



Research Paper

The feasibility and acceptability of implementing and evaluating a caregiver group intervention to address child mental health: A pilot study in Iraq

Sally Carter^{a,*}, Sana Sadiq^b, Alison L. Calcar^a, Tambri Housen^{a,c}, Grace Joshy^a, Nadia Fredj^d, Kamalini Lokuge^a

^a Australian National University, Australia

^b Médecins sans Frontières-Operational Centre Amsterdam (MSF-OCA), Iraq

^c The University of Newcastle, Australia

^d Médecins sans Frontières-Operational Centre Amsterdam (MSF-OCA), Netherlands

ARTICLE INFO

Keywords:

Parenting
Caregivers
Intervention
Mental health
Humanitarian
Trauma

ABSTRACT

Background: Complex humanitarian emergencies have a significant negative impact on the prevalence and severity of child mental health. The capacity of primary caregivers to provide care to their children is often adversely affected. There is a lack of evidence-based interventions to guide primary caregivers. This study assessed the feasibility and acceptability of implementing and evaluating a caregiver group counselling intervention, and provided an indication of its potential benefits.

Methods: A single arm pilot study was conducted in Northern Iraq. Primary caregivers of a child aged 8–12 years with concern about their child's mental health attended the caregiver group intervention. Quantitative and qualitative outcome measures were completed by caregivers and children at pre-intervention, post-intervention, and 12-week follow-up.

Results: The intervention was found to be feasible and acceptable to implement. Twelve participants were recruited, of which ten started the intervention and eight completed the intervention. All eight participants reported finding the intervention helpful. Evaluation of the intervention was found to be feasible and acceptable. Indicative results showed potential improvements across child and caregiver mental health.

Limitations: Limitations are that the small sample size limits the range of perspectives, lack of control group means observed changes could be due to factors other than the intervention, and potential bias exists due to self-completed fidelity monitoring and possible response bias.

Conclusions: The caregiver group intervention was feasible and acceptable to implement and evaluate in a humanitarian setting, and showed potential to positively impact child and caregiver mental health, warranting further research on its effectiveness.

1. Introduction

Complex humanitarian emergencies (CHEs) have a significant negative impact on the prevalence and severity of child mental health

and psychosocial difficulties (Attanayake et al., 2009; Stichick, 2001; Lokuge et al., 2013; Barenbaum et al., 2004; Silverman and La Greca, 2002; Galea et al., 2005; Atwine et al., 2005; Kagawa and Hindin, 2010; Cartwright et al., 2015). Despite strong evidence showing the negative

List of abbreviations: BPSES, Brief Parental Self-Efficacy Scale; CHE, Complex Humanitarian Emergencies; CORS, Child Outcome Rating Scale; CRIES-13, Child Revised Impact of Events Scale; EASE, Early Adolescent Skills for Emotions; ISIL, Islamic State of Iraq and the Levant; M, Mean; MHAM, Mental Health Activity Manager; MSF, Médecins sans Frontières; MSF-OCA, Médecins sans Frontières-Operational Centre Amsterdam; NGO, Non-Government Organisation; SD, Standard Deviation; SDQ-P, Strengths and Difficulties Questionnaire – Parent Form; SRQ-20, Self-Reporting Questionnaire; TRT, Teaching Recovery Techniques; WHO, World Health Organization.

* Corresponding author at: National Centre for Epidemiology and Population Health, The Australian National University, 62 Mills Road, Acton ACT 2601, Australia.

E-mail address: sally.carter@anu.edu.au (S. Carter).

<https://doi.org/10.1016/j.jadr.2023.100503>

Received 1 August 2022; Received in revised form 13 February 2023; Accepted 15 February 2023

Available online 18 February 2023

2666-9153/© 2023 The Authors. Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

mental health impact of CHEs on children, there remains a significant gap in evidence-based interventions that are feasible and effective for this population (Tol et al., 2013; Tol et al., 2011; Tol et al., 2014). A recent meta-analysis of randomised controlled trials of focused psychosocial support interventions in low-resource humanitarian settings found: (i) beneficial effects on children's posttraumatic stress disorder (PTSD) symptoms and functional impairment, and (ii) improvements in hope, coping, and social support (Purgato et al., 2018). Nonetheless, the authors recommended further research was required focusing on interventions for younger children, displaced children, and children living in larger households (Purgato et al., 2018).

Primary caregivers and caregiver¹ capacity to provide positive care to their children are often adversely affected in humanitarian contexts (O'Callaghan et al., 2014; El-Khani et al., 2016; Murphy et al., 2017). Caregiver interventions have robust empirical support and are widely used for a variety of child mental health difficulties in high income, stable contexts, as well as across cultures, and in low- and middle-income countries (Knerr et al., 2013; Gardner, 2017; Gardner et al., 2016; Engle et al., 2011; Mejia et al., 2012). This suggests that caregiver interventions may also be relevant and effective in CHEs, warranting further research.

Recent research used an exploratory qualitative approach to understand the perspectives of eight Médecins sans Frontières (MSF) international mental health staff on the challenges and needs experienced by primary caregivers and staff regarding parenting and child mental health in humanitarian settings (Carter et al., 2018). The findings confirmed and extended on existing literature describing the challenges of parenting in CHEs as the result of three main issues: (i) the instability, stress, and lack of support associated with living in a CHE setting, (ii) changes in child psychological and psychosocial functioning (including emotional, behavioural, somatic, and cognitive difficulties), and (iii) changes in caregiver emotional and psychological health and functioning (El-Khani et al., 2016; Qouta et al., 2008; Wieling et al., 2017). This study also highlighted that in the face of these significant negative shifts for families, caregivers lack the knowledge and skill to adjust their parenting approaches to provide appropriate care to their children. Promisingly, it was found that caregivers want greater guidance and support to understand how to help their children and how to manage difficult behavioural and emotional reactions in their children (El-Khani et al., 2016a,b; Carter et al., 2018; Wilton et al., 2017).

To date, few evidence-based parenting programs have been implemented and evaluated that specifically address the needs of caregivers in CHEs whom have concerns regarding their child's mental health. A review of caregiver interventions to address child mental health (including interventions with significant caregiver involvement) that were developed for or implemented in CHE settings and which have reported evaluations found a small number of studies that provide initial support for this approach. A total of 18 interventions were identified (see supplementary material), 13 of which were universal or targeted to children based on their exposure to potentially traumatic experiences ($n = 13$, 72.22%). Of the five interventions targeted to children and caregivers based on the existence or severity of child mental health difficulties or parent difficulties, four were targeted towards children with elevated psychosocial distress or trauma symptoms ($n = 4$, 22.22%), and one intervention targeted parents that were identified as having trouble parenting ($n = 1$, 5.56%).

