence of mental health and psychosocial difficulties. Diverse interventions exist that aim to ameliorate the effect of armed conflict on the psychological and psychosocial wellbeing of conflict affected youths. However, the evidence base for the effectiveness of these interventions is limited. Using standard review methodology, this review aims to address the effectiveness of psychological interventions employed among this population. The search was performed across four databases and grey literature. Article quality was assessed using the Downs and Black Quality Checklist (1998). Where possible, studies were subjected to meta-analyses. The remaining studies were included in a narrative synthesis. Eight studies concerned non clinical populations, while nine concerned clinical populations. Review findings conclude that Group Trauma Focused–Cognitive Behavioural Therapy is effective for reducing symptoms of posttraumatic stress disorder, anxiety, depression and improving prosocial behaviour among clinical cohorts. The evidence does not suggest that interventions aimed at non clinical groups within this population are effective. Despite high quality studies, further robust trials are required to strengthen the evidence base, as a lack of replication has resulted in a limited evidence base to inform practice.

Keywords: mental health, psychological, psychosocial, interventions, war affected youths, review

Introduction

Background

Mental health and psychosocial difficulties are prevalent among youths living in conflict

Key implications for practice

- Group Trauma Focused–Cognitive Behavioural Therapy is effective for reducing symptoms of posttraumatic stress syndrome, anxiety, depression and improving prosocial behaviour among clinical cohorts of conflict affected youths
- Evidence for non clinical cohort of conflict affected youths is limited
- Further robust trials are required to strengthen the evidence base for interventions aimed at the population, particularly for non clinical cohorts of conflict affected youths

or post conflict affected regions (Catani, Kohiladev, Ruf, Schauer, Elbert, & Neuner, 2009; Jakupcak & Tull, 2005). To improve mental wellbeing, psychological interventions for this population aim to address symptoms of posttraumatic stress disorder (PTSD), depression and anxiety, as well as difficulties such as externalised behaviour, aggression and poor overall functioning. Interventions also hope to contribute to breaking the cycle of civil conflict in conflict affected countries and regions (Bolton et al., 2007; Dybdahl, 2001; McMullen, O’Callaghan, Shannon, Black, & Eakin, 2013; O’Callaghan, McMullen, Shannon, Rafferty & Black, 2013).

The Inter-Agency Standing Committee (IASC) define ‘psychosocial support’ as ‘any type

of local or outside support that aims to protect or promote psychosocial wellbeing and/or prevent or treat mental disorder' (IASC, 2007, p.17). Psychological interventions for this population are widely used by state led health services, nongovernmental organisations (NGOs) and local community based organisations (CBOs), and are strongly recommended by the World Health Organization (2010). Despite this consensus, gaps exist between the needs of youths and the availability of evidence based interventions, with the majority of these informed by trauma based research in non conflict affected areas, particularly western Europe and North America (Morris, van Ommeren, Belfer, Saxena, & Saraceno, 2007). The suitability of such interventions for the issues facing conflict affected youths is questionable and, where impact has been noted, almost no longitudinal follow-ups have been conducted (Summerfield, 2001).

Three literature reviews exist for psychological interventions within this population (Jordans, Tol, Kompore & de Jong, 2009; Peltonen & Punamaki, 2010; Persson & Rousseau, 2009). These reviews recommend improving scientific research and insight into the causality and strength of reported changes on the range of outcomes. Additionally, by including outcomes related to optimal functioning and development, intervention outcomes can be expanded beyond symptom reduction. These reviews were conducted over five years ago, and global contexts assessed ranged widely. Other randomised control trials (RCTs) have since been published (e.g. McMullen et al., 2013). Across these reviews, only three RCT's relevant to interventions for war affected youths were detailed, including one study in northern Uganda (Bolton et al., 2007) and two in Bosnia and Herzegovina (Layne et al., 2001; Dybdahl, 2001). Consequently no comprehensive meta-analyses have been completed, and key questions remain unanswered relating to the effectiveness of interventions.

Literature detailing interventions for conflicted affected youths suggest some promising findings. However, this research is in need of an in-depth evidence base. The aim of this review is to provide evidence for the effectiveness of interventions employed among youths affected by ongoing conflict.

Method

Search strategy

Four databases were searched; Pubmed, PILOT, Psyc Info and Medline. Search terms included: (.child. or .adolescent.) and (.war. or .armed conflict. or .community violence. or . political . violence .) and (.intervention. or .treatment. or .therapeutics) and (.psychosocial. or .mental health.). The search covered publication dates between 1806 and 2014, and was performed on 16 July 2014, including past and present conflict affected areas. A grey literature search was conducted through websites of key organisations in this field, and a survey was conducted to inform the inclusion criteria, highlighting any further grey literature not already screened. Results of the survey informed inclusion criteria detailed below.

Articles were included for full review if they met the following criteria: a) the methodology was described as an RCT or a cluster randomised trial (CRT); b) primary participants were youths living in countries with protracted armed conflict or political violence; c) interventions aimed at reducing psychosocial or mental health effects of armed conflict; and d) the publication detailed the impact on psychosocial and mental health outcomes.

Studies were excluded if target populations were asylum seekers or refugees who had crossed an international border as the experiences of making the journey to a country of perceived safety, and the experience of living outside of the home country of conflict presents experiences and variables that are different to those experienced by those who remain living in conflict or

post-conflict zones. Studies were also excluded if they focused on single event exposure, such as a terrorist attack in an otherwise stable country, or if the population were exposed to interpersonal or internal familial conflict.

Procedure

Two reviewers (COS and TB) independently screened studies using the title/abstract, with those selected being screened by full text. Discrepancies were discussed with a third reviewer (CS) and agreed. Interrater reliability for article selection was good (Kappa = 84%). Reference lists of included studies were also screened. Finally, grey literature was screened by reviewers COS and TB.

Data synthesis and analysis methodology

Interventions were categorised according to the target populations, as either non clinical or clinical. Studies were categorised as *non clinical* if the interventions targeted youths at risk of developing psychosocial and mental health difficulties through exposure to continued violence. Studies were categorised as *clinical* if the interventions targeted participants whose symptoms met a clinical threshold.

