



A systematic review and meta-analysis of psychosocial interventions for 6–12-year-old children who have been forcibly displaced



Concettina Trimboli ^{a,*}, Lauren Parsons ^a, Caroline Fleay ^b, Dave Parsons ^a, Angus Buchanan ^a

^a Curtin School of Allied Health, Curtin University, Kent Street, Bentley, Australia

^b Centre for Human Rights Education, Curtin University, Kent Street, Bentley, Australia

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ABSTRACT

Background: Children who have been forcibly displaced are likely to experience psychosocial challenges given they may be dealing with past trauma and challenges of adapting to their new environment. Effective psychosocial interventions are needed to promote psychosocial wellbeing. Literature identifies the ages of 6–12 years (middle childhood), as key to addressing psychosocial development. To date, systematic reviews identifying effective psychosocial interventions for children have focused on adolescents.

Aim: We conducted a systematic review and meta-analysis to: 1) identify psychosocial interventions conducted in middle childhood with forcibly displaced children; 2) summarize the characteristics of the included interventions; 3) identify the methodological quality of the studies; and 4) identify effectiveness of the interventions.

Method: A comprehensive literature search was conducted across four databases and supplementary literature. Study design was classified according to the National Health and Medical Research Council Hierarchy of Evidence. Methodological quality was assessed using the QualSyst appraisal checklist. Intervention approaches were classified into activity codes using the 'Who is Where When doing What' (4Ws) tool. Intervention effects were explored through meta-analysis.

Results: Nineteen studies with 2386 children met the eligibility criteria. A total of 19 intervention approaches were identified. The interventions found to be most promising were Narrative Exposure Therapy for children and adolescents (KidNET), Cognitive Behavioural Therapy, Child-Centred Play Therapy, Eye Movement Desensitization and Reprocessing, and creative interventions. Unstructured play or education alone did not produce a beneficial intervention effect.

Conclusions: Middle childhood presents a unique opportunity to address psychosocial wellbeing with forcibly displaced children. While psychological-based activities in this review demonstrated effectiveness for symptom reduction, future intervention options should expand to include strengths- and resilience-based. Further research evaluating the effectiveness of psychosocial intervention for forcibly displaced children is required using randomised control designs, greater sample sizes, and longitudinal data.

1. Introduction

Addressing the needs of children who have been forcibly displaced is a growing concern. The United Nations High Commissioner for Refugees (UNHCR) estimated that at the end of 2020, 35 million children below 18 years of age had been forcibly displaced (UNHCR, 2021). Of interest to this study are children who have been forcibly displaced as per the United Nations definition, which includes refugees (United Nations General Assembly; UNGA, 1951), asylum seekers (UNHCR, 2016), or those who have been internally displaced due to the effects of armed conflict, situations of generalized violence, and human rights (UN, 1998).

There is considerable evidence that children who have been forcibly displaced are at significant risk of developing psychosocial problems due to the stressors that they may have been exposed to during displacement and resettlement, including violence, food insecurity, challenges of accessing health care and education, inadequate or unstable housing, and discrimination or bullying, which can make them vulnerable to a range of mental health and psychosocial problems (Fazel, Reed, Panter-Brick, & Stein, 2012; WHO, 2018). A recent systematic review of refugee and asylum seeker children in Europe reported prevalence rates of 19–53% for Post-Traumatic Stress Disorder (PTSD), 10–33% for depression, 9–32% for anxiety, and 20–35% for emotional and behavioural problems

* Corresponding author.

E-mail address: c.trimboli@postgrad.curtin.edu.au (C. Trimboli).

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(Kien et al., 2018). These conditions can have an impact on children's emotional regulation responses, dissociative symptoms, learning, self-esteem, and hope for the future (Brunzell, Stokes, & Waters, 2016). Consequently, children's development, wellbeing, and ability to integrate into their host country can be significantly affected (Brymer, Steinberg, Sonoberger, Layne, & Pynoos, 2008).

Middle childhood, typically considered as the ages between 6 and 12 years, is a crucial period of physical, social, emotional, and cognitive development (DelGiudice, 2018), and has therefore been identified as key for targeting psychosocial development, including behaviours, emotions, and relationships (Goodman, 1997). Children learn and develop psychosocial skills during middle childhood that enable them to build healthy social relationships, emotionally self-regulate, perform academically at school, and learn roles that will prepare them for adolescence and adulthood (Eccles, 1999). Additionally, developmental trajectories during middle childhood can affect later success in life (Goodman, 1997; Liew, 2012). All children need to cope with social and academic demands during middle childhood, however, psychosocial development is further complicated for forcibly displaced children, who have likely been exposed to violent conflict and trauma pre-migration and are attempting to settle and form new relationships in a host country while navigating an unfamiliar culture, different societal norms, a new language, loss of social networks, separation from family members and from family homes, isolation, and the potential lack of knowledge and skills needed to negotiate their new environment (Brown et al., 2017; European Union Agency for Fundamental Rights, 2019).

Scarce resources can further complicate supporting the psychosocial and mental health needs of children who have been forcibly displaced with up to 85% of the world's forcibly displaced population living in low- and middle-income countries (LMICs). Challenges associated with providing interventions within LMICs include insufficient workforce capacity and lack of both funding and availability of trained specialists to provide services (Pedersen et al., 2019). Thus, practitioners supporting the psychosocial wellbeing of forcibly displaced children need to consider the significant psychosocial development that occurs during middle childhood, which may benefit from unique and age-appropriate intervention approaches, and further consider the complexities of the children's physical, social, emotional, and cultural environments, and the host country environment and resources.

While a significant amount of research has evaluated psychosocial interventions for children and adolescents who have been forcibly displaced, middle childhood is an under-represented group in childhood forced displacement research. Psychosocial interventions can be broadly defined as non-pharmacological interventions having a psychological or social aim, which can improve symptoms, global functioning, quality of life, and social inclusion (Dua et al., 2011). Previous reviews of psychosocial interventions for forcibly displaced children have included adolescents and young adults (Bennouna et al., 2019; Brown et al., 2017; Newman et al., 2014; Purgato, Gastaldon, et al., 2018, b), adults (Turrini et al., 2017), displacement following natural disasters (Brown et al., 2017; Newman et al., 2014), or focused on a particular mental health outcome (e.g., PTSD; Brown et al., 2017; Newman et al., 2014). Others have been limited to one setting (e.g., school; Bennouna et al., 2019; Tyrer & Fazel, 2014), or economy (e.g., high income countries; Bennouna et al., 2019; Purgato, Gross, et al., 2018), or demonstrated some methodological or reporting limitations such as a lack of rigorous selection criteria or evaluation of the quality of the included studies (Bennouna et al., 2019; Brown et al., 2017; Nocon, Eberle-Sejari, Unterhitzberger, & Rosner, 2017; Tyrer & Fazel, 2014).

To address the limitations of existing literature and build on the existing evidence base, this study is a systematic review and meta-analysis of psychosocial interventions for refugee, asylum seeker and internally displaced children in middle childhood living in countries at all income levels, who have fled due to war or a fear of persecution. The specific aims for this study were to: 1) identify psychosocial interventions conducted with children in middle childhood; 2) summarize the

characteristics and approaches of the included interventions; 3) identify the methodological quality of the included studies; and 4) identify the effectiveness of the interventions reviewed for improving the psychosocial wellbeing of forcibly displaced children in middle childhood. For the purpose of this review, psychosocial wellbeing is defined as a state of emotional, social, and psychological wellbeing where the individual is able to be productive, adapt to changes or adversity, maintain positive social relationships, and develop positive self-esteem (Weare & Nind, 2011).

2. Methods

The methodology and reporting of this systematic review were guided by the Preferred Reporting Items for Systematic Reviews (PRISMA) statement (see Appendix A. Supplementary data). The PRISMA statement checklist provides items for the reporting of systematic reviews to ensure transparency and replicability in health care research (Liberati et al., 2009). The protocol was registered in the International Prospective Register of Systematic Reviews (PROSPERO), registration number: CRD42020175374.

2.1. Identification and selection of studies

A comprehensive literature search was conducted on 17th January 2020 using Medical Subject Headings (MeSH) and free-text strings across CINAHL Plus with full text (EBSCO), Embase, Medline (Ovid), and PsycInfo. A supplementary search of the reference lists of included papers was conducted to identify any eligible studies or dissertations. A search of Google Scholar, Scopus, ProQuest Dissertation Express and university repositories (espace) was also conducted.

2.2. Search strategy

Studies were identified through the following procedure. MeSH terms and free-text strings covered two concepts and were used in combination to search electronic databases: (1) Forced displacement and related terms and (2) Psychosocial and related terms. Truncations, wildcards, and phrase searching were used to broaden the free-text search. Limitations applied to the search included participant age, English language, and human participants. There were no restrictions on the date of publication. The full search strategy for each database is included in Table 1, and the complete search strings are provided as Supplementary data (Appendix B). Search terms used for Google Scholar, Scopus, ProQuest Dissertation Express and university repositories (espace) were 'forc* displace*' AND 'psychosocial' AND 'intervention' AND 'child*'.

2.3. Eligibility criteria

The following study eligibility criteria were applied for inclusion in the review: 1) mean age of participants was between 5 years and 12 years 11 months, or at least 50% of the sample were aged within this range; 2) the children had been forcibly displaced due to war or a well-founded fear of persecution based on their race, religion, nationality, membership in a particular social group, or political opinion (UNGA, 1951); 3) the study included a psychosocial intervention; and 4) psychosocial variables measured as outcomes. Interventions for participants as young as five were included so that the review also captured interventions relevant to children on the borderlines of our age of interest. No restrictions were placed on study design. Studies involving migrant children were included if the focus was on children who had been forcibly displaced due to war or a fear of persecution. Forced displacement due to natural disasters was only included if the children were also experiencing forced displacement due to war or a fear of persecution when the natural disaster occurred. Interventions with one or multiple approaches were eligible for inclusion and only studies published in English were included.