The four interventions targeted to children and caregivers based on child mental health difficulties provide initial support for such an approach. The World Health Organisation's (WHO) brief, non-specialist delivered group psychological intervention, Early Adolescent Skills for Emotions (EASE) (Fine et al., 2021), offered three caregiver sessions alongside a program of seven sessions for young adolescents aged 10–14

years. A feasibility cluster randomised controlled trial and a process evaluation of EASE conducted with Burundian refugees and their caregivers in Tanzania found the intervention was feasible and acceptable, with potential positive impact on adolescent psychosocial distress (Fine et al., 2021). A feasibility study conducted with Syrian refugees in Jordan found EASE to be a safe and acceptable intervention (Akhtar et al., 2021). Further research is planned to evaluate the effectiveness of EASE across a variety of humanitarian contexts (Akhtar et al., 2021; Dawson et al., 2019). Teaching Recovery Techniques (TRT) (Yule et al., 2013) provided two caregiver sessions alongside a program of five sessions for children aged eight years and older. A randomised controlled study with children aged 11–14 years in the West Bank, Palestine, found it was acceptable in this context, and significantly reduced post-traumatic stress, depression and grief amongst children (Barron et al., 2013). A cluster randomised controlled study with children aged 10–13 years in Gaza, Palestine found the intervention reduced posttraumatic stress amongst boys, and reduced posttraumatic stress amongst girls that had low levels of peri-traumatic dissociation (Qouta et al., 2012). An intervention based on TRT and enhanced with additional caregiver support, referred to as TRT + Parenting, provided five caregiver sessions alongside five sessions for children aged eight years and older (El-Khani et al., 2018). A pilot study conducted with families displaced by the Syrian conflict residing in Turkey found that the intervention was feasible to deliver and evaluate in this context, and that the intervention may potentially reduce child posttraumatic stress, increase caregivers' parental self-efficacy, and improve caregivers use of effective parenting strategies (El-Khani et al., 2018). A brief parenting psychoeducation intervention provided two caregiver sessions for caregivers of children aged 10–14 years (Jordans et al., 2013). A controlled study in Burundi found the intervention resulted in reduced aggression amongst boys, but had no impact on child depressive symptoms or family social support (Jordans et al., 2013). Together, these studies suggest that caregiver intervention to address child mental health difficulties may be feasible and acceptable in settings of CHE, and also have potential benefit on child as well as caregiver mental health.

The aim of this study was to assess the feasibility and acceptability of a caregiver group counselling intervention to address child mental health, as well as provide preliminary evidence of the potential benefits of the caregiver group intervention on child and caregiver mental health.

2. Methods

2.1. Context

The study was a collaboration between Médecins sans Frontières-Operational Centre Amsterdam (MSF-OCA) and researchers based at The Australian National University (ANU), completed between January and July 2021. Médecins sans Frontières (MSF) is an international non-government organisation (NGO) providing medical humanitarian aid across a range of countries, cultures and contexts. Since 1990 mental health has been an integral part of the medical care provided by MSF (de Jong, 2011).

The study was conducted in Al-Abbasi, a town in the Hawija District of the Kirkuk Governorate in Iraq. Since 2003, following the invasion of Iraq by Western forces, armed conflict in Iraq has led to violence, insecurity, and disruption to basic services and institutional capacity (United Nations Office for the Coordination of Humanitarian Affairs (OCHA), 2021). Occupation of part of Northern Iraq by Islamic State of Iraq and the Levant (ISIL) from 2014 to 2017 resulted in high levels of armed conflict and population displacement (United Nations Office for the Coordination of Humanitarian Affairs (OCHA), 2021). Following the defeat of ISIL, the humanitarian situation in Iraq has remained fragile, with the population experiencing significant problems related to physical and mental wellbeing, poor living standards, lack of access to basic services and employment opportunities, and a lack of protection for

¹ Throughout this manuscript the term caregiver/s refers to primary caregiver/s.

vulnerable groups (United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA), 2020; United Nations Office for the Coordination of Humanitarian Affairs (OCHA) Iraq, 2020).

2.2. Study design

This single arm pilot study consisted of one group of primary caregivers participating in a group intervention, alongside the completion of repeated outcome measures and feedback questionnaires by caregivers, children, and group facilitators.

2.3. Intervention implementation staff

MSF-OCA coordination and management staff were involved in the planning and oversight of the study, as well as liaising with local authorities for approval. The MSF Mental Health Activity Manager (MHAM) assumed the role of clinical supervisor and field research coordinator for this study. Two group facilitators and two data collection staff were selected from the MSF-OCA mental health team. The data collection staff were different to the group facilitators in an attempt to minimise response bias given that participants would form a therapeutic relationship with the group facilitators.

2.4. Participant eligibility and recruitment

Participants were primary caregivers and children living in Al-Abbasi, Iraq. Potential participants were eligible if they were: (i) a primary caregiver of a child aged 8–12 years, and had concerns about their child's mental health or psychosocial wellbeing, or (ii) a child aged 8–12 years whose caregiver was participating in the caregiver group intervention. Recruitment occurred through the existing networks and referral pathways within the MSF project. A screening interview was conducted by the group facilitators to ensure eligibility criteria was met, provide study information, complete informed consent/ assent, conduct screening outcome measures, and collect basic socio-demographic information. As the caregiver group intervention was designed to be delivered to groups of 8 – 12 caregivers, recruitment ceased when the maximum of 12 participants (primary caregivers) was reached.

2.5. The caregiver group intervention

The caregiver group intervention was developed with the aim of improving mental health and psychosocial wellbeing of children impacted by CHEs through providing caregivers with support, knowledge, and skills. It was based on literature review and preliminary research that explored the perspectives of eight MSF international mental health staff on the challenges and needs experienced by primary caregivers and staff regarding parenting and child mental health in humanitarian settings (Carter et al., 2018). This preliminary research found that interventions implemented for child mental health in CHEs often lacked detailed therapeutic intervention regarding parenting. Participants described non-specialist staff as feeling uncertain and incompetent in this area due to a lack of knowledge, skills, and resources. This research also provided critical insights to inform the focus and content of a parenting intervention to ensure it was relevant and feasible in CHEs, including to ensure it: (i) encompassed the diverse range of psychological and psychosocial difficulties experienced by children in CHEs (ideally addresses underlying processes or factors that create or maintain presenting difficulties), (ii) addressed the impact of CHEs on caregivers themselves and provided caregivers with their own support and coping strategies, (iii) was suitable for delivery by non-specialist staff, assuming little or no background knowledge in child and family mental health, and (iv) was time-effective, cost-effective, and resource-effective to ensure feasibility.

The caregiver group intervention was developed as a manual. Following initial writing of the caregiver group intervention it was

refined based on clinical consultation with eight professionals that held expertise in child mental health, child trauma, and/or experience in child mental health in humanitarian contexts. Further refinement was completed based on background research conducted with ten non-specialist staff in Papua New Guinea to explore their views on the potential usefulness, applicability, comprehensibility, benefits, and challenges of the caregiver group intervention. Lastly, cultural and contextual adaptation of the caregiver group intervention was completed with national MSF staff in Northern Iraq.

The caregiver group intervention was a closed group that consisted of six, 2-hour group sessions run weekly. It provided information and skills to caregivers to help them better support their child to cope with the impact of adversity and potentially traumatic experiences in humanitarian settings. The content of the caregiver group intervention was integrative, using approaches from attachment-based therapy, cognitive behavioural therapy, brain-based therapy, and a strengths based approach. The content of the caregiver group intervention is outlined in Table 1. In addition to the topics listed, each session included a review of the previous week's content, a review of the current week's content, and a break. The caregiver group intervention used a variety of approaches including didactic teaching, demonstrations, group discussions, and role plays.