Meta-analyses were conducted on post intervention scores for treatment and control groups only when comparable interventions and outcomes were present. For all meta-analyses, studies were weighted by sample size. Random effects modelling were used due to the inherent heterogeneity across studies. Standard mean differences (SDM) were utilised when the same outcomes were measured using different scales, and means differences (MD) were utilised when outcomes were measured on the same scales. All results represented in the meta-analysis are short-term outcomes, as there was insufficient data for long-term outcomes. RevMan 5.3 (The Cochrane

Collaboration, 2014) was used for meta-analytic calculations. A narrative synthesis of outcomes that were not eligible for meta-analyses was completed.

Critical appraisal

The Downs and Black quality assessment scale (QAS) measured study quality (Downs & Black, 1998). This QAS consists of 27 criteria that determine the quality of reporting, and external and internal validity. This tool has high internal consistency, good test-retest ($r = 0.88$), inter-rater ($r = 0.75$) reliability, and good face and criterion validity (0.90).

Results

Study selection

Of 649 publications and 4,276 grey literature items, 17 studies were ultimately included (Figure 1). Exclusion criteria consisted of: inappropriate methodology; no intervention; no evaluation; refugees, asylum seekers or adult participants; participants exposed to interpersonal conflict, urban violence, or a single event.

Intervention features

Table 1 provides an overview of intervention features. First, the eight interventions studies for non clinical populations are detailed, followed by the nine interventions studies for clinical populations.

Setting and sample size

Contexts ranged from displacement after violent conflict in Uganda, to exposure to ongoing armed conflict in the occupied Palestinian territories. Sample size in the studies ranged from 50 participants to larger community studies of 1127 war affected youths (McMullen et al., 2013; Khamis, Macy, & Coignes, 2004).

Participants

In 14 of the 17 studies, youths were the only participants in the interventions. Three

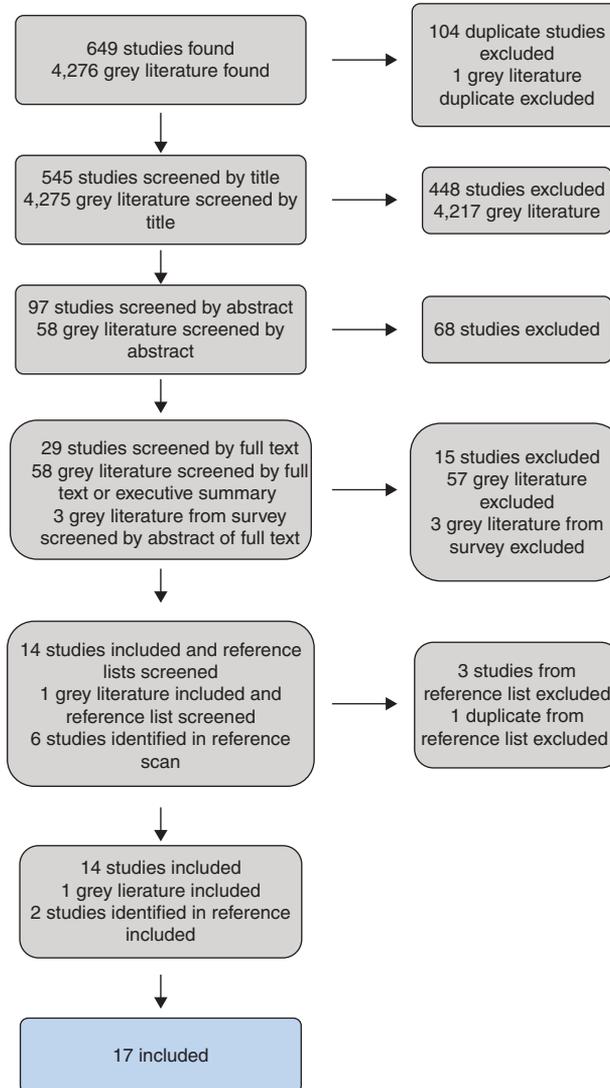


Figure 1: Flow chart illustration of search and screening process

interventions included parental involvement. Periodic parental discussions were a component of the intervention reported by Ager et al. (2011). Caregivers partook in all aspects of the intervention reported by O'Callaghan, Branham, Shannon, Betancourt, Dempster & McMullen (2014), as well as additional parent only activities, which focused on effective parenting. One of the interventions focused solely on parents, aiming to enhance maternal

mental health and provide psychoeducation on the impact of trauma (Dybdahl, 2001).

Outcomes

Outcomes measured in non clinical studies included wellbeing, peer and sibling relations, prosocial behaviour, hope, functional impairment, aggression, general psychological wellbeing, anxiety, depression

Table 1. Intervention features

Author & country	Sample size participants exclusion	Age	Intervention	Evidence quality	Type of control group	Primary outcomes	Primary outcome measures*	Effectiveness
Ager et al., 2011; Uganda	Non clinical populations 403 internally displaced youths; No exclusion criteria detailed	7 – 12	Psychosocial structured activities	CRT; Pre and 12 months post	Wait list	Wellbeing	Wellbeing scale developed for study**	Wellbeing $d = 0.72$ to 1.12
Day & Sadek, 1982; Lebanon	62 war affected youths exposed to conflict. No exclusion criteria detailed	10 – 12	Bensons relaxation technique	RCT; Pre, post and 3 month follow-up	Active	Anxiety	GAS-C	Anxiety $d = 0.175$
Diab et al., 2014; Palestine	428 war affected youths living in Gaza 3.5 months post-war; No exclusion criteria detailed.	10 – 13	Teaching recovery techniques	CRT; Pre, post and 6 month follow-up	Wait list	Peer /sibling relations	Youths loneliness scale; Friendship qualities scale	Loneliness $d = 0.14$; Peer relations $d = 0.12$; Sibling relations; $d = 0.02 = 0.21$