Table 1
Search terms.

	Database and Search Terms	Limitations
Subject Headings	<p>CINAHL: (MH "Refugees") AND (MH "Quality of Life") OR (MH "Quality of Life (Iowa NOC)") OR (MH "Psychological wellbeing") OR (MH "wellbeing (Iowa NOC)") OR (MH "Psychological wellbeing (Iowa NOC)") OR (MH "Mental Health")OR (MH "Mental Health Treatment (Saba CCC)") OR (MH "Mental Health Screening (Saba CCC)") OR (MH "Mental Health Promotion (Saba CCC)") OR (MH "Mental Health Care (Saba CCC)") OR (MH "Mental Health (Omaha)") OR (MH "Adaptation, Psychological") OR (MH "Stress, Psychological") OR (MH "Psychological Trauma") OR (MH "Posttraumatic Growth, Psychological") OR (MH "Support, Psychosocial") OR (MH "Desensitization, Psychosocial") OR (MH "Psychological Comfort Promotion (Iowa NIC)") OR (MH "Rehabilitation, Psychosocial") OR (MH "Psychosocial Deprivation") OR (MH "Support, Psychosocial") OR (MH "Rehabilitation, Psychosocial") OR (MH "Psychosocial Care (Saba CCC)") OR (MH "Psychosocial Health (Iowa NOC)") OR (MH "Psychosocial Deprivation") OR (MH "Psychosocial Adjustment: Life Change (Iowa NOC)") OR (MH "Psychosocial Adaptation (Iowa NOC)") OR (MH "Social Networks") OR (MH "Relocation Stress Syndrome (NANDA)") OR (MH "Rehabilitation, Community-Based") OR (MH "Play Therapy") OR (MH "Community Reintegration")</p> <p>Embase: (refugee/OR asylum seeker/) AND (psychosocial development/or psychosocial rehabilitation/or psychosocial care/OR psychological wellbeing/or psychological resilience/or psychological adjustment/OR mental health/OR wellbeing/)</p> <p>Medline: (Refugees/) AND (Psychosocial Support Systems/OR Psychological Trauma/or Posttraumatic Growth, Psychological/or Adaptation, Psychological/or Stress, Psychological/or Resilience, Psychological/OR Mental Health/OR "Quality of Life"/)</p> <p>PsycINFO: (exp Asylum Seeking/or exp Refugees/) AND (exp Psychosocial Development/or exp Psychosocial Readjustment/or exp Psychosocial Outcomes/or exp Psychosocial Rehabilitation/OR exp "Resilience (Psychological)"/or exp Psychological Engagement/OR exp Coping Behavior/or exp Well Being/OR exp Mental Health/)</p>	<p>Human; Age Groups: Child, Preschool: 2–5 years, Child: 6–12 years, Adolescent: 13–18 years; Language: English</p>
Free Text Words	<p>CINAHL Plus with Full Text: (refugee* OR asylum seeker* OR forc* displace* OR forced migra* OR migrant* OR humanitarian) AND (psychosocial or psychological or mental health or well?being) Field: Title/Abstract</p> <p>Embase: As per <i>CINAHL Plus with Full Text</i> Field:.mp. [mp = title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word]</p> <p>Medline: As per <i>CINAHL Plus with Full Text</i> Field:.mp. [mp = title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]</p> <p>PsycINFO: As per <i>CINAHL Plus with Full Text</i> Field:.mp. [mp = title, abstract, heading word, table of contents, key concepts, original title, tests & measures, mesh]</p>	<p>Human; English language; Child</p> <p>English language, humans and "all child (0–18 years)"</p> <p>Human, English language and (childhood or adolescence <13–17 years>)</p> <p><i>Initial search:</i> Publication date to 17.01.2020</p> <p><i>Initial search:</i> Publication date to 17.01.2020</p> <p><i>Initial search:</i> Publication date to 17.01.2020</p> <p><i>Initial search:</i> Publication date to 17.01.2020</p>

2.4. Study selection

Duplicate studies were removed by the first author, who then proceeded to screen all the abstracts against the eligibility criteria. A second author simultaneously screened a randomly selected 40% of the abstracts for inclusion. Interrater reliability of abstract selection for inclusion was calculated using Weighted Kappa. Full text articles were then obtained for abstracts that met the eligibility criteria. Following review of all the full text by both authors, articles that did not meet the eligibility criteria were excluded. Disagreement between the authors was resolved through discussion and consensus.

2.5. Systematic review

2.5.1. Classification of evidence and methodological quality

The strength of evidence for each intervention was classified according to the National Health and Medical Research Council (NHMRC) Hierarchy of Evidence framework (NHMRC, 1999) by one author. The methodological quality of all studies was then assessed by two authors using the QualSyst appraisal checklist (Kmet, Cook, & Lee, 2004). The NHMRC Hierarchy of Evidence was developed by the Australian NHMRC to rank and evaluate the evidence of healthcare interventions (NHMRC, 1999). Level II includes evidence obtained from at least one properly designed randomised controlled trial (RCT). Level III-1 includes evidence obtained from well-designed pseudo-randomised controlled trials, level III-2 evidence is obtained from comparative studies with concurrent controls but without randomisation (i.e., case control studies), level III-3 evidence is obtained from comparative studies such as an interrupted time series without a control group, and level IV consists of case series

with either post-test or pre-test/post-test outcomes. Although weaker in strength and generalisability, studies with level III and IV evidence were included in this review given the well documented methodological and ethical challenges of conducting research with refugee children (Block, Warr, Gibbs, & Riggs, 2012; Kaukko, Dunwoodie, & Riggs, 2017; Wahoush, 2009). Uncontrolled studies were also included as they can be used to assess novel and emerging therapies in the early stages of research development, particularly in low resource areas, which then can help justify and plan larger scale interventions.

Two authors rated all of the included studies independently using the QualSyst appraisal checklist. The QualSyst checklist utilises a 3-point ordinal scale (0 = no, 1 = partial, 2 = yes, NA = not applicable), to objectively evaluate a range of quantitative study designs using 14 standardised assessment criteria such as the appropriateness of the study design and methodology, participant characteristics, justification of the analytic methods, results reporting and if the conclusions were adequately supported by the research results (Kmet et al., 2004). Discrepancies between the authors were resolved through discussion and consensus.

Data collection process. Three comprehensive data extraction forms were created to extract relevant information from the studies identified for inclusion. The data extraction forms were then piloted by two authors, using two of the included studies. Modifications to improve the structure of the forms were made, and then one author completed the data extraction process for the remaining studies. A second author was consulted over uncertainties until consensus was reached.

2.5.2. Data items and synthesis of results

Data items were extracted and synthesised into a number of categories from all the included studies using the previously mentioned data

extraction forms. The first form identified characteristics of the included studies, incorporating the demographic data of the participants, psychosocial outcome measures used, and the treatment outcomes. The second form, guided by the Template for Intervention Description and Replication (TIDieR), focused on the characteristics of the psychosocial interventions, including the intervention focus, mode of delivery, intervention provider (person who conducted the intervention), setting, and if any tailoring or modifications were made. TIDieR is a 12-item checklist designed to improve the reporting and ultimately, the replicability of intervention studies (Hoffmann et al., 2014). Within this form, the 'Who is Where When doing What' (4Ws) tool was used to classify each intervention approach using the Mental Health and Psychosocial Support (MHPSS) activity codes (Inter-Agency Standing Committee; IASC, 2006). The 4Ws tool was designed to assist the mapping of MHPSS interventions both during and following humanitarian emergencies and it provides 11 activity codes to classify community-focused (6 codes), case-focused (4-codes) and general (one code) MHPSS activities. The third form identified the strength of evidence for each intervention, and the methodological quality of the included studies using the NHMRC Hierarchy of Evidence and the QualSyst checklist criteria. Once the data was extracted, similarities across the studies were identified, and the results were synthesised using a narrative approach. Treatment effectiveness was assessed using significance values and effect sizes of the main psychosocial outcomes.

2.6. Meta-analyses

Data were extracted from the included studies to measure the effect of psychosocial interventions for forcibly displaced children. If data necessary to complete the analyses had not been reported within the papers, authors were contacted to obtain the information. When multiple psychosocial outcome measures were reported for one study, the measure that best captured the broadest range of components included in the adopted definition of psychosocial wellbeing was selected. For measures with subscale and total scores, the total score was used. If data from multiple time points were reported for a study, the baseline measure and the first post-intervention scores were used.

A between-groups analysis was conducted to assess the effectiveness of interventions that used an RCT design. Next, a within-group analysis was conducted with all studies to explore the potential effectiveness of interventions that have been evaluated with less rigorous research designs. Group means, standard deviations, *t*-test values, effect size estimates, and sample sizes for pre- and post-measurements were entered into Comprehensive Meta-Analysis Version 3.3.070 (Borenstein, Hedges, Higgins, & Rothstein, 2011). Hedge's *g* effect sizes were generated using a random effects model, as the included studies were not likely to have the same true effect due to variability in the sampling, participant and intervention characteristics, and outcome measures used. Heterogeneity of the spread of effect sizes around the mean effect size was calculated using prediction intervals, which describe the distribution of true effect sizes. Hedge's *g* was used to calculate the effect sizes for standardised mean difference with a confidence interval of 95%. An effect size of ≤ 0.2 reflects negligible difference, between ≥ 0.2 and ≤ 0.49 was considered as small; between ≥ 0.5 and ≤ 0.79 was considered as moderate; and ≥ 0.8 was considered as large (Cohen, 2013). Forrest plots were generated for all analyses. Publication bias was assessed using Egger's Test (Egger, Smith, Schneider, & Minder, 1997).