2.6. Outcome measures

Repeated outcome measures were administered at screening, pre-intervention (two weeks before the group sessions began), post-intervention (one week after the group finished), and 12-week follow-up (12 weeks after the group finished). Feasibility and acceptability of implementing the caregiver group intervention was measured through: (i) the use of non-specialist health staff (selection, training, supervision, adherence), (ii) caregiver engagement (recruitment, retention), and (iii) acceptability of the caregiver group intervention (feedback from caregivers and staff). Feasibility and acceptability of evaluating the caregiver group intervention was measured through: (i) the use of non-specialist health staff (selection, training, supervision), (ii) caregiver and child engagement (recruitment, retention), and (iii) the feasibility and acceptability of outcome measures (completion rates, caregiver and staff feedback, relevance).

The potential benefit of the caregiver group intervention was measured through a range of outcome measures. Child mental health was assessed using *The Strengths and Difficulties Questionnaire – Parent*

Table 1
Content of the caregiver group intervention by session.

Session	Topic
Session One	Welcome & Introductions; Overview of the group; Group rules; Parent goals; Why is parenting important?; What are traumatic experiences?; Common reactions to traumatic experiences; Child development and traumatic experiences.
Session Two	Looking after yourself: Doing things to refresh; 'Survival brain' & 'learning brain'; Trauma, stress & 'survival brain'; Over-arousal & under-arousal; Helping your child move from 'survival brain' to 'learning brain'.
Session Three	Looking after yourself: Calming your body through your breathing; Safe, caring & consistent parenting; Being aware of your own brain state; Recognising the triggers for your own 'survival brain'.
Session Four	Looking after yourself: Gratitude & meaning; Building a positive relationship with your child; Spending time with your child; Showing interest in your child; Communicating with your child; Playing with your child; Comforting your child.
Session Five	Looking after yourself: Building social connection; Comforting your child – continued; Over-protection & under-protection; Talking to your child about traumatic experiences; Helping children make sense of their experiences.
Session Six	Looking after yourself: Strengths; Discipline; Encouraging good behaviour; Managing difficult behaviour; Review of the group; Highlights; Planning for the future; Congratulations.

Form (SDQ-P), a 25-item questionnaire completed by caregivers to assess child emotional and behavioural difficulties as well as positive attributes (Goodman, 1997). Each item requires caregivers to respond on a 3-point Likert scale, ranging from 0 (not true) to 2 (certainly true). The SDQ results in five subscales (each ranging from 0 to 10): conduct problems, inattention-hyperactivity, emotional symptoms, peer problems, and prosocial behaviour. The first four subscales are summed to generate a total difficulties score (range 0–40). High scores on the SDQ-P total difficulties subscale represent high levels of child mental health difficulties, with a score of ≥ 17 indicating a clinical level of symptoms. The SDQ (self-report and parent versions) have been validated in Arabic (Thabet et al., 2000; Almqarami and Shuwail, 2004; Alyahri and Goodman, 2006) and used with various populations in the Middle East (Panter-Brick et al., 2018; Panter-Brick et al., 2011; Panter-Brick et al., 2009; Hariz et al., 2013; Thabet et al., 2011; Khamis et al., 2004). It has demonstrated good internal consistency in previous studies (Cronbach's alpha = 0.82 for the total difficulties score) (Goodman, 2001).

Child trauma-related mental health difficulties were assessed using *The Child Revised Impact of Events Scale (CRIES-13)* (Smith et al., 2003). This is a 13-item self-report measure, where children respond to each item on a Likert-type scale, ranging from 0 (not at all), 1 (rarely), 3 (sometimes), and 5 (often). The CRIES-13 results in sub-scales of intrusion, avoidance, and hyperarousal. The subscales are summed to result in a total score (range 0–65). High scores on the CRIES-13 represent high levels of overall child trauma-related mental health difficulties. A score of 17 or more for the combined intrusion and avoidance indicate possible post-traumatic stress disorder (Stallard et al., 1999). It has been shown to have good psychometric properties in war-affected Arab populations (Punamaki et al., 2015; Veronese and Pepe, 2013) and used with a variety of Middle Eastern populations (Panter-Brick et al., 2011; Panter-Brick et al., 2009; Punamaki et al., 2015; Kangaslampi et al., 2016; Kolltveit et al., 2012). The CRIES-13 has demonstrated good internal consistency in previous studies (Cronbach's alpha = 0.73) (Kolltveit et al., 2012).

Child psychosocial functioning was measured using *The Child Outcome Rating Scale (CORS)* (Miller et al., 2003; Duncan et al., 2006). The CORS is a 4-item measure used to monitor a child's progress across four areas of life functioning: symptom distress, interpersonal wellbeing, social role, and overall wellbeing (Miller et al., 2003; Duncan et al., 2006). It was completed as a self-report by the child. Respondents place a mark on a 10 cm line for each life area to reflect how it has been over the past week, with the left meaning high/good and the right meaning low/bad (on the Arabic version). Scores across the four dimensions are summed to result in a total score (range 0–40). High total scores on the CORS represent good levels of child psychosocial functioning, with a scores of ≤ 32 indicating a clinically poor level of psychosocial functioning. The CORS has demonstrated good internal consistency in previous studies (Cronbach's alpha = 0.84 for the child-rated CORS) (Duncan et al., 2006).

Caregiver mental health was measured using *The Self Reporting Questionnaire (SRQ-20)*, a 20-item screening instrument to assess mental health disturbances in adults in developing countries (Beusenberg and Orley, 1994). It is a self-report measure that requires respondents to answer 1 (yes) or 0 (no) to each item. The SRQ-20 is effective in identifying adults with major depression, anxiety disorders, or suicidality. High scores on the SRQ-20 represent high levels of mental health difficulties, with a cut-off score of ≥ 7 indicating a clinical level of symptoms (Al-Subaie et al., 1998). The SRQ-20 has been widely used and validated in many cultural contexts. The SRQ-20 has demonstrated good internal consistency in previous studies (Cronbach's alpha > 0.84) (Panter-Brick et al., 2009).

Parental self-efficacy was assessed using *The Brief Parental Self-Efficacy Scale (BPSES)*, a brief 5-item measure used to assess parental self-efficacy (Child Outcomes Research Consortium, 2018). Each item requires caregivers to respond on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), giving a total scale score range

of 5 - 25. High scores on the BPSES represent high levels of parental self-efficacy. This measure was translated and back translated to Arabic for this study.

2.7. Procedure

During preparation, study materials (such as the group intervention manual) were translated to Arabic, and back translated by different translators to ensure consistency of concepts. Initial cultural adaptation was completed on all materials (e.g., metaphors and case examples adapted to suit the local context). Group facilitators and data collection staff completed three days of training conducted by the MSF MHAM.

During implementation, data collection staff administered outcome measures with participants at pre-intervention, post-intervention, and 12-week follow-up. Group facilitators lead the group sessions and completed fidelity monitoring checklists at the end of each group session. Group facilitators also participated in weekly 30–60 min sessions of clinical supervision provided by the MHAM (four conducted in person, two remotely).

The caregiver group intervention was conducted on Wednesday afternoons in the Mukhtar's (a village chief) house in Al-Abbasi. The location was selected by the MSF team as convenient and accessible to the population. The day and time of the caregiver group intervention, Wednesday afternoons, was chosen to suit caregiver availability and preference.

2.8. Analysis

Descriptive statistics regarding participant characteristics, recruitment, engagement, extent of outcome measure completeness, and adherence were determined. Themes and ideas in the qualitative feedback were identified to provide guidance to the future implementation of the caregiver group intervention and the research. Mean, standard deviation, mean change scores, and change score effect sizes were calculated for each outcome measure. Mean change scores were calculated by averaging the change score for each individual participant. Change score effect sizes were calculated by dividing the mean change score by the standard deviation of change scores (Seidel et al., 2014). Given the small sample size of this pilot study formal statistical tests of significance were not conducted.