	87 war affected mother-child dyads; No exclusion criteria detailed.	5-6	Psychoeducation for mothers	RCT; Pre and post	Active	Maternal mental health; Child psychosocial functioning	Wellbeing semantic scale; Birlleson's Depression Inventory; Parental rating of child's problems**	Maternal mental $d = 0.22$; Child psycho-social; Functioning $d = 0.33-0.54$
Dybdahl 2001; Bosnia	325 war affected adolescents; Psychiatric symptoms	11-14	Classroom based intervention ^R (CBI ^R)	Wait list	PTSD $d = 0.18$; Depression $d = 0.27$; Prosocial behaviour and; generic psychological functioning; $d = 0.41-0.46$; Functional impairment $d = 0.35$			
Jordans et al., 2010; Nepal	RCT; Pre and post		PTSD; Depression; Anxiety psychological functioning; Hope; Prosocial behaviour; Function impairment	CPSS; DSRS; SCARED-5; SDQ; CFI; CHS; Aggression Questionnaire				
Khamis et al., 2004 a, b; Palestine	1507 war affected youths in West Bank and Gaza; No exclusion criteria detailed.	6-14	CBI ^R	RCT; Pre and post	Wait list	Traumatic stress reactions; Anxiety; General functioning; Hope	CRIES-8; PENN State Worry; SDQ; CHS	PTS Symptoms $d = 0.07$; Coping strengths and resiliency maintained

Table 1. (Continued)

Author & country	Sample size participants exclusion	Age	Intervention	Evidence quality	Type of control group	Primary outcomes	Primary outcome measures*	Effectiveness
O'Callaghan et al., 2014; DRC	159 war affected youths and their caregivers facing current risk. Global developmental delay	7–15	Family focused psychosocial intervention	RCT; Pre, post and 3 month follow-up	Wait list	PTSD; Conduct problems; Prosocial behaviour	CRIES-8; AYPAs**	PTSD symptoms $d = 0.40$
Slone et al., 2013; Israel	179 adolescents; No exclusion criteria noted	16–17	Mobilisation of support and self-efficacy	CRT; Pre and post	Wait list	Psychological distress; Self efficacy	SDQ; SEQ-C	Self-efficacy $d = 0.43$; Psychological symptoms $d = 0.20 - 0.40$
Bolton et al., 2007; Uganda	Clinical populations 314 war affected Acholi adolescents living in IDP camps; Cognitive/physical disability/Severe suicidal ideation/behaviour	14–17	a) Group Interpersonal; Psychotherapy (GIPT); b) Creative Play (CP)	RCT; Pre and post	Wait list and Active	Depression; Anxiety; Conduct problems	AYPA**	Depression; IPT: $d = 0.57$; CP: $d = 0.20$

Ertl et al., 2011; Uganda	85 former child soldiers in IDP camps; Psychotic symptoms	12–25	a) Narrative exposure therapy (NET); b) Academic Catch-up (AC)	RCT; Pre treatment 3, 6, 12 month follow up	Wait list and Active	PTSD; Depression	PTSD; CAPS	PTSD symptoms; NET $d = 0.72$; AC $d = 0.66$
Gordon et al., 2008; Kosovo	82 war-affected youths; No exclusion criteria detailed	14–18	Mind body-skills group (MBSG)	RCT; Pre, post and 3 month follow-up	Wait list	PTSD	HTQ	PTSD $d = 1.13$
Layne 2001; Bosnia	127 war-affected adolescents; Psychosis, risk to self/others, substance abuse	13–18	Trauma and grief component therapy	RCT; Pre, post and 4 month follow-up	Active	PTSD; Depression; Maladaptive grief	UCLA-PTSD-RI; DSR; UCLA-GI	PTSD $d = 0.21$; Depression $d = 0.096$; Maladaptive grief; $d = 0.025$ – 0.451
McMullen et al., 2013; DRC	50 male former child soldiers	13–17	Group trauma-focused cognitive-behavioural therapy (GTF-CBT)	RCT; Pre, post and 3 month follow-up	Wait list	PTSD; Anxiety; Depression	UCLA-PTSD RI; AYPA**	PTS symptoms $d = 2.75$; Depression/ anxiety $d = 2.13$; Conduct problems $d = 1.28$; Improved psychosocial behaviours $d = 1.66$

Table 1. (Continued)

Author & country	Sample size participants exclusion	Age	Intervention	Evidence quality	Type of control group	Primary outcomes	Primary outcome measures*	Effectiveness
O'Callaghan et al., 2013; DRC	52 war-affected girls exposed to rape and inappropriate sexual touch; Intellectual disability, psychosis, severe emotional & behavioural problems	12–17	GTF-CBT	RCT; Pre, post and 3 month follow-up	Wait list	PTSD; Anxiety; Depression; Conduct problems; Prosocial behaviour	UCLA-PTSD RI; AYP A**	Reduced PTSD symptoms $d = 1.92$; Reduced depression/anxiety $d = 1.98$; Reduced conduct problems $d = 1.09$; Improved psychosocial behaviours; $d = 1.35$
Tol et al., 2008; Indonesia	495 war-affected youths with clinically significant symptoms of PTSD/depression.; Violent behaviour/ Severe psychiatric symptoms	8–17	CBI ^R	CRT; Pre, post and 3 month follow-up	Wait list	PTSD; Depression; Anxiety; Hope; General functioning	CPSS; DSRS SCARED-5; CHS FIS**	PTSD symptoms $d = 0.55$; Depression $d = 0.07$; Anxiety $d = 0.14$; Hope $d = 0.29$

Tol et al., 2012; Sri Lanka	399 war-affected youths; No exclusion after meeting inclusion criteria	9–12	CBI ^R	CRT; Pre, post and 3 month follow-up	Wait list	PTSD; Depression; Anxiety; General functioning	CPSS; DSRs; SCARED; SDQ; FIS**	PTSD $d = 0.14$; Depression $d = 0.53$; Anxiety $d = 0.13$
Tol et al., 2014; Burundi	329 youth exposed to continued political violence	8–17	CBI ^R	CRT; Pre, post and 3 month follow-up	Wait list	PTSD; Depression; Hope; General functioning	CPSS; DSRs; CHSFIS**	Reduced PTSD $d = 0.06$; Reduced depression $d = 0.12$; Increased Hope $d = 0.13$

* **Key of outcome measure:** Acholi Psychosocial Assessment Instrument (AYPA); Adolescent Coping for Problem Experience (A-COPE); Youths Attribution and Perceptions Scale (CAPS); Youths Attributional Style Questionnaire (CASQ); Youths Post-traumatic Stress Screen (CPSS); Child Reaction Impact of Events Scale (CRIEIS-8); Depression Self-rating Scale (DSRS); General Anxiety Scale for Youths (GAS-C); Harvard Trauma Questionnaire (HTQ); Impact of Event Scale (IES); Functional Impairment Scale (FIS); Rosenberg's Self-Esteem Scale (RSES); Screening for Childhood Anxiety Related Disorders-5 (SCARED-5); Strengths and Difficulties Questionnaire (SDQ); Self-Efficacy Questionnaire for Youths (SEQ-C); Child Hope Scale (CHS) Social Support matrix (SSM); University of California-PTSD Reaction Index (UCLA-PTSD RI); University of California-Greif Index (UCLA-GI); Youth Coping Inventory (YCI).

