Children of War: A Clinical Research Portfolio of Trauma Profiles and Interventions

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Acknowledgements

"For us, fear comes where terror comes to others because we are anesthetized to the guns constantly pointed at us. And the terror we have known is something few Westerners ever will. Israeli occupation exposes us very young to the extremes of our own emotions, until we cannot feel except in the extreme.
The roots of our grief coil so deeply into loss that death has come
to live with us like a family member who makes you happy by avoiding
you, but who is still one of the family. Our anger is a rage that
Westerners cannot understand. Our sadness can make the stones
weep. And the way we love is no exception. It is the kind of love you can know only if you have felt the intense hunger that makes your body eat itself at night. The kind you know only after life shields you from falling bombs or bullets passing through your body. It is the love that dives naked toward infinity's reach. I think it is where God lives." ---- *Mornings in Jenin by Susan Abulhawa*. Shared with author's permission.

To the children and young people who volunteered their time and told me their story, thank you.

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For my father, the original Dr Odeh, who survived through three wars and was displaced three times by the age of 16. For my Teta who walked barefoot alone with 7 children across countries. For my Amo Ibrahim who continued to write newspaper articles whilst in prison, by stuffing them into vegetables and having them smuggled out to the world. For my Khalto Louliyeh who, as she boarded the bus to flee her home with other refugees, was killed by bomb.

And for Romy, who has been with me this entire journey.

COVID-19 Statement

The Major Research Project (MRP; Chapter 2) initial study protocol is available in Appendix 2.8 (page 119). This was developed prior to the COVID-19 pandemic. Unfortunately, the pandemic disrupted clinical services and, consequently, recruitment efforts for the Glasgow cohort of this study were affected. As a result, the primary study aim was not achieved and data analysis was limited to explorations of the Bethlehem cohort alone.

Chapter 1

Systematic Review

A systematic review exploring the characteristics and effects of school-based, community-based, and individual-based interventions for child and adolescent trauma difficulties in low- and middle-income countries affected by war and conflict

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Abstract

This review investigated the types of interventions available for youth who experience trauma-related difficulties from war or conflict, and explored the impact of these interventions on symptoms and social support. Four databases were searched (Ovid Medline, Ovid Embase, EBSCO PsycInfo and ProQuest Applied Social Sciences Index and Abstracts (ASSIA)). Twelve studies were included in the review, with varying levels of impact in addressing symptoms and social support. Teaching Recovery Techniques was the most investigated intervention. No study reported the validity or reliability of interventions selected within their specific location, and treatment fidelity was rarely assessed. Findings suggested improvement in PTSD symptoms, with subgroups benefiting more than others. Some studies reported the social benefits of including families and teachers in either receiving or delivering interventions, however there was limited use of outcome measures investigating this. Papers were critically appraised using the Crowe Critical Appraisal Tool. The quality of studies was variable, indicating that overall quality in this field requires improvement. Most studies lacked a control group and a follow-up period, limiting conclusions that can be drawn.

Keywords: trauma, children, adolescents, intervention, systematic review

Introduction

Around half of the world's countries have been impacted by war and/or conflict in the last three decades (Marshall & Cole, 2009), the majority being low- and middle-income countries (LMICs; Brundtland, 2000). War and conflict can result from geopolitical power issues, including access to land and water, economic grievances (The World Bank Group, United Nations, 2018), and ethnic conflict (Boulden, 2015). One in 10 children and adolescents live in communities affected by war, conflict, or violence (UNICEF, 2016), and are at high risk of developing mental health difficulties (Jordans et al, 2016).

Post-traumatic stress disorder (PTSD) is a prevalent psychological disorder in war- and conflict-affected LMICs (Attanayake et al, 2009; Hanratty et al, 2019). Common PTSD features include avoidance of reminders of the trauma, increased hypervigilance and arousal, and re-experiencing the traumatic event (Hyland et al, 2017). But, these criteria do not sufficiently capture all reactions to chronic and repeated stressors such as those present in war and conflict affected areas (Barron & Abdallah, 2015), and its limitations in accurately capturing children and adolescents' reactions have been noted (van de Kolk et al, 2009). Chronic and/or extreme traumatic events can impact self-concept, sense of identity and emotional regulation (Brewin et al, 2017). This has resulted in the introduction of complex PTSD (CPTSD) as a disorder (International Classification of Disorders, World Health Organisation, 2020); with symptoms including re-experiencing trauma in the present, increased hypervigilance and arousal, and avoidance of traumatic reminders; as well as negative self-concept, interpersonal functioning difficulties and affect dysregulation (Hyland et al, 2017). These additional symptoms impact the individual in a wide variety of settings and interpersonal relations compared to PTSD symptoms alone, which only present when the individual is exposed to stimuli related to the traumatic event (Hyland et al, 2017).