3. Results

3.1. Participant demographics

The eight participants that completed the intervention and the research were all female primary caregivers, average age was 42 years (SD = 13.95; range 25 – 70 years), all were Arab, Muslim, and married. None of the participants had received mental healthcare for themselves, past or current. The child that these caregivers were concerned about (the child participants of the study) were all male, all currently attending school, with an average age of nine years (SD = 1.55; range 8 – 12 years). Primary caregivers identified the primary presenting problem for their child as: Other behavioural problems ($n = 4$), aggression ($n = 2$), anxiety ($n = 1$), and learning problems ($n = 1$). The primary precipitating event identified by the caregivers were: Traumatic experience linked to natural disasters ($n = 3$), psychological violence ($n = 1$), domestic discord or violence ($n = 1$), displacement, migration, and related problems ($n = 1$), non-violence related ($n = 1$), and physical injury ($n = 1$). Throughout the course of the group intervention, caregivers raised further concern about: sleep problems for themselves, bed-wetting for their children, child fears (kidnapping, airstrikes, displacement, hunger), school problems, and inability to move freely. Only one child had previously received mental health care. Five of the eight families had been internally displaced during the recent conflict (length of displacement ranged from 2 – 24 months), and subsequently returned

to their home in Al-Abbasi.

3.2. Implementation of the caregiver group intervention

Two non-specialist mental health staff were successfully selected from the MSF team, completed training, weekly supervision, and adhered to the group manual during facilitation of the group.

Twelve participants were recruited over a seven-week period (a further six were offered but declined to participate). Of these 12 eligible participants, two withdrew prior to Session One (one due to lack of time, one for family reasons). Of the 10 participants enrolled in the group, two withdrew following Session Two (one moved out of area, one for unknown reasons), resulting in eight participants that completed the group sessions and the research. Attendance levels were high, with between 6–8 participants at each of the six group sessions.

Caregivers provided positive feedback about the caregiver group intervention. Caregivers agreed that the group leaders listened to them and included them ($n = 7$ “a lot”; $n = 1$ “quite a lot”); that the things talked about in the group were important ($n = 7$ “a lot”; $n = 1$ “quite a lot”); that they liked what they did in the group ($n = 6$ “a lot”; $n = 2$ “quite a lot”); and that the group helped them ($n = 7$ “a lot”; $n = 1$ “quite a lot”). Qualitative feedback provided by caregivers on the open-ended questions of the participant group feedback questionnaire found that the things caregivers liked most about the caregiver group intervention were learning new techniques for parenting, interaction with the group facilitators and other caregivers, the opportunity to express their feelings, understanding why children get angry, learning about the brain, and learning how to respond to children. Alternatively, the things caregivers disliked most about the caregiver group intervention were the duration of the sessions (too long), when other caregivers brought children to the sessions, and the location where the group was held (due to concerns regarding confidentiality).

Group facilitators provided positive feedback about the caregiver group intervention, saying that they perceived the group intervention had helped caregivers ($n = 2$ “quite a lot”); that the things talked about in the group were important ($n = 2$ “a lot”); that they liked what they did in the group ($n = 2$ “a lot”); that facilitating the group helped them develop more knowledge in child mental health ($n = 2$ “a lot”); that facilitating the group helped them develop more experience/ skills in child mental health ($n = 2$ “a lot”); and that facilitating the group helped them in other parts of their work ($n = 2$ “a lot”). Group facilitators found the manual a comprehensible and helpful guide to running the caregiver group intervention. They provided positive feedback about the content and topics covered in the group, as well as the use of case examples, illustrations, group discussions, demonstrations, and role plays.

3.3. Evaluation of the caregiver group intervention

Four non-specialist mental health staff (two group facilitators and two data collection staff) were successfully selected from the MSF team and completed training and supervision regarding completion of research duties.

Eight participants completed the intervention and evaluation. Completion of evaluation outcome measures was high (100% of participants present at each assessment time point), with very low levels of missing responses in the quantitative evaluation (0.83% on pre-intervention SRQ-20; 0.64% on pre-intervention CRIES-13; 0% on all other measures at all other timepoints). Outcome measures were reported to be comprehensible and appropriate by caregivers. No issues were reported by the group facilitators, data collection staff, or MHAM regarding the research procedures or the outcome measures.

3.4. Potential benefits of the caregiver group intervention

Data collected from the evaluation outcome measures was analysed for the purposes of demonstrating potential impacts of the caregiver

group intervention. Table 2 presents the mean scores (M), standard deviations (SD), mean change scores, and effect sizes for each outcome measure (including subscales where relevant).

Improvements in child mental health and psychosocial functioning were seen on all measures. The total difficulties scale on the Strengths and Difficulties Questionnaire – Parent Form (SDQ-P) showed a decrease in child mental health difficulties from pre-intervention ($M = 22.00$, $SD = 4.66$) to post-intervention ($M = 17.50$, $SD = 3.25$) to 12-week follow-up ($M = 10.75$, $SD = 2.96$). Child trauma-related mental health difficulties, measured using the Child Revised Impact of Events Scale (CRIES-13), showed a trend of decreased trauma-related mental health difficulties from pre-intervention ($M = 41.63$, $SD = 8.25$) to post-intervention ($M = 18.17$, $SD = 4.62$) to 12-week follow-up ($M = 13.13$, $SD = 10.96$). Child psychosocial functioning, measured using the Child Outcome Rating Scale (CORS), showed a trend of improved psychosocial functioning from pre-intervention ($M = 23.88$, $SD = 4.23$) to post-intervention ($M = 30.56$, $SD = 3.49$) and to 12-week follow-up ($M = 34.00$, $SD = 1.74$).

Improvements in caregiver mental health and parental self-efficacy were also observed. Caregiver mental health, measured using the Self-Reporting Questionnaire (SRQ-20), showed a trend of decreased mental health difficulties from pre-intervention ($M = 10.88$, $SD = 3.48$) to post-intervention ($M = 7.13$, $SD = 3.04$) and to 12-week follow-up ($M = 3.63$, $SD = 1.69$). Parental self-efficacy, measured using the Brief Parental Self-Efficacy Scale (BPSES), showed a trend of improved parental self-efficacy from pre-intervention ($M = 17.63$, $SD = 3.85$) to post-intervention ($M = 18.38$, $SD = 1.77$) and to 12-week follow-up ($M = 22.00$, $SD = 1.69$).

4. Discussion

Overall this study found that a caregiver group intervention was feasible and acceptable in a setting of humanitarian need, as well as having potential benefit to both child and caregiver mental health. This supports findings from other studies that have found caregiver interventions to be feasible, acceptable, and of potential benefit to child mental health in complex humanitarian emergencies (Fine et al., 2021; Yule et al., 2013; Barron et al., 2013; Qouta et al., 2012; El-Khani et al., 2018; Jordans et al., 2013).

Caregiver interventions, or interventions with a significant caregiver component, have only recently received empirical attention in settings of CHE. This study adds to the emerging body of evidence about impacts of caregiver-based intervention for children with mental health difficulties in humanitarian contexts. Along with programs such as the WHO’s EASE and TRT + Parenting, this study adds to the initial findings that caregivers in CHEs engage with and appreciate support and guidance in managing mental health difficulties in their children. Further research is required to assess the effectiveness of these approaches.