** Measures developed for context.

and PTS symptoms (Ager et al., 2011; Day & Sadek, 1982; Diab, Punamäki, Palosaari & Qouta, 2014; Dybdahl, 2001; Jordans et al., 2010; Khamis et al., 2004; O’Callaghan et al., 2014).

Eight of the nine interventions for clinical populations measured at least three outcomes. Depression and PTSD were measured by eight studies, and anxiety was included in six. Grief, stigma, guilt and suicidal ideation were identified once across the nine studies (Ertl, Pfeiffer, Schauer, Elbert, & Neuner, 2011). Prosocial behaviour was included in two studies and hope in three studies (McMullen et al., 2013; O’Callaghan et al., 2013; Tol, Komproe, Susanty, Jordans, Macy & De Jong, 2008; Tol et al., 2012, 2014).

Eight studies utilised locally developed outcome measures (Ager et al., 2011; Bolton et al., 2007; McMullen et al., 2013; O’Callaghan et al., 2013; O’Callaghan et al., 2014; Tol et al., 2008, 2012, 2014).

Theoretical frameworks

Theoretical frameworks ranged from cognitive behavioural therapy (CBT), mind–body (e.g. meditation, breathing techniques, guided imagery), and narrative exposure therapy to interventions informed by an eclectic range of therapeutic models (Table 2).

Quality assessment

Quality of studies was assessed using the Downs and Black quality assessment scale

Table 2 Theoretical foundations of interventions

Category	Author	Theoretical basis
Non clinical	Ager et al., 2011; Jordans et al., 2010; Khamis et al., 2004	CBT, creative expressive (art) and experiential (drama) therapy
	Day et al., 1982	Biofeedback assisted relaxation training
	Diab et al., 2014 Dybdahl 2001	CBT principles Contemporary developmental theories
	O’Callaghan et al., 2014	Systemic, family focused, community based psychosocial intervention
	Slone et al., 2013	Resilience enhancement: self-efficacy and mobilisation of social support
Clinical	Bolton et al., 2007	Interpersonal psychotherapy; Resilience enhancement though verbal and non-verbal play
	Ertl et al., 2011	Narrative exposure therapy
	Gordon et al., 2008	Mind–body skills training
	Layne et al., 2001; McMullen et al., 2013; O’Callaghan et al., 2013	TF–CBT
	Tol et al., 2008, 2012, 2014	CBT, creative expressive and experiential therapy

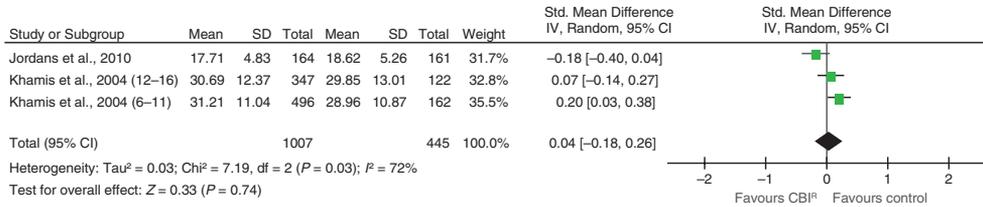


Figure 2: Effectiveness of CBI^R on PTS symptoms within a non clinical population.

(QAS, Downs & Black, 1998). Average study quality was high, meeting 83.4% of the criteria (range: 70–93%). Potential adverse events were not detailed in all 17 studies. Criteria commonly unfulfilled included not reporting exact P values and the absence of power calculations (Day & Sadek, 1982; Diab et al., 2014; Dybdahl 2001; Gordon, Stales & Blyta, 2008; Jordans et al., 2010; Khamis et al., 2004; Layne et al., 2001; McMullen et al., 2013; Slone, Shoshanie & Lobel, 2013).

Effectiveness of interventions

Intervention effectiveness is divided into two sections, 1) non clinical populations, and 2) clinical populations. Both sections include meta-analyses for eligible studies and brief narrative synthesis for the remaining studies.

Interventions for non clinical populations

Meta-analyses of Classroom Based Intervention^R for posttraumatic stress symptoms, anxiety, depression and hope

Three studies met meta-analyses criteria for the outcomes: PTS symptoms, anxiety, general psychosocial functioning and hope (Jordans et al., 2010; Khamis et al., 2004a; b). For the studies employing the

Classroom Based Intervention^R (CBI^R), different scales were used to measure outcomes (Table 1).

Symptoms of PTS

For symptoms of PTS, Figure 2 illustrates that the pooled estimate of random effects model found no overall effect for either CBI^R [SMD = 0.04; 95% CI (confidence interval) -0.18 to 0.026, P = 0.74]. Heterogeneity was statistically significant (I² = 72%, P = 0.03).¹

Anxiety

For anxiety, Figure 3 illustrates that the pooled estimate of random effects model found no overall effect for CBI^R (SMD = 0.65; 95% CI -0.56 to 0.187, P = 0.29). Heterogeneity was statistically significant (I² = 99%, P < 0.001).

General psychological functioning

Figure 4 illustrates that for general psychological functioning the mean difference for random effects model found no overall effect for CBI^R (MD = 1.69; 95% CI -3.82 to 0.44, P = 0.12), as measured on the SDQ. Heterogeneity was statistically significant (I² = 92%, P < 0.001).

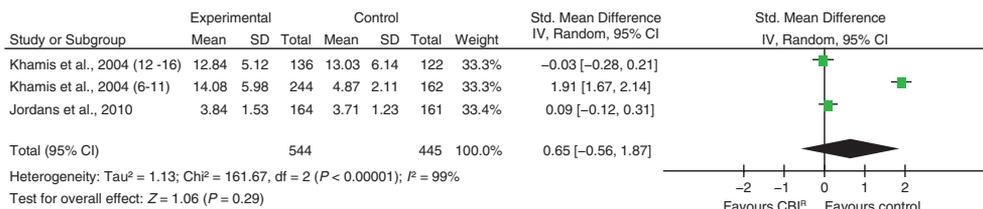


Figure 3: Effectiveness of CBI^R for anxiety within a non clinical population.