3. Results

3.1. Study selection

A total of 5254 papers were identified through the initial subject heading and free text searches across the following databases: CINAHL Plus with full text (EBSCO), Embase, Medline (Ovid), and PsycInfo. Forty-four further records were identified by checking the reference lists of

related papers and systematic reviews. An additional 13 records were identified via Google Scholar, Scopus, ProQuest Dissertation Express and university repositories (espace). These 5311 studies were screened for duplicate titles and abstracts and 1517 duplicates were removed, resulting in 3794 titles and abstracts to screen. The first author assessed all the 3794 eligible abstracts against the inclusion criteria and a second-rater assessed a randomly selected 40% of all the studies for inter-rater reliability (Weighted Kappa = 0.93, 95%CI: 0.87–0.99). There were only three abstracts in the random selection on which the raters did not agree. Given this low number, all three records proceeded to full text screening.

After assessing titles and abstracts against the inclusion criteria, a total of 60 studies were identified for full text screening. Full text records were accessed via the university library and Research Gate to determine if the studies met the inclusion criteria for this review. Of these 60 studies, 41 were excluded: i) 14 did not use any quantitative outcome measures; ii) one was not a psychosocial intervention study; iii) 24 did not meet the inclusion criteria related to participant age, iv) one did not include children that had been forcibly displaced (internally or externally) due to war or a fear of persecution, and v) one did not include the children themselves being forcibly displaced (they had been born in a refugee camp). Nineteen studies, evaluating 19 interventions, met the inclusion criteria (See Fig. 1).

3.2. Description of studies

Tables 2–4 provide detailed information of the included studies in the following areas: Characteristics of the included studies (Table 2), psychosocial intervention characteristics (Table 3), and methodological quality of the included studies (Table 4).

Characteristics of the included studies. Table 2 provides a description of the characteristics of participants within each study and the results, grouped by study design. The 19 studies included a total of 2386 children, of which 1892 received an intervention. Five of these studies also included families or caregivers (Annan, Sim, Puffer, Salhi, & Betancourt, 2017; Bjorn, Boden, Sydsjo, & Gustafsson, 2013; Dybdahl, 2001; El-Khani et al., 2018; O'Shea, Hodes, Down, & Bramley, 2000; O'Shea, Hodes, Down, & Bramley, 2000). All studies reported on the gender of participants with the exception of Metzler et al. (2019) and Schottelkorb, Doumas, and Garcia (2012). Of those studies that reported gender, 53% of child participants in the treatment group were males. Treatment group sample sizes ranged between 10 and 689 participants. The countries where the studies were conducted included the United Kingdom ($n = 3$), Turkey ($n = 3$), Canada ($n = 2$), Bosnia-Herzegovina ($n = 2$), the United States of America ($n = 2$), and single studies from Sri Lanka, Thailand, Sierra Leone, Uganda, Ethiopia, Sweden, and Germany. Ten of the studies were conducted in low-middle income countries (LMIC) and nine in high-income countries (HIC) (The World Bank, 2020).

Participants originated from Thailand, Sri Lanka, the Middle East, Africa, the Balkans, India, Pakistan, Bangladesh, Vietnam, Cambodia, Sierra Leone, Ethiopia, Uganda, Turkey, and Syria. Nine studies reported that children needed to exhibit a mental health, psychological, emotional, or behavioural problem for inclusion into the study (Catani et al., 2009; Dura-Vila, Klases, Makatini, Rahimi, & Hodes, 2013; El-Khani et al., 2018; Fazel, Doll, & Stein, 2009; Murray et al., 2018; O'Shea et al., 2000; Oras, Ezpeleta, & Ahmad, 2004; Ruf et al., 2010; Schottelkorb et al., 2012). However, of these studies, only five used standardised assessments to identify a mental health, psychological, emotional, or behavioural problem (Catani et al., 2009; El-Khani et al., 2018; Murray et al., 2018; Oras et al., 2004; Schottelkorb et al., 2012). The rates of attrition ranged from 3% to 43%.

Study design. Five studies used an RCT design (NHMRC Level II Evidence), three used a comparative study design with concurrent controls (NHMRC Level III Evidence), and 11 studies used a case series with pre-test/post-test outcomes (NHMRC Level IV Evidence). All outcome measures were administered immediately prior to intervention

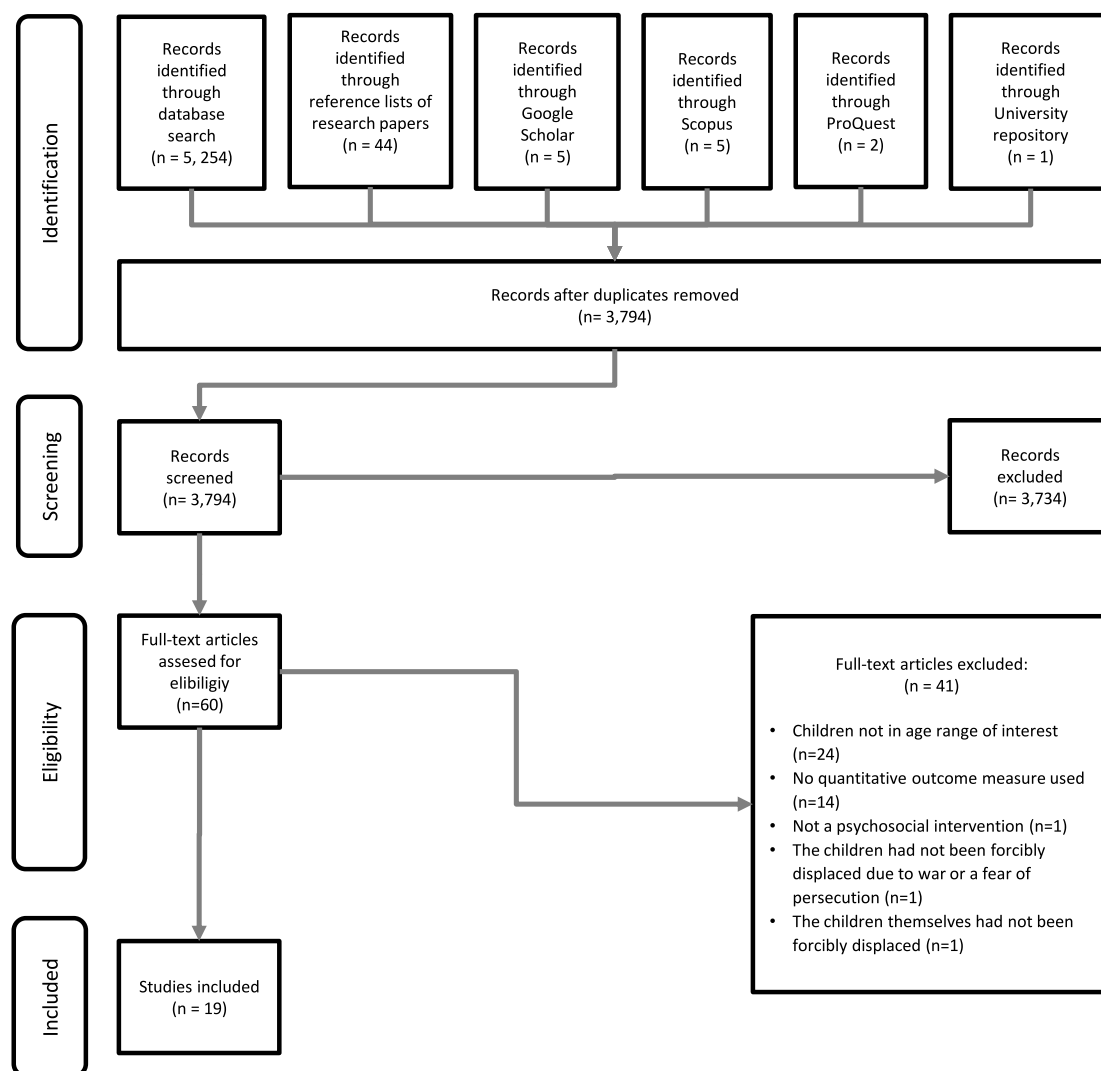


Fig. 1. PRISMA – Study flow diagram.

commencement, and of the studies that reported the time of post-intervention measurement, the time ranged from two weeks to 18 months after the intervention periods ended. Four studies provided additional follow-up assessment data ranging from six to 18 months post intervention (Annan et al., 2017; Catani et al., 2009; Metzler et al., 2019; Ruf et al., 2010).

Control groups. Control groups were used in eight studies. Two studies assigned control participants to a waitlisted control group, which served as a no-treatment comparison during the intervention phase of the project, but then participants received the intervention at a later stage (Annan et al., 2017; Ruf et al., 2010). Control participants in three studies received alternative psychosocial treatment options such as meditation and relaxation or play therapy (Catani et al., 2009; Schottelkorb et al., 2012), or they only received basic medical care (Dybdahl, 2001). In two school-based studies, students from classes that did not receive the intervention acted as controls (Rousseau, Benoit, Lacroix, & Gauthier, 2009; Rousseau, Drapeau, Lacroix, Bagilishya, & Heusch, 2005). and one study identified age and gender matched controls (Fazel et al., 2009).

Outcome measures. The number of psychosocial outcome measures used per study ranged from one to five. Outcomes evaluated across the studies included, behavioural problems (nine studies), PTSD symptoms (nine studies), depression (three studies), anxiety (three studies), well-being (two studies), and developmental assets, which measures internal strengths and external supports (one study). The most frequently used

outcome measure was the Strengths and Difficulties Questionnaire (SDQ; $n = 6$), followed by the University of California at Los Angeles Post-Traumatic Stress Disorder Reaction Index (UCLA PTSD Index; $n = 4$), the Child Depression Inventory (CDI; $n = 2$), and the Youth Self Report (YSR; $n = 2$).