4.1. Strengths of the caregiver group intervention

The caregiver group intervention was found to be feasible to implement in Northern Iraq. Facilitation by non-specialist health staff (including selection, training, supervision, and adherence to the manual) was successful. Caregivers were successfully recruited in a reasonably short timeframe. Of the 10 caregivers that started the caregiver group intervention, eight caregivers (80%) completed it, with attendance levels high. Qualitative feedback from caregivers and group facilitators was that the caregiver group intervention was helpful, relevant, inclusive, and enjoyable. Group facilitators also felt that facilitating the caregiver group intervention had a positive impact on their own professional knowledge and skills. They described the manual as clear and comprehensible, and said the level of detail and flexibility in the manual was appropriate. Positive feedback was received regarding the cultural appropriateness of the caregiver group intervention.

A further strength was the usefulness, acceptability, and

Table 2

Mean and standard deviation scores at different time points, changes over time, and effect sizes for each outcome measure during the pilot study in Iraq, Jan – Jul 2021.

Outcome measure*	Screening M (SD)	Pre- intervention M (SD)	Post- intervention M (SD)	12-week follow-up M (SD)	Mean Change Score †				
					M (SD)		Effect Size ‡		
					Pre-Post	Pre – Follow-up	Pre- Post	Pre – Follow-up	
Child Outcome Rating Scale (CORS)	27.84 (4.00)	23.88 (4.23)	30.56 (3.49)	34.00 (1.74)	6.69 (4.48)	10.13 (4.68)	1.49	2.17	
Strengths and Difficulties Questionnaire – Parent Form (SDQ-P)	Emotional symptoms	–	6.38 (1.77)	4.13 (1.46)	2.25 (1.39)	–2.25 (2.38)	–4.13 (2.36)	–0.95	–1.75
	Peer problems	–	3.75 (2.05)	3.25 (1.28)	3.13 (1.25)	–0.50 (2.39)	–0.63 (1.92)	–0.21	–0.33
	Conduct problems	–	5.13 (1.73)	3.75 (1.49)	2.00 (1.51)	–1.38 (1.69)	–3.13 (2.17)	–0.82	–1.44
	Inattention- Hyperactivity	–	6.75 (1.98)	6.38 (2.13)	3.38 (2.00)	–0.38 (2.00)	–3.38 (3.38)	–0.19	–1.00
	Total difficulties	–	22.00 (4.66)	17.50 (3.25)	10.75 (2.96)	–4.50 (4.63)	–11.25 (6.58)	–0.97	–1.71
Child Revised Impact of Events Scale (CRIES-13)	Prosocial behaviour	–	5.63 (2.62)	6.50 (2.00)	8.88 (1.13)	0.88 (2.10)	3.25 (3.01)	0.42	1.08
	Intrusion	–	12.50 (4.96)	5.50 (3.46)	3.88 (4.55)	–7.00 (4.96)	–8.63 (4.00)	–1.41	–2.16
	Avoidance	–	11.25 (4.98)	7.38 (2.67)	5.88 (4.12)	–3.88 (6.79)	–5.38 (5.80)	–0.57	–0.93
	Arousal	–	17.88 (5.77)	6.75 (3.15)	3.38 (3.62)	–11.13 (7.68)	–14.50 (7.65)	–1.45	–1.89
Total	–	41.63 (8.25)	19.63 (8.42)	13.13 (10.96)	–22.00 (13.44)	–28.50 (13.93)	–1.64	–2.05	
Self Reporting Questionnaire (SRQ-20)	–	10.88 (3.48)	7.13 (3.04)	3.36 (1.69)	–3.75 (3.96)	–7.25 (2.38)	–0.95	–3.05	
Brief Parental Self-Efficacy Scale (BPSES)	–	17.63 (3.85)	18.38 (1.77)	22.00 (1.69)	0.75 (2.96)	4.38 (4.72)	0.25	0.93	

* High scores on the SDQ-P, CRIES-13, SRQ-20 = high levels of difficulties; High scores on the CORS, BPSES = high levels of psychosocial functioning / parental self-efficacy.

† Mean change scores were based on paired data.

‡ Change score effect size of 0.2 is deemed small, 0.5 medium, and 0.8 large (McLeod, 2019). A positive mean change score and effect size reflect an increase in scores from pre-intervention to post-intervention, or pre-intervention to 12-week follow-up. A negative mean change score and effect size reflect a decrease in scores from pre-intervention to post-intervention, or pre-intervention to 12-week follow-up.

effectiveness of remote clinical supervision (provided by the MHAM to the group facilitators for session 5 and session 6) and remote research supervision (provided by the primary investigator to the MHAM for the duration of the study). The effectiveness of this approach was no doubt dependant on the dedication and enthusiasm of the MSF-OCA team, particularly the MHAM and group facilitators.

4.2. Opportunities to strengthen the caregiver group intervention

Firstly, it was suggested that the session duration be reduced and the number of sessions be increased to provide more sessions and to reduce rushing through content. Given good attendance rates it is likely that increasing the number of sessions would be feasible in this setting. A second concern was the disruption caused when other caregivers brought their child/ren to the group sessions. The possibility of providing childcare should be considered during future implementation of the intervention, an approach that has been effectively used to encourage caregiver participation and attendance in other caregiver interventions (Annan et al., 2017; Miller et al., 2020a,b). Third, the premises where the caregiver group intervention was run was a concern to caregivers and group facilitators as it lacked confidentiality. The location was selected due to its convenience and accessibility to the population, and its ability to accommodate the number of people participating in the group. At the time the location was selected ensuring confidentiality was possible, however, by the time the group commenced the site was undergoing construction, which meant building staff were entering the premises. Confidentiality for mental health interventions is paramount, and this issue highlights the need to carefully consider the pros and cons of possible locations in the planning stage. A further suggestion regarding the caregiver group intervention was to

include male primary caregivers, ideally running a concurrent group for male caregivers as they are typically key decision makers for the child and family. This fits with the vision of the caregiver group intervention to be available to all primary caregivers regardless of gender or relationship to the child (e.g., mothers/fathers, grandparents, aunts/uncles, guardians). Finally, although the group is appropriate for caregivers of children of any gender, all child participants were male. This may have been random or potentially related to cultural perspectives regarding children and/or child mental health. Future research is required to evaluate the feasibility and acceptability for caregivers of children of other genders, as well as examine possible explanations for the imbalance towards male children.

4.3. The research procedures and outcome measures used to evaluate the caregiver group intervention

The research procedures and outcome measures used to evaluate the caregiver group intervention were feasible and acceptable. Non-specialist health staff were successfully selected, trained, and supervised to execute the research procedures and collect outcome measure data.

Of the 12 participants that completed the informed consent process and pre-intervention assessment, four (33%) withdrew. This is a reasonably high attrition rate, and future research should seek to understand in more depth the reasons for caregiver withdrawal to improve screening, engagement, and retention, as well as inform decisions about which caregivers to target with the caregiver group intervention and which caregivers may be better suited to a different treatment approach (Friars and Mellor, 2009).

Completion of outcome measures was high, with all participants that

were engaged in the research at each assessment time point completing all outcome measures with extremely low levels of missed items.