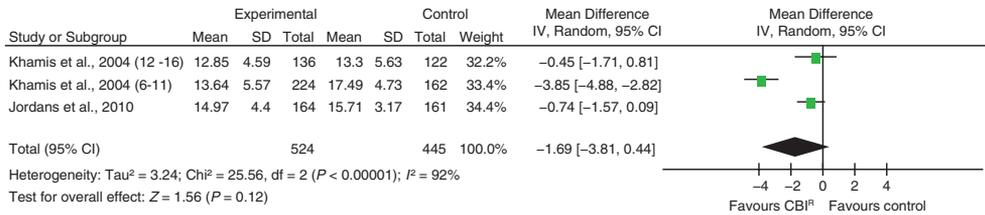


Figure 4: Effectiveness of CBI^R for general psychosocial functioning within a non clinical population.

Hope

Hope was measured using the Child Hope Scale (CHS, Snyder et al., 1997) Figure 5 illustrates that the mean difference of the random effects model found a significant overall effect in favour of CBI^R (MD=1.59; 95% CI 0.54 to 2.64, P= 0.003). Heterogeneity was statistically significant (I² = 72%, P < 0.03).

Hope was the singular outcome identified as significantly changing following the implementation of CBI^R. General psychological functioning and symptoms of PTS moved in the expected direction post intervention, however anxiety did not.

It is also noteworthy that higher effectiveness was consistently identified in Khamis et al. (2004b) where participants ranged between 6 and 11 years and in the other two studies participants ranged from 11 to 16 years.

Narrative synthesis of remaining interventions for non clinical populations

Examining effect sizes of studies excluded from the meta-analyses (detailed in Table 1), it may be argued that there is evidence to

suggest these interventions have a positive impact on wellbeing (Cohen’s d = 0.72–1.12, Ager et al., 2011).

Effect sizes could not be determined for the effectiveness of trauma recovery techniques (TRT) to improve peer and siblings relations (Day & Sadek, 1982); relaxation interventions for anxiety (Day & Sadek, 1982); or social mobilisation for general psychological functioning and self esteem (Slone et al., 2013), as insufficient data is provided.

Effectiveness of interventions for clinical populations

Separate meta-analyses were computed for group trauma focused cognitive behavioural therapy (GTF–CBT) and CBI^R due to the differing nature of the interventions. GTF–CBT meta-analyses included the outcomes: PTSD; anxiety and depression (combined); conduct difficulties; and prosocial behaviour (McMullen et al., 2013, O’Callaghan et al., 2013). For CBI^R, meta-analyses for the outcomes PTSD; depression; anxiety; hope; and functional impairment were computed (Tol et al., 2008, 2010, 2014).

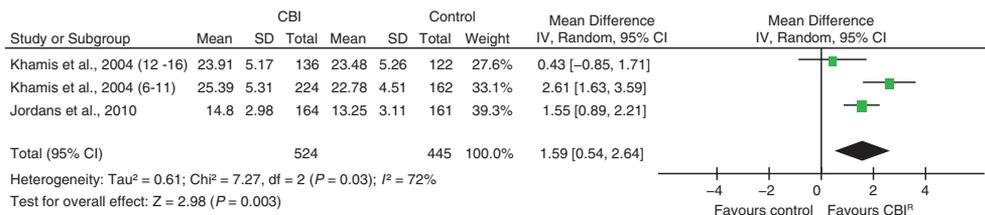


Figure 5: Effectiveness of CBI^R for hope within a non-clinical population.

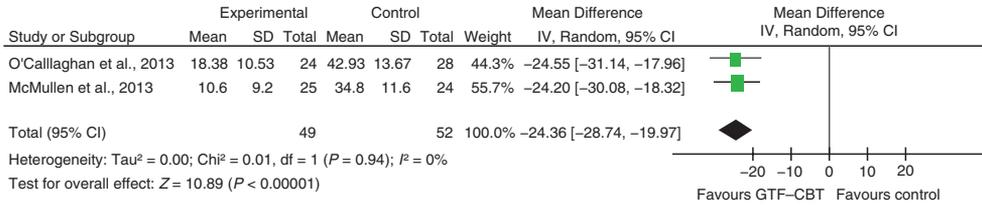


Figure 6: Effectiveness of GTF-CBT on PTSD within a clinical population.

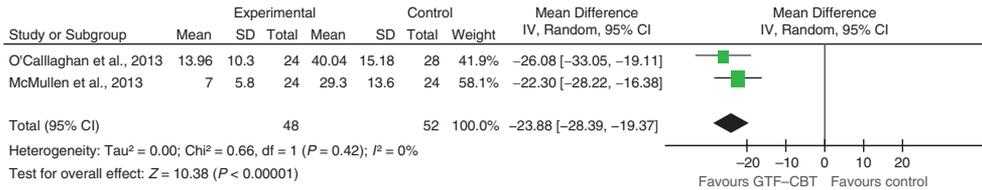


Figure 7: Effectiveness of GTF-CBT for anxiety and depression (combined).

Meta-analyses of GTF-CBT for PTSD, anxiety and depression (combined), conduct difficulties and prosocial behaviour

PTSD

PTSD was measured using the University of California-PTSD Reaction Index (UCLA-PTSD-RI, Steinberg et al. (2013) in both studies. Figure 6 indicates that GTF-CBT yielded a statistically significant mean decrease of 24.36 (95% CI -28.63 – -1.29, P < 0.0001). Heterogeneity was not significant (I² = 0%; P = 0.94).

Anxiety

Anxiety and depression were measured as a combined outcome using a subscale on the African Youth Psychological Assessment (AYPA, Betancourt et al., 2009). As shown in Figure 7, GTF-CBT yielded a statistically significant mean decrease of 23.88 (95% CI

-28.39 to -19.37, P < 0.00001). Heterogeneity was not significant (I² = 0%; P = 0.42).

Conduct problems

Conduct problems were measured as using a subscale on the AYPA. As shown in Figure 8, GTF-CBT yielded a significant mean decrease of 6.89 (95% CI -9.10 to -4.69, P < 0.0001). Heterogeneity was not significant (I² = 0%; P = 0.58).