The evidence base for trauma-targeting interventions for children and adolescents has largely come from high-income countries (HICs); psychopharmacology, cognitive behavioural therapies (CBT) and interpersonal therapy (IPT) are identified as effective treatments (Callahan

et al, 2012) and require highly trained professionals (Hetrick et al, 2016). The suitability of using these interventions in LMICs, where multiple barriers exist in the development of and access to mental health services, is only starting to be explored by researchers (de Haan et al, 2021). These barriers include human and financial resource limitations (Becker & Kleinman, 2013) –HICs spend around $50 (United States Dollar, U.S.D) a year per individual on mental health services compared to $2 (U.S.D) in LMICs (WHO, 2014). Additionally, HICs typically have 50 mental health professionals working per 100,000 people, compared to only one professional per 100,000 in LMICs (WHO, 2014). As such, interventions offered in LMICs not only have to be effective in addressing the needs of children and adolescents, but also require cost-effectiveness and sustainability within low resource settings (Tol et al, 2011; Morina et al, 2017).

International consensus guidelines recommend a multi-layered system of support to be delivered at different tiers (Inter-Agency Standing Committee; IASC, 2007) ranging from enhancing community resilience and reducing distress, to directly targeting symptoms and processing trauma (Hanratty et al, 2019). This systemic approach entails: 1) general humanitarian support for the whole population aimed to prevent later development of severe psychological difficulties (for example, Psychological First Aid; Hanratty et al, 2019); 2) community-based activities that promote and enhance protective factors; and 3) more specialised support for individuals presenting with mental health conditions (United Nations (UN), 2013; Purgato et al, 2018).

The challenges of low human and financial resource in LMICs has led to several adaptations for delivering interventions. This includes task-shifting to school-based staff and adults in the community (Raj et al, 2021), and psychosocial support in place of therapeutic intervention (Purgato et al, 2018). The latter aims to promote psychosocial wellbeing and to prevent or treat mental health difficulties, by adapting evidence-based interventions (such as CBT) and adding techniques that build upon strengths, such as expressive or support-building activities (for example, art and trust building exercises; Purgato et al, 2018). The efficacy of different

approaches in LMICs is needed to clarify what interventions suit which contexts and populations best (Vally & Abrahams, 2016).

Individual-Based Approaches

Psychological interventions can benefit young survivors of mass violence in LMICs (Nexhmedin et al, 2017); CBT demonstrates a universally positive effect for child refugees (Lawton & Spencer, 2021). Gold standard treatment approaches developed in HICs can thus be translated to use in LMICs contexts also. Whilst the evidence base for PTSD lists several person-level approaches focused on reducing symptoms, the living conditions in war- and conflict-affected LMICs are moderating factors in children and adolescents' mental health (Tol et al, 2013). Research therefore suggests that school and community-based interventions may be useful alternatives.

Community-Based Approaches

Community involvement in service design and development may result in better met communities' needs (Vally & Abrahams, 2016). Community-based mental health services are recommended by the Action Plan of the World Psychiatric Association (Thornicroft et al, 2010), World Bank's Disease Control Priorities (Patel et al, 2016), and the WHO's Mental Health Action Plan (WHO, 2013; Kohrt et al, 2018).

School-Based Approaches

School can be a place of consistent support in a chaotic environment (Tyrer & Fazel, 2014). Jordans and colleagues (2016) found most psychosocial and mental health interventions for children affected by armed conflict were school-based and concluded that they were beneficial. Studies in Sri Lanka and Burundi found school-based mental health interventions improved functional impairment and reduced psychological symptoms for some subgroups of children, including those living in more stable environments, but has an adverse impact on vulnerable children, those living in severe poverty and with continued conflict-related stressors (Jordans et al, 2010; Tol et al, 2014). They therefore recommended more intensive interventions for

vulnerable youth who require additional support (Tol et al, 2014), indicating a possible contextual threshold on which environments are most appropriate for effective school-based interventions and consequent reduction in potential harm to youth (Purgato et al, 2014). Future research should investigate specific factors influencing intervention efficacy, especially contextual ones (Purgato et al, 2014), and to explore interventions aimed at community and family support (Jordans et al, 2016).