4.4. Potential benefits

This study was designed to test the feasibility and acceptability of the caregiver group intervention, and was not powered to formally evaluate effectiveness of the caregiver group intervention. The results, however, indicated a *potential* positive impact on both child and caregiver outcomes. Caregiver and child rated measures of child mental health and psychosocial wellbeing all showed positive impact from pre-intervention to post-intervention, with further improvement to 12-week follow-up. An improvement in caregiver mental health was also observed, with a decline in caregiver mental health difficulties found over the course of the caregiver group intervention and further decline seen to the 12-week follow-up assessment. A potential improvement in parental self-efficacy was observed, with an increase in caregiver self-rated reports of parental self-efficacy seen across the course of the intervention and further improvement observed to the 12-week follow-up assessment.

4.5. The challenges of conducting research in humanitarian settings

Many of the challenges experienced in the implementation of this pilot study are reflective of the challenges that will continue to be present when providing mental health services and conducting research in humanitarian settings. Issues such as delays in the planned timeline, population movement (participants moving away from the area; closure of refugee/ IDP camps), curfews, movement restrictions on staff and participants, and staff turnover are not unusual in humanitarian settings. These challenges highlight the need for flexibility and strong communication between all research and implementing staff, as well as flexibility when planning implementation timelines.

4.6. Limitations

This was a small, single arm pilot study that consisted of one group of eight participants. With such a small sample size the range of perspectives and experiences with the caregiver group intervention is limited (particularly the lack of male caregiver perspectives). Secondly, potential bias may have existed due to the use of self-completed fidelity monitoring and response bias in participant outcome measures. Further, as this study did not include a control group, it is possible that the observed changes would have happened regardless with the passage of time. Although this is unlikely given the magnitude of some of the changes observed, a randomised controlled trial design would allow evaluation of the impact of the intervention, while controlling for factors such as time or contact with a supportive professional. A further limitation was the use of some outcome measures that were not validated for the local culture (unfortunately, validation of all outcome measures used was beyond the scope of this research). Lastly, during an effectiveness trial, a longer follow-up timeframe (greater than 12 weeks) would allow stronger conclusions about the longer-term impact of the caregiver group intervention, however, this may also result in higher levels of participant drop-out.

5. Conclusions

This pilot study found that the caregiver group counselling intervention was feasible and acceptable to implement and evaluate in a setting of post-conflict / humanitarian emergency. Further, there is a preliminary indication that the caregiver group intervention may have a positive impact on child mental health, child psychosocial functioning, caregiver mental health, and parental self-efficacy. The results will guide the further refinement of the caregiver group intervention itself, as well as the research procedures used to evaluate the intervention in the

future. The positive results provide a strong justification for future research to assess the effectiveness of the caregiver group intervention through a fully powered randomised controlled trial. If found to be effective, the caregiver group intervention will substantially contribute to the mental health support provided to children and their caregivers in humanitarian settings and contribute towards filling the gap of evidence-based interventions to support child mental health in complex humanitarian settings.

Research in context

Evidence before this study

The negative impact of complex humanitarian emergencies (CHEs) on child mental health and psychosocial functioning has been well established. Further, the understanding of various risk and protective factors for this population has developed greatly over recent decades. The role of caregivers and parenting in supporting child mental health is critical. Non-specialist staff have limited skills, knowledge, or resources to support them provide caregiver interventions. Research that supports the development of evidence-based caregiver interventions tailored to the specific needs of caregivers in humanitarian settings and that address child mental health is scant. Promisingly, however, the small number of initial studies evaluating caregiver interventions suggest they may be appropriate to these contexts and of benefit to child and caregiver mental health. This pilot study assessed the feasibility and acceptability of a caregiver group counselling intervention in Northern Iraq.

Added value of this study

The caregiver group intervention was co-designed with mental health staff working in the local setting and informed by preliminary research that identified specific needs of this population. The intervention was designed to be delivered by non-specialist health staff within the specific constraints of CHE's. We found that the intervention, delivered to caregivers of children aged 8 - 12 years over six sessions, was feasible and acceptable to implement and evaluate in a setting of post-conflict / humanitarian emergency. The results also suggested the intervention may have a positive impact on measures of child mental health, child psychosocial functioning, caregiver mental health, and parental self-efficacy based on results over a 12-week follow-up period.

Implications of all the available evidence

This study showed potential for a caregiver group counselling intervention to positively impact child and caregiver mental health, warranting further research on the effectiveness of the intervention. If demonstrated as effective, the intervention will address a critical need for feasible and acceptable interventions to support primary caregivers and health staff to in turn support children's mental health in CHEs.

Ethics approval and consent to participate

This study received ethical approval from the Australian National University Human Research Ethics Committee (Protocol 2018/244) and from the Médecins sans Frontières Ethics Review Board (Protocol 1854). Local approval to complete this pilot study in Al-Abbasi was received from the Kirkuk Governorate Ministry of Health, Iraq.

Consent for publication

Not applicable.

Availability of data and materials

Data and materials available on request.

Authors' contributions

SC – Design of the study, implementation of the study, analysis of data, interpretation of results, writing the manuscript.

SS – Implementation of the study.

AC – Design of the study, analysis of data, interpretation of results, writing the manuscript.

TH – Design of the study, analysis of data, interpretation of results, writing the manuscript.

GJ – Design of the study, analysis of data, interpretation of results, writing the manuscript.

NF – Implementation of the study.

KL – Design of the study, implementation of the study, analysis of data, interpretation of results, writing the manuscript.

Funding

SC was funded by an Australian Government Research Training Program Domestic Scholarship and the Grace Groom Memorial Scholarship 2019.

ALC is funded by a National Health and Medical Research Council fellowship (1173146).

Study implementation, including implementing staff costs, were covered by Médecins sans Frontières-Operational Centre Amsterdam (MSF-OCA).

Role of funding source

This research was conducted as part of SC's doctoral research, which was supported by an Australian Government Research Training Program Domestic Scholarship and the Grace Groom Memorial Scholarship 2019. ALC is funded by a National Health and Medical Research Council fellowship (1,173,146). Funding for study implementation, including implementing staff costs, was supported by Médecins sans Frontières-Operational Centre Amsterdam (MSF-OCA).

Declaration of Competing Interest

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.

Acknowledgements

Thank-you to the team and patients that contributed to this work.

Thank-you to Paul Kowal for editorial input.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:[10.1016/j.jadr.2023.100503](https://doi.org/10.1016/j.jadr.2023.100503).

References

- Attanayake, V., McKay, R., Joffres, M., Singh, S., Burkle Jr., F., Mills, E., 2009. Prevalence of mental disorders among children exposed to war: a systematic review of 7,920 children. *Med. Confl. Surviv.* 25 (1), 4–19.
- Stichick, T., 2001. The psychosocial impact of armed conflict on children: rethinking traditional paradigms in research and intervention. *Child Adolesc. Psychiatr. Clin. N. Am.* 10 (4), 797–814.
- Lokuge, K., Shah, T., Pintaldi, G., Thurber, K., Martinez-Viciana, C., Cristobal, M., et al., 2013. Mental health services for children exposed to armed conflict: medecins Sans Frontières' experience in the Democratic Republic of Congo, Iraq and the occupied Palestinian territory. *Paediatr. Int. Child Health* 33 (4), 259–272.