Prosocial behaviour

Prosocial behaviour was measured on a subscale of the AYPA. As shown in Figure 9, GTF-CBT yielded a statistically significant mean increase of 4.78 (95% CI 2.07-7.49; P = 0.0006). Heterogeneity was not significant (I² = 0%; P = 0.10).

Meta-analyses identified GTF-CBT led to statistically significant improvements on

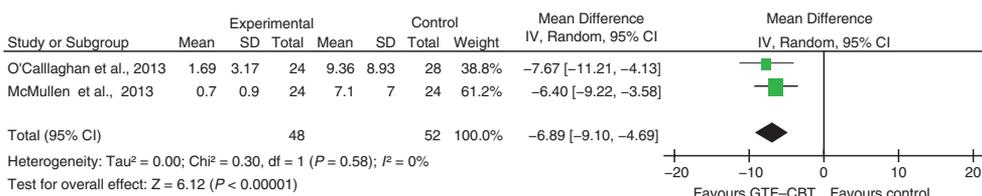


Figure 8: Effectiveness of GTF-CBT for conduct problems within a clinical population.

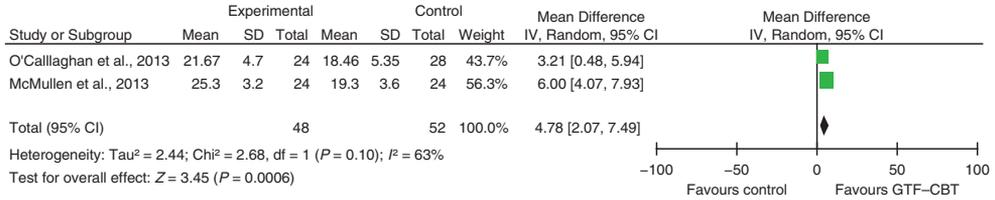


Figure 9: Effectiveness of GTF-CBT for prosocial behaviour within a clinical population.

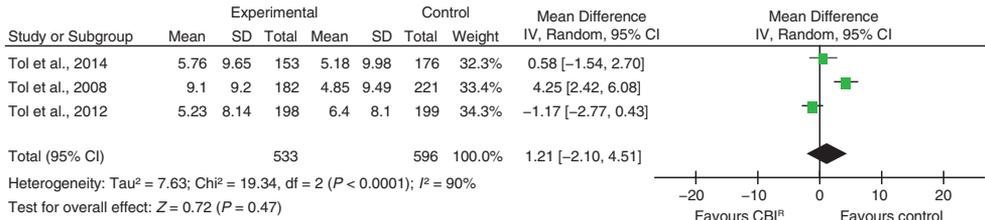


Figure 10: Effectiveness of CBI^R for PTSD in clinical population.

PTSD, anxiety and depression, conduct problems and prosocial behaviours outcomes.

Meta-analyses of CBI^R for PTSD, anxiety, depression, hope and functional impairment in a clinical population

PTSD

PTSD was measured using the Child PSTS Symptoms Scale (CPSS, Foa, Johnson, Feeny, & Treadwell, 2001). As seen in Figure 10, CBI^R did not yield any overall significant effect with a mean decrease of 1.12 (95% CI -2.1 to 4.51, P = 0.47). Heterogeneity was statistically significant (I² = 90%; P < 0.0001).

Depression

For depression, CBI^R did not yield a significant effect with a mean decrease of 0.02

(95% CI -0.86 to 0.47, P = 0.56), as measured on the depression self-rating scale (DSRS). Heterogeneity was not statistically significant (I² = 35%; P = 0.21) Figure 11.

Anxiety

Anxiety was measured on the Self-report for Anxiety Related Disorders (SCARED-5, Birmaheer et al., 1999), however, Tol et al. (2014) did not include it in the final analysis as internal reliability was low. As seen in Figure 12, for anxiety an overall effect nearing significance was found in favour of CBI^R with a mean decrease of 0.31 (95% CI -0.76 to 0.01, P = 0.06). Heterogeneity was not statistically significant (I² = 0%; P = 0.93).

Functional impairment

Functional impairment was measured on contextually constructed scales developed by the

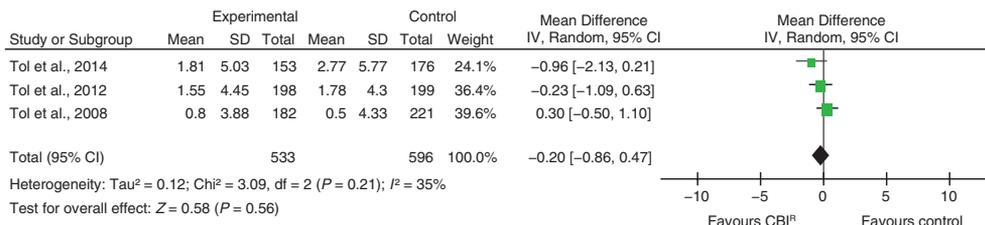


Figure 11: Effectiveness of CBI^R for Depression in clinical population.

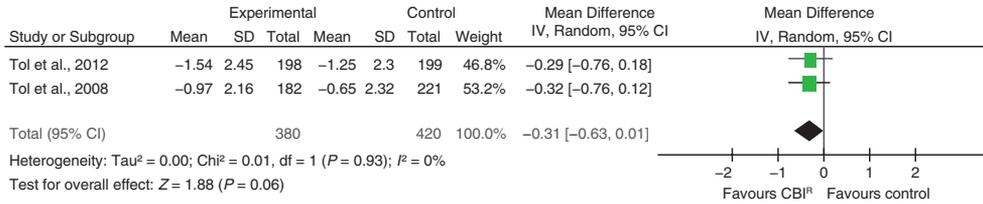


Figure 12: Effectiveness of CBI^R for Anxiety in clinical population.

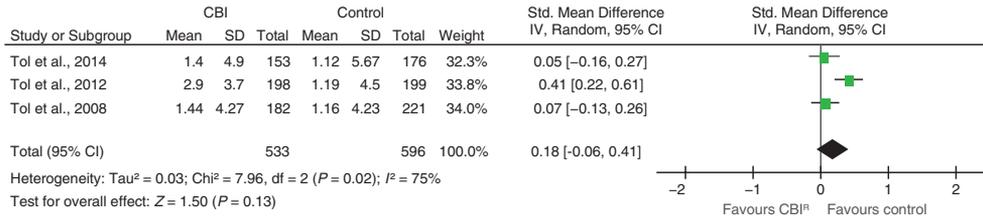


Figure 13: Effectiveness of CBI^R for Functional Impairment in a clinical population.

researchers for each study. Figure 13 indicates that for functional impairment, CBI^R did not yield any overall significant effect with a mean increase of 0.07 (95% CI -0.13 to 0.26, P = 0.13). Heterogeneity was statistically significant (I² = 75%; P = 0.02).