Psychosocial intervention content. Table 3 provides a description of the psychosocial interventions identified in the literature. The activities within the interventions were classified into five of the 4Ws intervention code labels: Psychological intervention ($n = 19$), strengthening community and family support ($n = 4$), psychosocial support in education ($n = 4$), clinical management of mental disorders by specialised mental health care providers ($n = 3$), and safe spaces ($n = 1$). The specific activities included in the interventions were: Cognitive-behavioural therapy (CBT; $n = 5$), play (including unstructured play; $n = 4$ interventions), creative arts activities (e.g., music, dance therapy, art, and craft; $n = 4$), parent education ($n = 4$), family therapy ($n = 4$), therapeutic discussions ($n = 3$), child education ($n = 3$), Narrative Exposure Therapy for children and adolescents (KidNET; $n = 2$), and psychotherapy ($n = 2$). Consultation, meditation/relaxation, case management (a model of service delivery where someone coordinates interventions and can provide individualised services as required), teacher support, and eye movement desensitization and reprocessing (EMDR) were reported in one study each. The majority of studies included a combination of intervention activities, with six studies using only one (Bjorn et al., 2013; Fox,

Table 2
Characteristics of included studies.

Study design Authors/year	Country of research (World Bank country classification)/ Participant origin	Groups (treatment/ control condition): n Male: n; Female: n	Attrition	Age M (SD)	Outcome measure	Treatment outcomes
RCT						
Annan et al. (2017)	Thailand (LMIC)/ Thailand.	Treatment (Parent and child education, unstructured play): 240 Male: 117; Female: 123 Control (Wait-listed): 239 Male: 116; Female: 123	10% 11%	10.3 (1.6) 10.4 (1.7)	Achenbach CBCL; YSR	Significant reduction in externalizing problems post-treatment compared to controls (caregiver ES $-.22$, $p = .02$; child report ES -0.11 , $p = .02$). Significant increase in prosocial protective factors compared to controls (children ES $.20$, $p < .01$).
Catani et al. (2009)	Sri Lanka (LMIC)/Sri Lanka.	Treatment (KidNET): 16 Male: 10; Female: 6 Control (MED- RELAX): 15 Male: 7; Female: 8	0 6%	11.6 (2.0) 12.3 (2.0)	UCLA PTSD Index for DSM-IV	No significant difference across or within groups.
Dybdahl (2001)	Bosnia- Herzegovina (LMIC)/ Bosnia- Herzegovina.	Treatment (Parent education): 87 mother child dyads Male: 39; Female: 48 Control (Basic medical check-ups): 45 Male: NR; Female: NR	14%	5.5 (0.7) NR (NR)	Mother's Description of Child; Child's Problems Checklist; Adapted Birleson's Depression Inventory; Psychologist Observation and Evaluation	Significant decrease in Psychologist Observation and Evaluation anxiety scale in favour of intervention group ($p < .1$, one-tailed t -test). Significant increase in happiness rating in favour of the intervention group ($p = .05$). ES – NR.
Ruf et al. (2010)	Germany (HIC)/Turkey, Syria, Chechnya, Russia, Georgia and Germany.	Treatment (KidNET):13 Male: 7; Female: 6 Control (Treatment as usual-unstructured play): 13 Male: 7; Female: 6	8%	11.5 (3.2) 11.4 (3.2)	UCLA PTSD Index for DSM-IV	Significant reduction in PTSD symptoms in the treatment group ($p = .001$, $g = 1.9$). Significant improvements in the treatment group for intrusion symptoms ($p < .001$), avoidance and numbing ($p = .001$), hyperarousal ($p < .05$), and functional impairment ($p < .001$). ES – NR. Significant improvement in the intrusion symptoms of the control group ($p < .05$). ES – NR. Between-groups analysis not completed.
Schottelkorb et al. (2012)	USA (HIC)/ Africa, Middle East, Asia and Europe.	Treatment (CBT): 14 Male: NR; Female: NR Control (CCPT Play): 17 Male: NR; Female: NR	16%	9.2 (2.0)	UCLA PTSD Index for DSM-IV; PROPS	Both groups demonstrated a significant reduction in severity of symptoms for children who met criteria for full PTSD ($p = .01$, $\eta^2 = .43$). No significant between-groups differences.
Comparative study with concurrent controls						
Fazel et al. (2009)	UK (HIC)/ Balkans, Asia (including India) and Africa.	Treatment (Consultation, individual and family therapy): 47 Male: 32; Female: 15 Control Group 1 (Age and gender matched controls): 47 Male: 32; Female: 15 Control Group 2 (Age and gender matched controls): 47 Male: 32; Female: 15	35% NR NR	NR (NR) 43% aged 5–9, 19% 10–13, 38% 14–18	SDQ-T	Significant reduction in the total SDQ score in all groups ($p = .016$), peer problems scale ($p = .005$) and hyperactivity scale ($p = .05$). Significantly greater hyperactivity score reduction in the refugee group compared to the control groups ($p = .037$). ES – NR.
Rousseau et al. (2005)	Canada (HIC)/ Asia and South America.	Treatment (Creative activities): 73 Male: 38; Female: 35 Control (Children from other classes):65 Male: 43; Female: 22	3%	10 (1.3) 9.6 (1.9)	Achenbach's Teacher's Report Form; Piers-Harris Self-Concept Scale	Post-test Achenbach's Teacher's Report Form: significant reduction in the internalizing symptoms compared to the control group ($p = .021$). ES – NR. Piers-Harris Self-Concept Scale: significant reduction in internalizing ($p = .001$) and externalizing ($p < .000$) symptoms, an increase in popularity ($p = .008$) and satisfaction ($p < .000$) compared to the control group. ES – NR.
Rousseau et al. (2009)	Canada (HIC)/ Asia, India, and Pakistan.	Treatment (Unstructured play): 52 Male: 22; Female: 30	17%	5.3 (0.4)	SDQ – T; SDQ-P	SDQ-P: significant improvement in total score for the treatment group ($p = .001$, $d = .36$). Significant reduction in symptoms in the treatment group ($p = .003$, ES – NR), the

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Table 2 (continued)

Study design Authors/year	Country of research (World Bank country classification)/ Participant origin	Groups (treatment/ control condition): n Male: n; Female: n	Attrition	Age M (SD)	Outcome measure	Treatment outcomes
		Control (Children from other classes): 53 Male: 24; Female: 29		5.3 (0.5)		emotional symptoms ($p = .002$, $d = .43$) and relational subscale ($p = .001$, $d = .48$). SDQ-T: A significant deterioration in emotional symptoms ($p = .042$, $d = -.31$) and behavioural symptoms ($p = .034$, $d = -.31$) for the control group. ES – NR. Significant difference post-intervention between the treatment and control group for the SDQ-T emotional symptoms and total score ($p < .05$). ES – NR.
Case series with pre- test/post-test outcomes						
Bjorn et al. (2013)	Bosnia- Herzegovina (LMIC)/ Bosnia- Herzegovina.	Treatment (Family therapy): 10 Male: 5; Female: 5	29%	11.2 (3.2)	Symptom Checklist; Erica play method (sandbox play)	Significant improvement ($p = .046$), with 9 children building one normal sandbox.
Dura-Vila et al. (2013)	UK (HIC)/ Middle East, Africa, Europe and Other.	Treatment (Case management, family therapy, CBT): 102 Male: 77; Female: 25	33%	10.1 (NR)	SDQ-T; SDQ-P	Significant improvements for SDQ-T Total Problem Scores ($p = .010$), Hyperactivity Scores ($p = .0105$), and Peer Problem scores ($p = .017$). ES – NR. Significant improvements for SDQ-P Total Problem Scores ($p = .006$, paired t -test), Hyperactivity Scores ($p = .000$, paired t -test), and Conduct Problem Score ($p = .043$, paired t - test). ES – NR.
El-Khani et al. (2018)	Turkey (LMIC)/Syria.	Treatment (Parent and child education): 16 Male: 8; Female: 8	7%	9.9 (1.9)	CRIES-13; CAPES	Significant reduction in CRIES-13 Intrusion measure score ($p = .024$). ES – NR. Significant reduction in the total CAPES intensity of problems ($p = .018$) and specifically child behavioural problems ($p = .041$). ES – NR.
Fox et al. (2005)	USA (HIC)/ Vietnam and Cambodia.	Treatment (Therapeutic discussion): 58 Male: 25; Female: 33	NR	10 (NR)	CDI	Significant reduction between time 1 and 3 ($p = .003$, 2-tailed significance) and time 1 and 4 ($p = .000$). ES – NR.
Gomez et al. (2017)	Turkey (LMIC)/Syria.	Treatment (CBT): 32 Male: 12; Female: 20	NR	12.4 (1.7)	CPTS-RI; SCAS; SDQ – Self-report	Significant reduction in CPTS-RI total score post-intervention ($t = 2.72$, $p = .011$) and in intrusion ($t = 3.88$, $p = .001$) and arousal ($t = 2.60$, $p = .015$). ES – NR. Significant reduction in SCAS total score post- assessment ($t = 3.73$, $p = .001$). ES – NR. Significant reduction in post-test SDQ total ($t = 2.44$, $p = .021$) and emotional problems ($t = 2.85$, $p = .008$). ES – NR.
Gupta and Zimmer (2008)	Sierra Leone (LMIC)/Sierra Leone.	Treatment (Therapeutic discussion and creative activities): 315 Male: 167; Female: 148	3%	10.7 (NR)	IES	Significant reduction in post-test intrusion and arousal symptoms ($p < .0001$) and an increase in post-test avoidance reactions ($p < .0001$). ES – NR.
Metzler et al. (2019)	Uganda (LMIC)/ Congo.	Treatment (Creative activities and schooling): 689 Male: NR; Female: NR	8%	NR (NR) aged 6-12	Locally derived measure of PSWB; CRDA	Significant improvement favouring intervention group ($p < .001$, $d = .347$) with PSWB. ES – NR. Significant improvement in CRDA ($b = 2.517$, $p < .001$, $d = .231$). ES – NR.
Murray et al. (2018)	Ethiopia (LMIC)/NR.	Treatment (Parent and child education, CBT): 38 Male: 21; Female: 17	3%	11.2 (3.2)	Achenbach CBCL; YSR; CPSS-I; Orphans and Vulnerable Children wellbeing Tool	Significant reduction in Achenbach CBCL post- treatment internalizing and externalizing symptom scores ($p < .001$, $d = 1.37$). ES – NR. Significant reduction in YSR post-treatment internalizing symptoms $p < .001$, $d = 1.37$). ES – NR. Significant reduction in CPSS-I post-treatment PTS symptom scores ($p < .001$, $d = 1.71$). ES – NR. Orphans and Vulnerable Children wellbeing Tool: Significant increase in post-treatment