- Barenbaum, J., Ruchkin, V., Schwab-Stone, M., 2004. The psychosocial aspects of children exposed to war. *J. Child Psychol. Psychiatry* 45 (1), 41–62.
- Silverman, W.K., La Greca, A.M., 2002. Children experiencing disasters: definitions, reactions, and predictors of outcomes. In: La Greca, A., Silverman, W., Vernberg, E., Roberts, M. (Eds.), *Helping Children Cope With Disasters and Terrorism*. American Psychological Association, Washington, DC, pp. 11–33.
- Galea, S., Nandi, A., Vlahov, D., 2005. The epidemiology of post-traumatic stress disorder after disasters. *Epidemiol. Rev.* 27, 78–91.
- Atwine, B., Cantor-Graae, E., Bajunirwe, F., 2005. Psychological distress among AIDS orphans in rural Uganda. *Soc. Sci. Med.* 61 (3), 555–564.
- Kaggwa, E.B., Hindin, M.J., 2010. The psychological effect of orphanhood in a matured HIV epidemic: an analysis of young people in Mukono, Uganda. *Soc. Sci. Med.* 70 (7), 1002–1010.
- Cartwright, K., El-Khani, A., Subryan, A., Calam, R., 2015. Establishing the feasibility of assessing the mental health of children displaced by the Syrian conflict. *Glob. Ment. Health* 2, e8.
- Tol, W.A., Song, S., Jordans, M.J., 2013. Annual Research Review: resilience and mental health in children and adolescents living in areas of armed conflict - a systematic review of findings in low- and middle-income countries. *J. Child Psychol. Psychiatry* 54 (4), 445–460.
- Tol, W.A., Patel, V., Tomlinson, M., Baingana, F., Galappatti, A., Panter-Brick, C., et al., 2011. Research priorities for mental health and psychosocial support in humanitarian settings. *PLoS Med.* 8 (9), e1001096.
- Tol, W.A., Barbui, C., Bisson, J., Cohen, J., Hijazi, Z., Jones, L., et al., 2014. World Health Organization guidelines for management of acute stress, PTSD, and bereavement: key challenges on the road ahead. *PLoS Med.* 11 (12), e1001769.
- Purgato, M., Gross, A.L., Betancourt, T., Bolton, P., Bonetto, C., Gastaldon, C., et al., 2018. Focused psychosocial interventions for children in low-resource humanitarian settings: a systematic review and individual participant data meta-analysis. *Lancet Global Health* 6 (4), e390–e400.
- O'Callaghan, P., Branham, L., Shannon, C., Betancourt, T.S., Dempster, M., McMullen, J., 2014. A pilot study of a family focused, psychosocial intervention with war-exposed youth at risk of attack and abduction in north-eastern Democratic Republic of Congo. *Child Abuse Negl.* 38 (7), 1197–1207.
- El-Khani, A., Ulph, F., Peters, S., Syria, Calam R., 2016a. The challenges of parenting in refugee situations of immediate displacement. *Intervention* 14 (2), 99–113.
- Murphy, K.M., Rodrigues, K., Costigan, J., Annan, J., 2017. Raising children in conflict: an integrative model of parenting in war. *Peace Conflict* 23 (1), 46–57.
- Knerr, W., Gardner, F., Cluver, L., 2013. Improving positive parenting skills and reducing harsh and abusive parenting in low- and middle-income countries: a systematic review. *Prev. Sci.* (14), 352–363.
- Gardner, F., 2017. Parenting Interventions: How Well do They Transport from One Country to another? UNICEF Office of Research, Florence, Italy.
- Gardner, F., Montgomery, P., Knerr, W., 2016. Transporting evidence-based parenting programs for child problem behavior (age 3-10) between countries: systematic review and meta-analysis. *J. Clin. Child. Adolesc. Psychol.* 45 (6), 749–762.
- Engle, P.L., Fernald, L.C.H., Alderman, H., Behrman, J., O'Gara, C., Yousofzai, A., et al., 2011. Strategies for reducing inequalities and improving developmental outcomes for young children in low-income and middle-income countries. *Lancet* 378 (9799), 1339–1353.
- Mejia, A., Calam, R., Sanders, M.R., 2012. A review of parenting programs in developing countries: opportunities and challenges for preventing emotional and behavioral difficulties in children. *Clin. Child Fam. Psychol. Rev.* 15 (2), 163–175.
- Carter, S., Hitchman E., Lokuge K. Staff perspectives on the challenges and needs of addressing child mental health in humanitarian contexts: internal Médecins Sans Frontières report. 2018.
- Qouta, S., Punamäki, R.-L., El Sarraj, E., 2008. Child development and family mental health in war and military violence: the Palestinian experience. *Int. J. Behav. Dev.* 32 (4), 310–321.
- Wieling, E., Mehul, C., Yumbul, C., Mollerherm, J., Ertl, V., Laura, A., et al., 2017. Preparing the field for feasibility testing of a parenting intervention for war-affected mothers in northern Uganda. *Fam. Process* 56 (2), 376–392.
- El-Khani, A., Cartwright, K., Redmond, A., Calam, R., 2016b. Daily bread: a novel vehicle for dissemination and evaluation of psychological first aid for families exposed to armed conflict in Syria. *Glob. Ment. Health* 3, e15.
- Wilton, K., Shioiri-Clark, M., Galanek, G., Murphy, K., 2017. Parenting in displacement: Adapting Vroom For Displaced Syrian families. International Rescue Committee, New York, NY.
- Fine, S.L., Malik, A., Guimond, M.-F., Nemiro, A., Temu, G., Likindikoki, S., et al., 2021. Improving mental health in low-resource settings: a feasibility randomized controlled trial of a transdiagnostic psychological intervention among Burundian refugee adolescents and their caregivers. *Behav. Res. Ther.*
- Akhtar, A., Malik, A., Ghatasheh, M., Aqel, I.S., Habashneh, R., Dawson, K.S., et al., 2021. Feasibility trial of a brief scalable psychological intervention for Syrian refugee adolescents in Jordan. *Eur. J. Psychotraumatol.* 12 (1), 1901408.
- Dawson, K.S., Watts, S., Carswell, K., Shehadeh, M.H., Jordans, M.J.D., Bryant, R.A., et al., 2019. Improving access to evidence-based interventions for young adolescents: early adolescent skills for emotions (EASE). *World Psychiatry* 18 (1), 105–107.
- Yule, W., Dyregrov, A., Raundalen, M., Smith, P., 2013. Children and war: the work of the Children and War Foundation. *Eur. J. Psychotraumatol.* 4 (18424–8).
- Barron, I.G., Abdallah, G., Smith, P., 2013. Randomized control trial of a CBT trauma recovery program in Palestinian schools. *J. Loss Trauma* 18 (4), 306–321.
- Qouta, S.R., Palosaari, E., Diab, M., Punamaki, R.L., 2012. Intervention effectiveness among war-affected children: a cluster randomized controlled trial on improving mental health. *J. Trauma Stress* 25 (3), 288–298.