Hope

Hope was measured on the Child Hope Scale (Synder et al., 1997). Figure 14 illustrates that CBI^R did not yield any overall significant effect for hope, with a mean increase of 0.33 (95% CI -1.51 to 0.13 to 1.21, P = 0.51). Heterogeneity was not statistically significant (I² = 0%; P = 0.33).

Narrative synthesis of remaining interventions for clinical populations

Effect sizes for the remaining interventions indicate some evidence to suggest that these may prove beneficial (Table 1).

Three studies that were not included in the meta-analyses examined the effectiveness of various interventions for PTSD. Gordon et al. (2008) employed a mind-body skills programme, finding a large treatment effect favouring the intervention group (Cohen's d = 1.13). The effectiveness of narrative exposure therapy (NET) and an academic catch-up group for PTSD were examined by Ertl, Pfeiffer, Schauer, Elbert & Neuner (2011). NET produced a larger treatment effect (Cohen's d = 0.76) than the academic catch up group (Cohen's d = 0.66), both being favoured over the control condition. Trauma and grief component therapy (TGCT, Smith & Saunders, 2005), produced a larger effect size (Cohen's d = 1.66) for the treatment group who received the intervention earlier than the control, suggesting earlier intervention is more effective than delayed interventions (Layne et al., 2001).

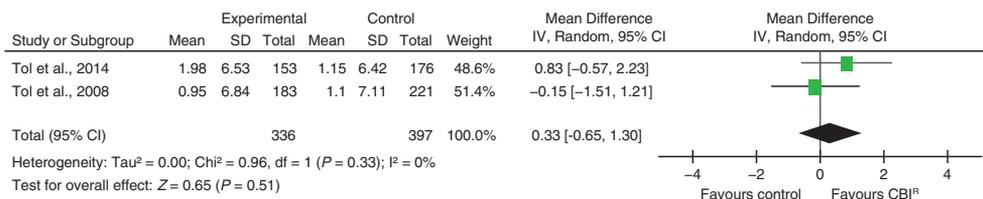


Figure 14: Effectiveness of CBI^R for Hope in clinical population.

For depression within clinical populations, Bolton et al. (2007) found that Group Interpersonal Therapy (Cohen's $d=0.52$) was more effective than creative play (Cohen's $d=0.2$), compared to a comparison group, but no significant effects were identified for anxiety nor conduct difficulties.

Although these findings point to potentially effective interventions for PTSD and depression within clinical populations, the true clinical effectiveness remains unquantified without meta-analytic calculations.

Discussion

Key findings

Research in this area does not provide a rigorous evidence base to inform practice. Within clinical cohorts of conflict affected youths, meta-analyses found GTF-CBT to be effective in reducing symptoms of, anxiety, conduct problems and increasing pro-social behaviour however, only three studies were included in this analysis. For non clinical populations, CBI^R was the only intervention eligible for meta-analyses and was found to be effective for the sole outcome, hope. Overall, from meta-analytic calculations, it is evident that interventions which are comprised of core elements of CBT, such as GGTF-CBT for clinical cohorts, are beneficial.

It is also apparent from this review that interventions that are comprised of core elements of CBT have secured more RCTs, and that this may result in a skewed evidence base in favour of such interventions. Importantly, this should not be taken as lack of evidence for interventions informed by other theoretical frameworks, rather it indicates a lack of studies examining effectiveness of interventions other than CBT-type protocols.

Examining individual effect sizes for studies not included in meta-analyses, it is arguable that some of these interventions may be beneficial for this population. For example, moderate to large effect sizes were identified for interventions grounded in mind-body,

systemic, narrative and interpersonal therapeutic frameworks (e.g. Bolton et al., 2007; Dybdahl, 2001; Gordon et al., 2008; O'Callaghan et al., 2014). However, as these are all one-off studies no conclusive evidence exists on the effectiveness of these interventions.

Synthesis of intervention features

Seventeen studies were included in this review and although research in the area has increased (the number of controlled studies increasing from three in 2009 and to 17 in 2014) this is still low relative to the number of conflict affected youths. However, the high rating across the QAS evidences that there have been advances in research. Six of the studies included CRTs and the remaining eleven were RCTs, a marked improvement from the three RCTs identified in a review five years ago (Jordans et al., 2009).

There is a continued focus on clinical outcomes, even within non clinical populations. Although there is a movement to incorporating more psychosocial outcomes, it is clear from the results of this review that clinical outcomes (e.g. PTSD, depression etc.) outweigh non clinical outcomes (e.g. pro-social behaviour). The limited effectiveness of interventions for non clinical cohorts may be a result of the use of clinical measures for non clinical populations. The use of such measures may result in floor-effect results, with the resultant missed opportunity to examine changes which may occur at a sub clinical level.

Few studies were identified that utilised locally validated outcome measures. As symptom expression can differ across contexts, evaluating intervention effectiveness based on measures that are not culturally germane may result in inaccurate findings. Sample sizes ranged between 50 to larger community studies of 1127 war affected youths (McMullen et al., 2013; Khamis et al., 2004). Although these are adequate sample sizes, not all studies explicitly

stated power calculations. All interventions were group based, this is not surprising given the limited resources in these contexts, as well as the stigma that may be associated with mental health difficulties (Betancourt Meyers-Ohki, Charrow & Tol, 2014).