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Table 2 (continued)

Study design Authors/year	Country of research (World Bank country classification)/ Participant origin	Groups (treatment/ control condition): n Male: n; Female: n	Attrition	Age M (SD)	Outcome measure	Treatment outcomes
Oras et al. (2004)	Sweden (HIC)/Asia, Turkey, Europe and Africa.	Treatment (EMDR): 13 Male: 3; Female: 10	0%	Male: 11 (NR) Female: 12 (NR)	PTSS-C; GAF	child wellbeing scores ($p < .001$, $d = .75$). ES – NR. Significant decrease in post-treatment post-traumatic stress total scores ($p < .01$, $z = -3.0$). Significant GAF post-treatment improvement in scores ($p < .01$, $z = 2.7$). No significant post-treatment difference.
O'Shea et al. (2000)	UK (HIC)/ Middle East, Sub-Saharan Africa and Europe.	Treatment (Family therapy, CBT): 14 Male: 12; Female: 2	43%	9.6 (1.2)	SDQ-T	
Ugurlu et al. (2016)	Turkey (LMIC)/Syria.	Treatment (Creative activities): 64 Male: 34; Female: 29	NR	9.2 (1.7)	SLE Questionnaire; CDI; State-Trait Anxiety Scale; UCLA PTSD Index for DSM-IV (parent version)	Significant post intervention effect for trauma symptoms ($p < .05$, $g = 1.00$). Significant post intervention effect for depression ratings ($p < .05$, $g = .72$). Significant post intervention improvement of PTSD ($p < .05$). ES – NR.

Notes: Randomised Control Trial (RCT), Low Middle Income Countries (LMIC), Child Behaviour Checklist (CBCL), Youth Self Report (YSR), Not Applicable (NA), Effect Size (ES), Narrative Exposure Therapy for traumatized children and adolescents (KidNET), High Income Countries (HIC), University of California at Los Angeles Post-Traumatic Stress Disorder Reaction Index for Diagnostic and Statistical Manual of Mental Disorders (UCLA PTSD Index for DSM-IV), Child-Centred Play Therapy (CCPT), Not Reported (NR), Strengths and Difficulties Questionnaire – Teacher Version (SDQ - T), Strengths and Difficulties Questionnaire – Parent Version (SDQ - P), Children's Revised Impact of Events Scale (CRIES-13), Depression Self-Rating Scale for Children (DSRS), Screen for Childhood Anxiety Related Disorders (SCARED), Child Adjustment and Parenting Efficacy Scale (CAPES), Children's Depression Inventory (CDI), Child Post-Traumatic Stress – Reaction Index (CPTS-RI), Spence Children's Anxiety Scale (SCAS), Impact of Events Scale (IES), PSWB (Psychosocial wellbeing), Caregiver Rating of Developmental Assets (CRDA), Child p Stress Disorder Symptom Scale-Interview (CPSS-I), Eye Movement Desensitization and Reprocessing (EMDR), Post-Traumatic Stress Symptom Scale for Children (PTSS-C), Global Assessment of Functioning (GAF), Parent Report of Post-Traumatic Symptoms (PROPS), Stressful Life Events (SLE), Child Post-Traumatic Stress Disorder Reaction Index (CPTSD-RI), Stressful Life Events (SLE).

Rossetti, Burns, & Popovich, 2005; Gormez et al., 2017; Rousseau et al., 2005, 2009; Ruf et al., 2010; Ugurlu, Akca, & Acarturk, 2016).

Psychosocial intervention delivery features. Interventions were delivered across different modalities and environments. Of the studies that identified the intervention modality, seven used both group and individual, six used only groups, and four used only individual. Intervention settings included schools (Annan et al., 2017; Fazel et al., 2009; Fox et al., 2005; O'Shea et al., 2000; Rousseau et al., 2009; Rousseau et al., 2005; Ruf et al., 2010), refugee centres ($n = 2$; Gupta & Zimmer, 2008; Murray et al., 2018) and community spaces, such as community halls (Annan et al., 2017). The intervention providers included lay counsellors, teachers, qualified therapists and psychiatrists. Teachers were identified as intervention providers in eight studies, mental health therapists or clinicians were used in eight studies, and art therapists conducted interventions in three studies. All intervention providers who did not come from a health professional background, that is, lay counsellors, received training specific to the intervention or ongoing support, or both, from the principal investigator or other team members, who were either health educators or clinicians.

The frequency and duration of interventions ranged between the studies. The shortest intervention was the Brief Family Therapy (Bjorn et al., 2013), which included three sessions of 1 h. The longest duration intervention was the child development, trauma reactions, and coping intervention study, which ran over five months, however the frequency and length of sessions was not reported (Dybdahl, 2001). A majority of the interventions included weekly or twice weekly sessions ranging from 30 min to 2 h. Of the studies that reported the number of sessions included within the intervention, the numbers ranged from three (Bjorn et al., 2013) to 25 (Oras et al., 2004) sessions. Eight sessions were reported in four studies. Modifications were made during the implementation of some of the interventions or tailoring was required to ensure sensitivity of the interventions to the different contexts in which

they were implemented. Examples of modifications included providing more sessions if they were required, adapting a pre-existing programme specifically to the needs of forcibly displaced children and their families, or tailoring the intervention to the needs of the child and their family.

Methodological quality. Table 4 identifies the level of evidence for the 19 included studies according to the NHMRC framework, and the QualSyst methodological quality rating for each study reviewed. A supplementary table (Appendix C) provides summary data of the QualSyst appraisal checklist for each study.

Risk of bias in included studies. Of the included studies, only one reported a power analysis to determine a sample size calculation prior to commencing the intervention (Annan et al., 2017). The remaining papers did not conduct a sample size calculation, however 10 studies acknowledged small sizes (Bjorn et al., 2013; Catani et al., 2009; Dybdahl, 2001; Fazel et al., 2009; Gormez et al., 2017; Murray et al., 2018; O'Shea et al., 2000; Oras et al., 2004; Rousseau et al., 2005; Ugurlu et al., 2016), three acknowledged modest sample sizes (Rousseau et al., 2009; Ruf et al., 2010; Schottelkorb et al., 2012), and one identified that it didn't conduct a power analysis as they were conducting a feasibility study (El-Khani et al., 2018). Randomisation of participants to groups was reported in five studies (Annan et al., 2017; Catani et al., 2009; Dybdahl, 2001; Gormez et al., 2017; Gupta & Zimmer, 2008; Rousseau et al., 2009; Ruf et al., 2010; Schottelkorb et al., 2012) and randomisation procedures were detailed in all of these studies. The 12 remaining papers did not report on any randomisation of participants to groups and thus the risk of bias in these studies is unclear. All included studies were at risk of bias due to the challenges in blinding participants, their families, and caregivers in administering psychosocial interventions, however this is a well-known feature of designing clinical intervention research (Gluud, 2006). Blinding of the assessors to the intervention was reported in seven studies (Annan et al., 2017; Catani et al., 2009; Dybdahl, 2001; Gormez et al., 2017; Oras et al., 2004; Rousseau et al., 2009; Ruf et al., 2010). Six

Table 3
Psychosocial intervention characteristics.

Study design Authors/year	4Ws intervention activity code: Intervention activity	Mode of delivery	Setting	Intervention providers	Additional training of intervention providers	Duration	Tailoring/ modifications
RCT							
Annan et al. (2017)	Strengthening community and family support: Parent and child education and unstructured play	Individual and group	Community spaces	International Rescue Committee staff, local area facilitators	Y	Weekly sessions of 2 h over 14 weeks	Y
Catani et al. (2009)	Psychological intervention: KidNET	Individual	NR	Counsellors	Y	6 sessions of 90 min over 2 weeks	NR
	Psychological intervention: Meditation/relaxation	NR	NR	Counsellors	Y	6 sessions of 90 min over 2 weeks	NR
Dybdahl (2001)	Strengthening community and family support: Parent education and support	Individual and group	NR	Pre-school teacher, physicians	NR	Weekly education groups over 20 weeks, 5 weekly support visits and monthly healthcare appointments. Duration of session NR	NR
Ruf et al. (2010)	Psychological intervention: Narrative Exposure Therapy for children and adolescents (KidNET)	Individual	School	Clinical psychologists	NR	8 weekly sessions of 90–120 min	NR
Schottelkorb et al. (2012)	Psychological intervention: CBT	Individual	School	Students	Y	Twice weekly 45-min sessions with the child and parent over 12 weeks.	Y
	Psychological intervention: CCPT Play	NR	School	Students	Y	Twice weekly session of 30 min, overall duration NR. Six x 15-min sessions with parents	NR
Comparative study with concurrent controls							
Fazel et al. (2009)	Psychosocial support in education: Teacher support Psychological intervention: Family therapy Psychological intervention: Psychotherapy Clinical management of mental disorders by specialised health care providers: Case management	Individual and group	School	Mental health workers, teachers	NR	Weekly consultation with teachers (time and duration NR) Individual and family therapy NR	Y
Rousseau et al. (2005)	Psychosocial support in education: Creative activities	Individual and group	School	Art therapist, Psychologist, teacher	NR	12 weekly sessions of 2 h	NR
Rousseau et al. (2009)	Psychosocial support in education: Unstructured play	Groups	Kindergarten	Art therapists	NR	10 sessions of 60 min every second week over 4 months	Y
Case series with pre-test/post-test outcomes							
Bjorn et al. (2013)	Psychological intervention: Family therapy using a systemic and narrative approach to addresses crises.	Group	NR	Researcher, family therapist	NR	3 sessions of 60 min. Duration NR.	Y
Dura-Vila et al. (2013)	Psychological intervention: Psychotherapy Psychological intervention: Family therapy Psychological intervention: CBT Clinical management of mental disorders by specialised health care providers: Case management	Individual and group	NR	Family therapists, child and adolescent psychiatric nurses, child psychiatry trainee.	NR	Session number varied between 0 and more than 9. Duration of individual sessions and overall duration NR.	Y
El-Khani et al. (2018)	Strengthening community and family support: Parent and child education	Group	NR	Teachers	Y	5 weeks of 2-h sessions (with children) and one 2-h parent session.	Y
		Group	School		NR		Y