- El-Khani, A., Cartwright, K., Ang, C., Henshaw, E., Tanveer, M., Calam, R., 2018. Testing the feasibility of delivering and evaluating a child mental health recovery program enhanced with additional parenting sessions for families displaced by the Syrian conflict: a pilot study. *Peace Conflict* 24 (2), 188–200.
- Jordans, M.J., Tol, W.A., Ndayisaba, A., Komproe, I.H., 2013. A controlled evaluation of a brief parenting psychoeducation intervention in Burundi. *Soc. Psychiatry Psychiatr. Epidemiol.* 48 (11), 1851–1859.
- de Jong, K., 2011. *Medecins Sans Frontieres - Psychosocial and Mental Health Interventions in Areas of Mass Violence*. Rozenberg Publishing Services, Amsterdam.
- United Nations Office for the Coordination of Humanitarian Affairs (OCHA). About OCHA Iraq. 2021 [cited 2021 9th July]. Available from: <https://www.unocha.org/iraq/about-ocha-iraq>.
- United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA), 2020. Iraq: Kirkuk Governorate Profile and Humanitarian Response. UNOCHA [updated December 2020; cited 2021 8th July]. Available from: <https://reliefweb.int/report/iraq/iraq-kirkuk-governorate-profile-and-humanitarian-response-updated-december-2020>.
- United Nations Office for the Coordination of Humanitarian Affairs (OCHA) Iraq, 2020. Iraq Humanitarian Fund 2020 Annual Report. OCHA, Geneva, Switzerland.
- Goodman, R., 1997. The strengths and difficulties questionnaire: a research note. *J. Child Psychol. Psychiatry* 38 (5), 581–586.
- Thabet, A.A., Stretch, D., Vostanis, P., 2000. Child mental health problems in Arab children: application of the strengths and difficulties questionnaire. *Int. J. Soc. Psychiatry* 46 (4), 266–280.
- Almagrabi, M.H., Shuwail, A.Y., 2004. Validity of the self-report version of the strengths and difficulties questionnaire in Yemen. *Saudi Med. J.* 25 (5), 592–601.
- Alyahri, A., Goodman, R., 2006. Validation of the Arabic strengths and difficulties questionnaire and the development and well-being assessment. *Eastern Mediterranean Health J.* 12 (2), S139.
- Panter-Brick, C., Dajani, R., Eggerman, M., Hermosilla, S., Sancilio, A., Ager, A., 2018. Insecurity, distress and mental health: experimental and randomized controlled trials of a psychosocial intervention for youth affected by the Syrian crisis. *J. Child Psychol. Psychiatry* 59 (5), 523–541.
- Panter-Brick, C., Goodman, A., Tol, W., Eggerman, M., 2011. Mental health and childhood adversities: a longitudinal study in Kabul, Afghanistan. *J. Am. Acad. Child Adolesc. Psychiatry* 50 (4), 349–363.
- Panter-Brick, C., Eggerman, M., Gonzalez, V., Safdar, S., 2009. Violence, suffering, and mental health in Afghanistan: a school-based survey. *Lancet* 374 (9692), 807–816.
- Hariz, N., Bawab, S., Atwi, M., Tavitian, L., Zeinoun, P., Khani, M., et al., 2013. Reliability and validity of the Arabic screen for child anxiety related emotional disorders (SCARED) in a clinical sample. *Psychiatry Res.* 209 (2), 222–228.
- Thabet, A.A., Matar, S., Carpintero, A., Bankart, J., Vostanis, P., 2011. Mental health problems among labour children in the Gaza Strip. *Child Care Health Dev.* 37 (1), 89–95.
- Khamis, V., Macy, R., Coigne, V., 2004. The Impact of the Classroom/Community/Camp-Based Intervention (CBI) Program On Palestinian children. Save the Children, USA.
- Goodman, R., 2001. Psychometric properties of the strengths and difficulties questionnaire. *J. Am. Acad. Child Adolesc. Psychiatry* 40 (11), 1337–1345.
- Smith, P., Perrin, S., Dyregrov, A., Yule, W., 2003. Principal components analysis of the Impact of Events Scale with children in war. *Personal. Individual Diff.* 34 (315–322).
- Stallard, P., Velleman, R., Baldwin, S., 1999. Psychological screening of children for post-traumatic stress disorder. *J. Child Psychol. Psychiatry Allied Disciplines* 40, 1075–1082.
- Punamaki, R.L., Palosaari, E., Diab, M., Peltonen, K., Qouta, S.R., 2015. Trajectories of posttraumatic stress symptoms (PTSS) after major war among Palestinian children: trauma, family- and child-related predictors. *J. Affect. Disord.* 172, 133–140.
- Veronese, G., Pepe, A., 2013. Psychometric properties of IES-R, short Arabic version in contexts of military violence. *Res. Soc. Work Pract.* 23 (6), 710–718.
- Kangaslampi, S., Punamaki, R.L., Qouta, S., Diab, M., Peltonen, K., 2016. Psychosocial group intervention among war-affected children: an analysis of changes in posttraumatic cognitions. *J. Trauma Stress* 29 (6), 546–555.
- Kolltveit, S., Lange II, N., Thabet, A.A., Dyregrov, A., Pallesen, S., Johnsen, T.B., et al., 2012. Risk factors for PTSD, anxiety, and depression among adolescents in Gaza. *J. Trauma Stress* 25 (2), 164–170.
- Miller, S.D., Duncan, B.L., Brown, J., Sparks, J., Claud, D., 2003. The outcome rating scale: a preliminary study of the reliability, validity, and feasibility of a brief visual analog measure. *J. Brief Therapy* 2, 91–100.
- Duncan, B.L., Sparks, J., Miller, S.D., Bohanske, R.T., DA, Claud, 2006. Giving youth a voice: a preliminary study of the reliability and validity of a brief outcome measure for children, adolescents, and caretakers. *J. Brief Therapy* 5 (2), 71–88.
- Beusenbergh, M., Orley, J.H., 1994. A User's Guide to the Self Reporting Questionnaire (SRQ). World Health Organization Division of Mental Health, Geneva, Switzerland.
- Al-Subaie, A.S., Mohammed, K., Al-Malik, T., 1998. The Arabic self-reporting questionnaire (SRQ) as a psychiatric screening instrument in medical patients. *Ann. Saudi Med.* 18 (4), 308–310.
- Child Outcomes Research Consortium. Outcome and experience measures. 2018 [updated 26th January 2018; cited 2018 26th January]. Available from: <http://www.corc.uk.net/outcome-experience-measures/>.
- Seidel, J.A., Miller, S.D., Chow, D.L., 2014. Effect size calculations for the clinician: methods and comparability. *Psychotherapy Res.* 24 (4), 470–484.
- McLeod S.A. What does effect size tell you?: simply psychology; 2019 [cited 2021 10th August]. Available from: <https://www.simplypsychology.org/effect-size.html>.
- Annan, J., Sim, A., Puffer, E.S., Salhi, C., Betancourt, T.S., 2017. Improving mental health outcomes of Burmese migrant and displaced children in Thailand: a community-based randomized controlled trial of a parenting and Family skills intervention. *Prev. Sci.* 18 (7), 793–803.
- Miller, K.E., Arnous, M., Tossyeh, F., Chen, A., Bakolis, I., Koppenol-Gonzalez, G.V., et al., 2020a. Protocol for a randomized control trial of the Caregiver Support intervention with Syrian refugees in Lebanon. *Trials* 21 (1), 277.
- Miller, K.E., Koppenol-Gonzalez, G.V., Arnous, M., Tossyeh, F., Chen, A., Nahas, N., et al., 2020b. Supporting Syrian families displaced by armed conflict: a pilot randomized controlled trial of the Caregiver Support Intervention. *Child Abuse Negl.* 106, 104512.
- Friars, P., Mellor, D., 2009. Drop-out from parenting training programmes: a retrospective study. *J. Child Adolesc. Ment. Health* 21 (1), 29–38.