The age profile of participants is more heavily focused on adolescents. There is limited research on interventions for younger youths, with only four studies including youths seven years and younger (Ager et al., 2011; Dybdahl, 2001; Khamis et al., 2004; O'Callaghan et al., 2014). However, Khamis et al. (2004) large scale community intervention found that treatment effectiveness was higher amongst youths aged 6–11 years, compared with 12–16 years. This highlights that interventions efficacious at one stage may not be so at another, and physical, emotional and social developmental stages need to be considered before applying standard interventions to various age groups. Further research into interventions for younger youths is needed. Dybdahl (2001) assessed the effectiveness of an intervention for a younger population and findings were positive, however, as this is a one-off study it cannot be recommended as an effective protocol. This intervention takes into account the developmental stage of the child and an understanding that vulnerability is intrinsically linked to dependence on a traumatised caregiver who may be unable to provide protection and an emotional safe base. Additional RCTs may be a beneficial avenue for improving the evidence base for this age group

It is also important to consider the timing of interventions. Layne et al. (2001) examined the impact of timing, finding those who received earlier intervention showed greater improvement, compared to those who received delayed intervention. These findings support the view that preventive and early interventions are most effective.

Synthesis of findings related to effectiveness and theoretical foundations

Clear trends emerged in reviewing the effectiveness of interventions informed by differing theoretical frameworks. Within non clinical studies, four interventions explicitly highlighted CBT principles and resilience enhancement frameworks (Ager et al., 2011; Jordans et al., 2010; Khamis et al., 2004a; b; Diab et al., 2014). Three of these studies employed CBI^R, whilst Ager et al. (2011) adapted CBI^R to include systemic components, such as community activities and parental involvement. Among the clinical studies, CBT was also explicitly stated as the theoretical foundation for five of the nine interventions. Two of these studies employed a 'pure' CBT protocol, specifically GTF-CBT (McMullen et al., 2013; O'Callaghan et al., 2013). The three remaining interventions employed the CBI^R which comprises CBT principles and incorporates elements of resilience enhancement (Tol et al., 2008, 2012, 2014).

There has been criticism of the application of CBT-based interventions to war affected youths as it may not be suitable to local cultures, values and traditions. However, the effectiveness of GTF-CBT is evidenced by the meta-analyses in this review. Relying on this finding is problematic as only three studies were analysed. GTF-CBT is an accredited intervention and has been trialled with asylum seekers in United Kingdom (e.g. Ehntholt, Smith & Yule, 2005). Although such research is outside conflict zones, it should not be discarded due to differing contexts, as a clear understanding of the mechanism of change within the components of the intervention have been established. It may be argued that when such mechanisms are understood, effectiveness will transfer, as the application of the intervention across settings will ensure cultural relevance.

The effectiveness of CBI^R across both non clinical and clinical groups was restricted, with significant improvements identified in the non clinical group being limited to hope. One potential cause was the extremely large sample size. Although the studies report adequate procedures for treatment fidelity, one could question its reliability given the large numbers of lay facilitators and teachers providing the intervention.

Within the clinical population, effects nearing significance were identified for anxiety, whereas in the non clinical population significant effects were identified on the outcome hope. In exploring this difference, questions arise relating to the outcomes measured. While outcomes of interest for non clinical populations are predominantly clinical, an important question is whether using clinical methods within a non clinical population may result in reduced sensitivity to changes in symptoms that do not meet the clinical threshold.

Despite guidance on the importance of holistic interventions from the IASC Reference Group on Mental Health and Psychosocial Support in Emergency Settings, it is apparent that evidence for interventions informed by CBT collectively outweighs interventions informed by other theoretical frameworks (IASC, 2007). Evidently, these interventions do exist in smaller numbers, but the lack of replication limits examining effectiveness.

There is a strong evidence base to suggest secure and trusting relationships counteract stressors, and this has been extended to interventions within this population (Bowby, 1969; Sveass & Reichett, 2001). To address the effects of war exposure two non clinical interventions focused on enhancing interpersonal and social relations (O'Callaghan et al., 2014; Slone et al., 2013). Among clinical interventions, improving interpersonal relations was also a key focus in Bolton et al. (2007a) in which IPT-G (group interpersonal therapy) was the intervention of choice. Across both groups, results for such

interventions were promising, as indicated by moderate effect sizes.

Two interventions couched within the mind–body framework were identified in this review, one in both the universal and indicated category, for anxiety and PTSD respectively, (Day & Sadek, 1982; Gordon et al., 2008). Results from Gordon et al. (2008) suggest promise, as indicated by the large effect size.

NET informed an intervention within the indicated category and promising results were found for PTSD, however, as only one study was informed by this theoretical framework, the true effectiveness could not be analysed. Despite these findings, the lack of replication and missing data within research is heavily influenced by CBT-type interventions which have been subjected to meta-analyses.

Future research

This review demonstrates a movement towards quality trials. However, continued emphasis on well designed trials is needed to address factors that have limited study eligibility for meta-analyses. Key considerations in future research are the use of theoretically grounded interventions and the use of appropriate outcomes (e.g. less focus on clinical outcomes within non clinical populations). Additionally, replication of existing interventions—which have proven quality design and evidence of utility—may broaden the evidence base in this area.

A particular area of concern is the lack of evidence supporting interventions delivered to youths who do not meet clinically significant thresholds. Results of a survey conducted by the authors, prior to this review, highlighted this as a key area for further research. This is reflected in the findings of this review. Such studies may benefit from employing interventions that are firmly based in theoretical frameworks.

It may be important for future research to focus on younger age groups; this is particularly true for interventions for clinical cohorts.

Across both non clinical and clinical interventions there is a lack of longitudinal data, therefore, the long-term impact of these interventions remains unquantified.

Limitations

The paucity of literature in the area, as well as the heterogeneity of the existing evidence, limited this review. Due to the diversity of target populations, interventions and outcomes, not all studies were eligible for meta-analyses. The studies excluded from meta-analyses were subjected to brief narrative synthesis and the nuances, strengths and limitations of these studies have been discounted. An analysis of the mechanisms affecting change was beyond the scope of this review. Future reviews may benefit from identifying specific outcomes or interventions to begin an in-depth analysis of the mechanism affecting change on various outcomes. Additionally, cultural adaptations and treatment fidelity were not detailed and could provide important insight into discrepancies identified across the studies.

Conclusions

Research examining intervention effectiveness for conflict affected youths is limited. Although meta-analyses found GTF-CBT to be effective in clinical populations, only three studies were included in this analysis. Considerable gaps remain in the effectiveness of interventions for this group. This is particularly evident for non clinical populations among conflict affect youths.

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¹ I² is the is an indication of the level of heterogeneity in the meta-analysis. This is an important consideration as it allows one to understand whether the effect size is true, or instead it is somehow affected by the heterogeneity found in the studies included in the meta-analysis.

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