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Table 3 (continued)

Study design Authors/year	4Ws intervention activity code: Intervention activity	Mode of delivery	Setting	Intervention providers	Additional training of intervention providers	Duration	Tailoring/ modifications
Fox et al. (2005)	Psychological intervention: Therapeutic discussion			School nurses, teachers		Weekly hour sessions over 8 weeks	
Gomez et al. (2017)	Psychological intervention: CBT	Group	NR	Teachers	Y	8 sessions of 70–90 min. Overall duration NR.	NR
Gupta and Zimmer (2008)	Psychological intervention: Therapeutic discussion Psychosocial support in education: Creative activities	Group	Refugee camp	Refugee camp teachers	Y	8 sessions of 80 min over 4 weeks	NR
Metzler et al. (2019)	Safe spaces: Creative activities and unstructured play	Individual and group	NR	Trained facilitators	NR	4-h sessions available 5 days p/ week, overall duration NR	NR
Murray et al. (2018)	Strengthening community and family support: Parent and child education Psychological intervention: CBT	NR	Refugee camp	Lay counsellors	Y	Suggested implementation of weekly sessions of 60–90 min over 6–12 weeks	Y
Oras et al. (2004)	Psychological intervention: EMDR	Individual	NR	Psychologist	NR	1-2 sessions per week over 5–25 sessions. Duration of session NR.	Y
O'Shea et al. (2000)	Psychological intervention: Family therapy Psychological intervention: CBT	Individual and group	School	Child and adolescent mental health professional	NR	NR	NR
Ugurlu et al. (2016)	Psychological intervention: Creative activities	NR	NR	Art therapists	NR	5-day workshop	NR

Notes: Yes (Y), Not Reported (NR), Narrative Exposure Therapy for children and adolescents (KidNET), Cognitive Behavioural Therapy (CBT), Child-Centred Play Therapy (CCPT), Eye Movement Desensitization and Reprocessing (EMDR).

studies used either parent or caregiver report outcome measures and thus are open to bias as the parents and caregivers could not be blinded to the intervention (Annan et al., 2017; Dura-Vila et al., 2013; Dybdahl, 2001; El-Khani et al., 2018; Metzler et al., 2019; Rousseau et al., 2009).

3.3. Effects of interventions: Meta-analysis results

Seventeen of the 19 studies were included in the meta-analysis. Two studies (Bjorn et al., 2013; Rousseau et al., 2005) were not included in the within-groups analysis, as the required data for meta-analysis was not reported. The authors were contacted for the necessary data, however only one author responded, stating the data were unavailable. Between-group analyses were conducted to compare intervention group outcomes with randomised control groups in five studies (Annan et al., 2017; Catani et al., 2009; Dybdahl, 2001; Ruf et al., 2010; Schottelkorb et al., 2012). Overall treatment effects were calculated for the 17 psychosocial interventions. Sub-group analyses were not conducted as dividing the small number of studies included in the meta-analysis would have resulted in multiple groups comprised of too few studies to conduct meaningful analysis. Thus, it was not possible to examine how moderator variables contributed to the variance of the effect size.

3.4. Between-groups meta-analysis

Hedge's *g* effect sizes ranged from 0.0137 to 0.9957, as shown in Fig. 2. Of the five intervention groups sampled, KidNET produced the largest effect size when compared to a control group of unstructured play (Ruf et al., 2010). The study by Catani et al. (2009) showed a negligible effect in the between groups analysis between KidNET and MED-RELAX, however this is due to MED-RELAX also being effective, as the within group analysis shows a large effect size for KidNET in this study.

The other interventions that produced a negligible effect compared to

the control were parent and child education and unstructured play (Annan et al., 2017) and parent education and support (Dybdahl, 2001). The combined intervention effect for all studies was negligible, and not statistically significant ($Z(5) = 1.3184$, $p = .1874$, Hedge's $g = 0.1487$, 95%CI = $-0.0724-0.3698$). The prediction interval mean effect size was 0.15 with a 95% confidence interval of -0.07 to 0.37. The true effect size in 95% of all comparable populations falls in the interval -0.37 to 0.67. Egger's *P* value (1-tailed) was 0.1997, suggesting that the meta-analysis was not susceptible to publication bias.

3.4.1. Within intervention group meta-analysis

Hedge's *g* effect sizes for the 17 intervention groups ranged from 0.0283 to 1.816 when assessing intervention effects for intervention groups only, as shown in Fig. 3. Of the 17 intervention groups sampled, eight produced a large effect, four produced a medium effect, and two produced a small effect. The interventions that had large effects were EMDR (Oras et al., 2004), KidNET (Catani et al., 2009), parenting and child education with CBT (Murray et al., 2018), creative activities (Ugurlu et al., 2016), KidNET (Ruf et al., 2010), therapeutic discussion and creative activities (Gupta & Zimmer, 2008), therapeutic discussion (Fox et al., 2005), family therapy and CBT (O'Shea et al., 2000) in decreasing order of effectiveness. A negligible effect size <0.2 was measured for parent and child education and unstructured play (Annan et al., 2017), unstructured play (Rousseau et al., 2009), and parent education and support (Dybdahl, 2001).

The combined intervention effect for all studies was moderate ($z(17) = 5.8885$, $p < .000$, Hedge's $g = 0.7504$, 95%CI = $0.5006-1.0001$). The prediction interval mean effect size was 0.75 with a 95% confidence interval of 0.50–1.00. The true effect size in 95% of all comparable populations falls in the interval -0.28 to 1.78. Egger's *P* (1-tailed) was 0.1407, suggesting that the meta-analysis was not susceptible to publication bias.

Table 4
Methodological quality of included studies.

Authors/year	Objective described	Study design appropriate	Participant selection and source of information/ input variables described	Participant characteristics described	Randomisation procedures	Blinding of investigators reported	Blinding of subjects reported	Outcome measure(s) well defined/ means of assessment reported	Sample size appropriate	Analytic methods described and appropriate	Estimate of variance for main results reported	Controlled for confounding	Results reported in sufficient detail	Conclusions supported by the results
NHMRC evidence level II (RCT)														
Annan et al. (2017)	2	2	1	2	2	2	NA	2	2	2	2	2	2	2
Catani et al. (2009)	2	2	1	2	2	0	NA	1	1	2	2	2	2	2
Dybdahl (2001)	1	1	1	1	2	2	NA	1	1	1	2	2	2	2
Ruf et al. (2010)	1	1	2	2	2	2	NA	1	1	2	1	2	2	2
Schottelkorb et al. (2012)	2	2	1	2	2	0	NA	1	1	1	2	1	2	2
NHMRC evidence level III (Comparative study with concurrent controls)														
Fazel et al. (2009)	2	2	1	2	NA	0	NA	2	2	2	1	1	2	2
Rousseau et al. (2005)	1	2	1	2	NA	0	NA	2	2	2	2	0	2	2
Rousseau et al. (2005)	1	1	1	2	NA	0	NA	1	2	2	2	2	2	2
NHMRC evidence level IV (Case series with pre-test/post-test outcomes)														
Bjorn et al. (2013)	1	1	1	2	NA	0	NA	1	1	2	0	0	1	2
Dura-Vila et al. (2013)	2	1	2	2	NA	0	NA	2	2	2	1	0	2	2
El-Khani et al. (2018)	2	2	1	2	NA	0	NA	1	2	2	2	0	2	2
Fox et al. (2005)	2	2	1	2	NA	0	NA	1	2	2	0	0	1	2
Gomez et al. (2017)	2	2	1	2	NA	0	NA	2	1	2	2	0	2	2
Gupta and Zimmer (2008)	2	2	1	2	NA	0	NA	1	2	2	0	0	2	2
Metzler et al. (2019)	1	2	1	2	NA	0	NA	1	2	2	2	1	2	2
Murray et al. (2018)	2	1	2	2	NA	0	NA	1	1	2	2	0	2	2
Oras et al. (2004)	2	1	2	2	NA	0	NA	1	2	2	1	0	2	2
O'Shea et al. (2000)	0	1	0	1	NA	0	NA	1	1	2	0	0	1	1
Ugurlu et al. (2016)	2	2	1	2	NA	0	NA	2	2	1	2	0	2	2

Notes: 0 = no, 1 = partial, 2 = yes, NA = Not applicable.

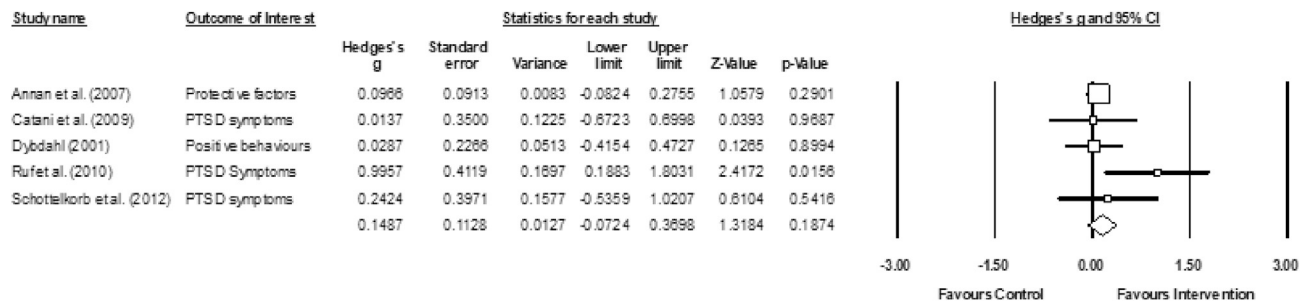


Fig. 2. Between-groups meta-analysis. Notes: *Hedge's g* interpreted as per Cohen's *d* conventions: ≤ 0.2 = negligible difference, 0.2–0.49 = small, 0.5–0.79 = moderate ≥ 0.8 = large.