Current Review

This review will investigate the different adaptations of interventions (individual, community and school based) for youth in war-affected LMICs. Jordans et al (2009) conducted a similar review, finding an insufficiency of rigorous studies in the area. Their review was repeated in 2009-2015 where rigor and clarity were still lacking in studies (Jordans et al, 2016). They recommended diversification of research, and interventions targeted at community and family support. This is in line with literature recommending school- and community-based interventions with lower resource in healthcare (Raj et al, 2021; Purgato et al, 2018). This review therefore aimed to investigate interventions conducted for children and adolescents in war-affected LMICs from 2016, with the addition of examining any social support offered within interventions.

Review Question

What are the characteristics and effects of school-based, community-based and individual-based interventions delivered in LMICs for children and young people affected by war and conflict?

Secondary exploratory question

Do school-based, community-based and individual-based interventions differ in their impact on trauma-related difficulties and in social support?

Methods

Design

This systematic review adheres to the Preferred Reporting Items for Systematic Reviews and Meta-Analysis Guidelines (PRISMA; Page et al, 2021).

Search Strategy

The Cochrane Database of Systematic Reviews (CDSR) and PROSPERO database were checked to establish there were no published or ongoing reviews exploring our specific aims.

Following several scoping searches, four databases (Ovid Medline, Ovid Embase, EBSCO PsycInfo, ProQuest Applied Social Sciences Index and Abstracts (ASSIA)) were searched for relevant literature on 9th June 2022. Search sensitivity was ensured through consultation with a college librarian. The search strategy for each database can be found in Appendix 1.1 (Page 91); key words for each of the key components included "trauma", "intervention", "LMIC", "war" and "child". The Boolean operator OR was applied to group terms, and search components were combined with AND. Restrictions were applied for language (English only) and date (2016 until June 2022). Forward and backward citation chaining was conducted to identify additional papers however none met the inclusion criteria. The protocol was not pre-registered.

Eligibility Criteria

Table 1.1 displays the inclusion/exclusion criteria applied to assess study eligibility in this review. For this paper, LMICs are low- and middle-income countries, as listed in the World Bank list (The World Bank Group, 2022). High-income countries were excluded.

Table 1.1
Inclusion/Exclusion Criteria

Inclusion	Exclusion
Primary research studies. Peer reviewed. Published in English. Sample included children and adolescents exposed to war and/or conflict. Studies investigating interventions for trauma-related difficulties, CPTSD and PTSD*. Interventions conducted in LMICs. Quantitative methodology. Use of trauma-related outcome measure.	Participants aged 20+ years. Published in language other than English. Interventions conducted in HICs. Systematic reviews. Qualitative methodology. Single case studies. Outcome measures that are not trauma-related.

**Note CPTSD was introduced to diagnostic manuals recently - earlier research may only use PTSD as terminology*

Data Selection

A total of 1448 papers were found from the search (see Figure 1.1). Search results were imported into the referencing software EndNote and then to web-tool Rayyan where 264 duplicates were removed, resulting in 1184 papers to be screened by title and abstract using the inclusion and exclusion criteria (see Table 1.1). The reviewer independently screened all titles and abstracts, with a sample of 115 randomly screened by an independent reviewer (Trainee Clinical Psychologist). Reviewers were in 96% agreement for inclusion-exclusion decisions, with the remaining 4% resolved through discussion and supervision. A total of 1141 papers were excluded at this stage, leaving 56 papers for full-text screening using the inclusion and exclusion criteria (Table 1.1). The independent reviewer randomly screened five articles, where both reviewers had 100% agreement on screening decisions. A total of 44 papers were excluded at this stage, resulting in twelve papers being included for this review.

Data extraction and synthesis

Data were entered in an Excel Spreadsheet. Table 1.2 reflects the elements extracted from each paper, including whether participants were referred to interventions to address their difficulties, or if they were included only because they had been exposed to traumatic events. It was noted which papers reported on social support and the measures applied to investigate this. Due to the heterogeneity of papers, narrative synthesis was used (Popay et al. 2016). Preliminary syntheses of findings are presented in Table 1.2 with their characteristics discussed. Papers were then grouped together – first by intervention setting (individual, community, or school) then by type of intervention within each setting, in order to describe the interventions delivered and their outcomes. An exploration of emerging patterns from the included papers was then conducted using idea webbing (Clinkenbeard, 1991; Popay et al, 2016). Quality appraisal was applied to critically evaluate study findings.