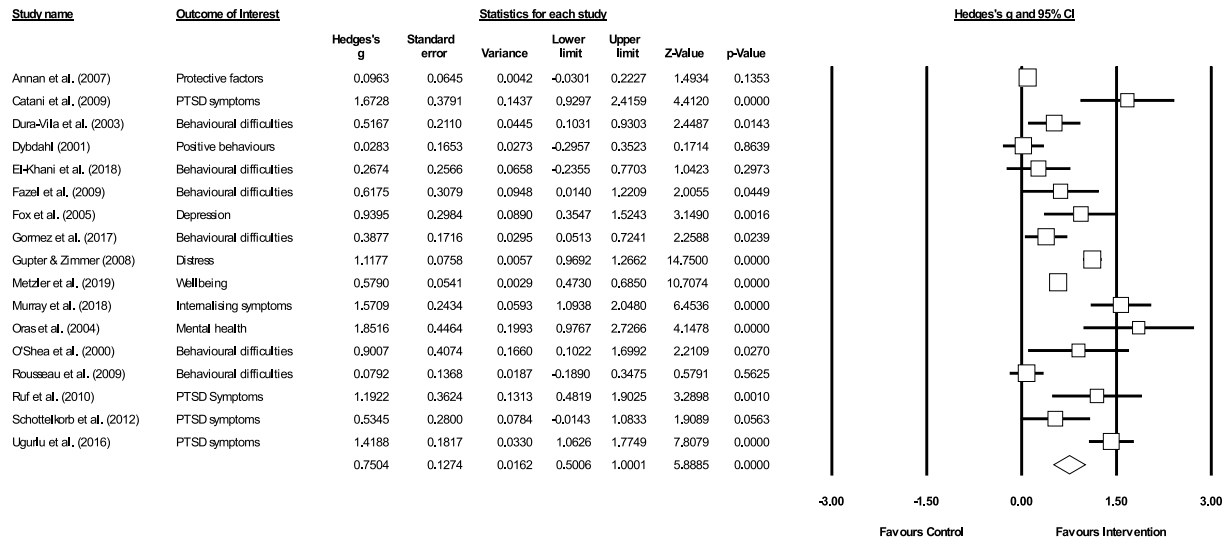


Fig. 3. Within intervention group meta-analysis. Notes: *Hedge's g* interpreted as per Cohen's *d* conventions: ≤ 0.2 = negligible difference, 0.2–0.49 = small, 0.5–0.79 = moderate, ≥ 0.8 = large.

4. Discussion

Our systematic review and meta-analysis of psychosocial interventions conducted with 6–12-year-old children who have been forcibly displaced due to war or a fear of persecution identified 19 studies that met the inclusion criteria, evaluating 19 interventions. The meta-analysis identified several promising interventions which are discussed below, however the results need to be interpreted with caution due to a lack of RCT design studies.

The only intervention that demonstrated a large effect size relative to the control condition was KidNET, when compared with unstructured play (Ruf et al., 2010). KidNET also demonstrated a large effect size on PTSD symptomology in one other study, however when compared to meditation/relaxation in the between-group meta-analysis the effect size difference was negligible (Catani et al., 2009). These findings may suggest that both KidNET and meditation/relaxation are effective approaches to reduce PTSD symptomology in children who have been forcibly displaced. KidNET is a short-term narrative exposure therapy aimed specifically at reducing PTSD symptomology with forcibly displaced children. Based on CBT principles, children are exposed to trauma memories in a safe environment to construct a coherent narrative of events with the aim of inhibiting the fear response. The findings of KidNET being effective are consistent with systematic reviews conducted with older children up to 17 years of age. Both Tyrer and Fazel (2014) and Brown et al. (2017) found that verbal processing-based therapies (such as KidNET) led to significant symptom reduction in depression, anxiety, PTSD, functional impairment and peer problems in school and community-based settings with forcibly displaced populations.

The observation that meditation/relaxation was also effective in addressing PTSD when used as a control condition by Catani et al. (2009) is worthy of further exploration. While the use of meditation is relatively recent in the area of psychosocial wellbeing and mental health with children, the evidence on the effectiveness of meditation for adults with clinical conditions in improving psychosocial related outcomes is mixed (Goyal et al., 2014). However, recent research considering the effects of mindfulness, a specific meditation practice, on adult refugees found positive results (Aizik-Reebs, Yuval, Hadash, Gebreyohans Gebremariam, & Bernstein, 2021), and a meta-analysis with healthy children and youths, specifically considering mindfulness as a meditation practice, identified strong effect sizes for the reduction in psychological symptoms and behavioural issues (Black, Milam, & Sussman, 2009; Zoogman, Goldberg, Hoyt, & Miller, 2015). Further research is needed to evaluate the effects of specific types of meditation/relaxation as a psychosocial intervention approach for children who have been forcibly displaced, particularly in LMICs, as meditation can be learnt in school settings and practiced in groups, making it potentially less resource intensive than other approaches.

CBT-based approaches were shown to be relatively effective, particularly when combined with other intervention activities. In the within-group analysis, large effect sizes were found for CBT in combination with family therapy (O'Shea et al., 2000) and education (Murray et al., 2018), while moderate effect sizes were reported for CBT only (Schottelkorb et al., 2012), and CBT combined with individual and family therapy, and case management (Dura-Vila et al., 2013). The effectiveness of CBT is in line with the findings of a recent systematic review that found CBT to be effective on symptoms of PTSD, depression and anxiety in child

refugees who have experienced trauma (Lawton & Spencer, 2021). One CBT intervention did demonstrate a small effect size, however this finding may be explained by the way the CBT was implemented; the CBT was administered by teachers who had only received a two-day training (Gomez et al., 2017), whereas all other CBT-based interventions were delivered by mental health professionals. Therapeutic discussion was found to have a large effect size in the within-group analysis when used as a standalone intervention approach using what the authors refer to as 'a form of cognitive-behavioural interaction' (Fox et al., 2005, p. 1230). These findings in relation to the effectiveness of CBT-based therapies within this study should be interpreted with caution due to a lack of RCTs, however findings do suggest the use of CBT as a component of psychosocial interventions for forcibly displaced children is worthy of further research with children in middle-childhood.

Whilst play is acknowledged as having many psychosocial benefits including generating solutions, developing social competencies, and allowing children to express themselves and process traumatic events (Nijhof et al., 2018), the results of this meta-analysis suggest the distinction between structured and unstructured play activities is critical when including play in intervention approaches. When structured play in the form of CCPT (Child-Centred Play Therapy) was used as a control (Schottelkorb et al., 2012), the relative effect size between the intervention (CBT) and CCPT was small ($g = 0.242$), suggesting that CCPT may also provide psychosocial benefits. CCPT is a play-based mental health intervention that is developmentally appropriate, and designed for children who are experiencing social, emotional, behavioural, and relational disorders. Consideration is given to the therapeutic relationship and environment, to provide a safe, consistent space. Thus, this play approach may be useful for children who have been forcibly displaced. In contrast, unstructured play demonstrated no significant treatment effect in both the between- and within-groups analysis (Annan et al., 2017; Rousseau et al., 2009), which is consistent with findings from a systematic review by Lee et al. (2020), who found that while unstructured play can have physical benefits, the impact on psychosocial wellbeing is inconsistent. Further research investigating play-based therapy approaches would be worthwhile, given that play therapy can be administered in groups and thus be cost-efficient in low-resource areas.

EMDR is one intervention approach that shows promise, with a large intervention effect evident in the within-groups meta-analysis (Oras et al., 2004). Brown et al. (2017) similarly found EMDR to have a high effect size in their systematic review of older children who had been forcibly displaced. Whilst the results from studies using EMDR are promising, EMDR requires that intervention providers are already licensed mental health practitioners in order to undertake EMDR training (EMDR Institute INC, 2020) and EMDR mainly focuses on PTSD symptoms (Shapiro, 2017). Thus, EMDR can be characterised as a suitable intervention when the focus is on PTSD symptoms and trained professionals are available and may not be applicable in resource constraint environments when considering intervention in LMIC.

Creative therapies have been suggested as having the potential to transform suffering and negative experiences into artistic and cultural products that give new meaning to past experiences (International Organization For Migration, 2016). The analysis found mixed results when using creative therapies either in isolation or in combination, with two studies demonstrating a large effect on psychosocial wellbeing, one where creative interventions was used as a standalone intervention (Ugurlu et al., 2016), and one when combined with therapeutic discussion (Gupta & Zimmer, 2008). The study by Metzler et al. (2019) used creative activities in combination with unstructured play and produced a moderate effect. However, when creative interventions were used and compared to a control group of children in parallel classes (Rousseau et al., 2005), the intervention group only demonstrated a small effect size. There is some evidence in the literature suggesting that creative activities can have a positive effect on psychosocial wellbeing of children who have been forcibly displaced (Ager et al., 2011; Brown et al., 2017; Tyrer & Fazel, 2014). Further research is required using randomised

controlled trials to accurately determine the effect of creative interventions on psychosocial wellbeing for children who have been forcibly displaced. However, the setting of where this intervention would be appropriate needs to be considered, as creative-based interventions often rely on trained specialists and materials for delivery, which can make them cost-prohibitive (Ormert, 2020).

The interventions that included parent education produced small to negligible intervention effects in both the within- and between-groups meta-analyses (Annan et al., 2017; Dybdahl, 2001), (El-Khani et al., 2018). All these studies were conducted in LMIC which may suggest that resource constraints might have influenced the intervention selection, as education can be considered a low-cost intervention (Billi et al., 1992). The small to negligible effectiveness of these education focused interventions might be explained by the detrimental impact trauma can have on both children's and adults' cognitive functioning such as difficulty with goal setting, considering alternatives, and problem solving (Rossen, 2020). These cognitive challenges can impact upon the ability to process and apply educational intervention strategies in a variety of situations. However, when CBT was combined with education in Murray et al. (2018), the within-group analysis showed a large effect size. This suggests that further exploration of education within multimodal approaches is warranted in future research, especially considering that education can be scaled to larger groups and thus could be used in low-resource environments.

Despite middle childhood being a crucial period for psychosocial development targeting positive development, healthy social relationships, and skills that can prepare children for later life, the studies in this review focused largely on treatment approaches aimed at alleviating psychological distress and outcomes measuring symptom reduction. Perhaps consequently, studies that required the presence of psychosocial distress for inclusion tended to find larger effect sizes across mainly PTSD related outcome measures. Of the five studies that used a standardised assessment to identify the presence of a mental health, psychological, emotional, or behavioural problem for inclusion into the study, four of the studies demonstrated a moderate to large effect in the within-group analyses (Catani et al., 2009; Murray et al., 2018; Oras et al., 2004; Schottelkorb et al., 2012). The emphasis on accessing children's own resilience and assets in the forced displacement literature (Reed, Fazel, Jones, Panter-Brick, & Stein, 2011; Siriwardhana, Ali, Roberts, & Stewart, 2014) was not reflected in the interventions identified within this review. People who have been forcibly displaced have strengths and resources to support their own psychosocial wellbeing (UNHCR, n.d.). Psychosocial interventions that capitalize on these strengths and help build a sense of agency could empower forcibly displaced children and their caregivers as they attempt to adapt to a new environment with its associated challenges and prepare children for later life, promoting agency and social inclusion (Bottrell, 2009; Lustig et al., 2004). Future intervention approaches should thus expand beyond alleviating psychological distress to include strengths- and resilience-based approaches, and this broadening of intervention approaches would then allow interventions to be tailored to the unique needs of the displaced child. Consequently, outcome measures considering broader conceptualisations of psychosocial wellbeing should be incorporated within the research.

Strengthening family and community supports may also increase the intervention effects of psychosocial intervention approaches for forcibly displaced children during middle childhood. Both the UNHCR and researchers have identified the importance of strengthening locally existing supports with people who have been forcibly displaced (Miller & Rasco, 2004; UNHCR, 2013; Ventevogel, Schinina, Strang, Gagliato, & Hansen, 2015). Given these recommendations, it is notable that few studies in this review considered the relationships and the environment within their interventions. Only eight interventions included family or caregivers (Annan et al., 2017; Bjorn et al., 2013; Dura-Vila et al., 2013; Dybdahl, 2001; El-Khani et al., 2018; Fazel et al., 2009; Murray et al., 2018; O'Shea et al., 2000). This absence of family and caregiver involvement may be

for a variety of reasons, including stigma associated with accessing mental health treatment, particularly in some cultures (Salami, Salma, & Hegadoren, 2019; Shannon, Wieling, Simmelink-McCleary, & Becher, 2015), families and caregivers having their own trauma history impacting on their ability to engage in interventions for their children, and experiencing post-migration difficulties resulting in more pressing priorities such as stabilising the home environment including accessing food, ensuring stable accommodation, and earning money (Fazel & Betancourt, 2018). None of the interventions addressed alleviating daily stressors that forcibly displaced families deal with including accessing food and adequate shelter and generating an income, as suggested by Miller and Rasmussen (2010). Strategies to involve forcibly displaced families and caregivers in interventions that could improve not only the psychosocial wellbeing of the children, but also that of families and caregivers should be considered, and could include addressing some of these daily stressors people who are forcibly displaced face (Miller & Rasmussen, 2010).

Teachers were the most common intervention provider and school environments were the setting where a majority of psychosocial interventions took place. This finding aligns with the emerging role that teachers and school communities can play in providing psychosocial interventions to forcibly displaced children (Tyner & Fazel, 2014). Fazel and Betancourt (2018) later considered the practicalities of who can conduct psychosocial interventions with trauma survivors and refugee children and suggested that 'lay counsellors' (including teachers, school assistants, educational staff) could be used, provided they have adequate training and support. The suggested use of lay counsellors was reflected in this review as half the studies reported on interventions being conducted by lay counsellors, who had all received additional training and, in some cases, ongoing supervision by mental health practitioners attached to the research. However, results of this review suggest that training and support of lay counsellors' may play a critical part in the effectiveness of psychosocial interventions. Within this review training and support of lay counsellors ranged widely, from ten-day training followed by 6 months of weekly training meetings (Murray et al. (2018) to a two day training for teachers who had themselves experienced trauma (Gormez et al. (2017)). These differences in training intensity might partly explain the differences in observed effectiveness in the respective studies. An association between training and effect sizes has also been noted by Brown et al. (2017), whose meta-analysis found that intervention effects were moderated by type of profession, with higher levels of training related to larger effect sizes.

School settings are generally recognised as a safe, stable, and undisturbed environment where children can engage in interventions, which is particularly important for children who have been forcibly displaced, who are likely to be living in a chaotic and disruptive home environment (Silove, 2013). Solely using the school environment could, however, pose a limitation to how inclusive interventions are regarding involving parents and caregivers and the wider community. Considering various settings where psychosocial interventions can be provided and various groups of people included could thus be beneficial to consider. Although school environments were the setting of many interventions, notably, none of the interventions included peers. Good practice involving immigrant and refugee children identifies that peer mentoring with local peers can provide the migrant children with support in difficult situations, help establish social relationships with local children, reduce the sense of loneliness and isolation associated with migration, which can help facilitate self-confidence and a sense of wellbeing (European Commission, 2019; Messiou & Azaola, 2018). The inclusion of peers in intervention approaches for this population may be worthy of consideration in future intervention development and evaluation.

Several limitations of existing studies were identified in this review and meta-analysis. Whilst the majority of the included studies were conducted with satisfactory methodological quality for the selected research design, only a small proportion of interventions were evaluated

using a controlled research design. Additionally, only one of the studies reported using a power analysis to determine sample size prior to commencing the intervention, with a majority of included studies reporting small samples as a study limitation. We also found that prediction intervals including the null value in the within- and between-groups meta-analyses were an additional factor introducing uncertainties into predicting the effectiveness of interventions. An additional limitation identified within the studies is a lack of longitudinal data. While the benefits of most of the psychosocial interventions were maintained at follow up (measured at least two weeks following the intervention), we were unable to determine if the effects of the interventions were maintained long term as only four studies provided follow-up post-intervention assessments (from 6 to 18 months). The lack of longitudinal data is common with studies conducted in post conflict settings due to the highly transient nature of people who have been forcibly displaced and difficulty accessing people within their new environment (Betancourt, McBain, Newnham, & Brennan, 2015; Block, Riggs, & Haslam, 2013). However, understanding and measuring the long-term effects of receiving a psychosocial intervention using longitudinal data would be particularly relevant for middle childhood, given these children are likely to experience developmental changes as they transition into adolescence and adulthood, and continue to be exposed to ongoing post-migration stressors (Anderson, 2020).

Whilst an effort was made to increase transparency and minimise bias within this systematic review and meta-analysis by using PRISMA reporting, multiple databases to confidently identify all settings and countries where psychosocial interventions have been evaluated, and evaluating the methodological quality of the included studies, limitations exist. Only studies published in English were included, thus limiting finding research published in other languages. Only one reviewer extracted the data, which may have led to data extraction errors, however one of the other researchers was consulted when uncertainties arose. Another limitation was the broad approach of psychosocial interventions, the different methodological designs used, and the variety of outcome measures, which complicated the comparison of studies. Future research would benefit from larger controlled studies to provide much needed evidence on the effectiveness of psychosocial interventions. Some studies reported multiple outcome measures, which were not merged into a composite score primarily due to the very small number ($n = 5$) of studies within the primary (between-groups) analysis. Robust variance estimation could be used in future meta-analyses to make use of all outcome measure data once more high-quality studies are available and the minimum number of studies to estimate average effect sizes is met. Additionally, the intervention approaches were not coded using a strict coding system, and the manuals used in the intervention themselves were not coded, thus we are unable to report on the specific details of each intervention, and the effect each component of the intervention had. Lastly, due to the low number of studies identified, moderating factors could not be analysed.

5. Conclusion

This systematic review and exploratory meta-analysis identified psychosocial interventions conducted with children in middle childhood across all income countries, who have been forcibly displaced due to war or a fear of persecution and summarised the characteristics and approaches of the included interventions. A diverse range of psychosocial intervention approaches were identified. The interventions found to be most promising for 6–12-year-old forcibly displaced children were KidNET, CBT, CCPT, EMDR, and creative interventions. Unstructured play or education alone did not produce a beneficial intervention effect. While the existing evidence base outlines the potential to improve psychosocial wellbeing in 6–12-year-old forcibly displaced children through interventions, it does not allow for clear recommendations regarding which interventions should be applied in certain settings due to a lack of

controlled studies. Future interventions should expand beyond treatment approaches aimed at alleviating psychological distress and include strengths- and resilience-based intervention approaches. Future research evaluating the effectiveness of psychosocial interventions for forcibly displaced children should include studies of more rigorous design, with greater sample sizes, and the capture of longitudinal data to provide more certainty around the effectiveness of interventions.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.ssmmh.2021.100028>.

Declaration of interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Author contributions

Concettina Trimboli: Conceptualization, Data curation, Formal analysis, Validation, Methodology, Writing - Original Draft, Writing - Review & Editing, Project administration, Lauren Parsons: Formal analysis, Validation, Writing - Review & Editing, Supervision, Caroline Fleay: Writing - Review & Editing, Supervision, Dave Parsons: Data curation, Writing - Review & Editing, Angus Buchanan: Writing - Review & Editing, Supervision.

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