Critical Appraisal

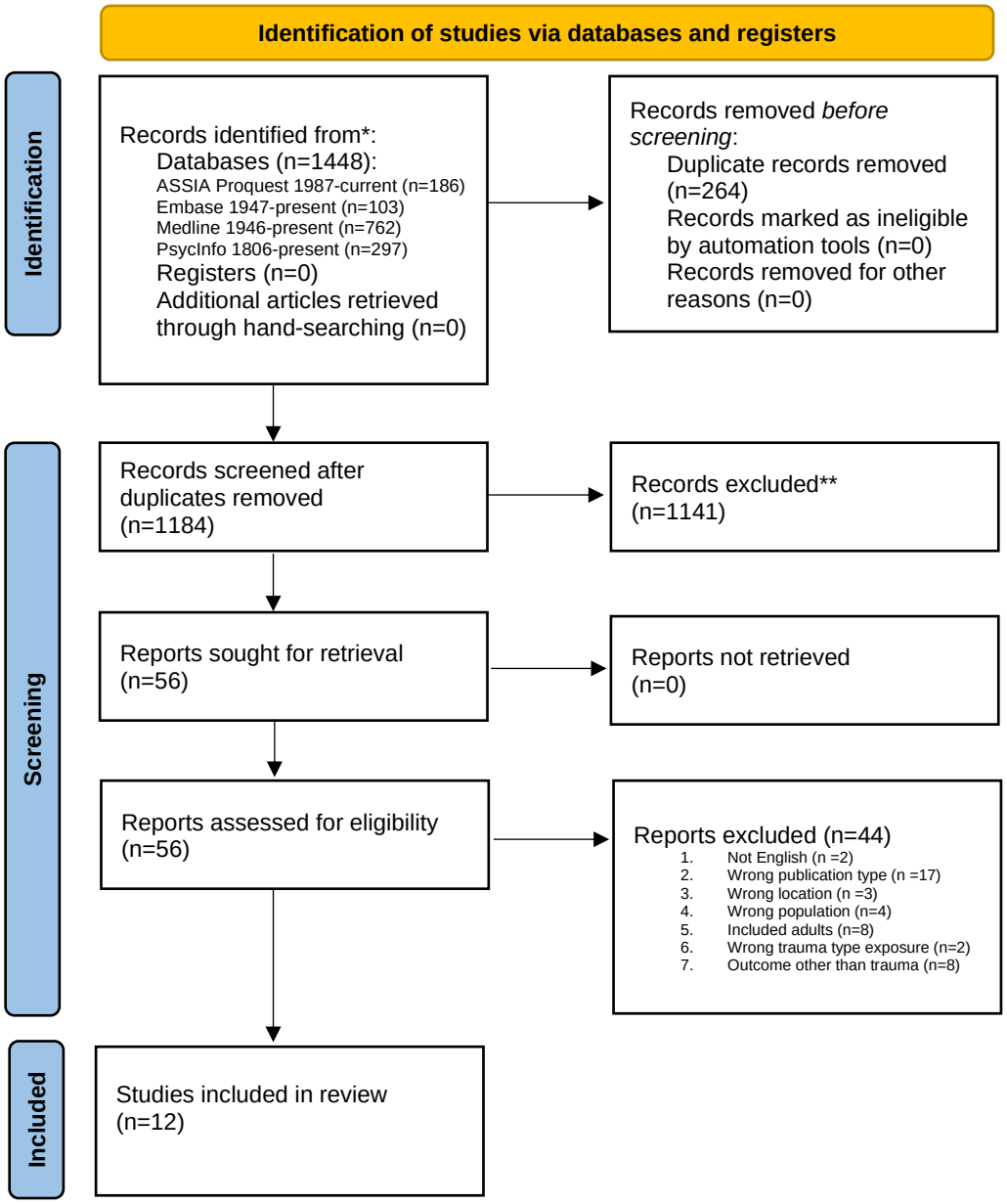
Each included study was quality assessed using The Crowe Critical Appraisal Tool (CCAT, version 1.4; Crowe, 2013) (see Appendix 1.2, Page 108) which was selected due to its suitability for evaluating a wide range of methodological studies. This tool includes a form and user guide to enhance validity and reliability of the appraisal process. The tool has 22 items, each item with multiple descriptors to appraise and score eight categories (see Appendix 1.2, Page 108). The total score for a paper is calculated through summing the scores of each category together, then conversion into a percentage (see Appendix 1.2, page 108 for more scoring guidance). The reviewer is advised to appraise research designs by their own merits, rather than a "gold standard"; and to use their best judgement when scoring. For this review, a higher percentage of criteria being met was taken as an indicator of higher study quality. Studies were not excluded from this review based on quality, due to anticipated low number of high-quality studies. Four of the included studies (33%) were randomly selected to be appraised by the independent reviewer. Interrater agreement was at 91% and discrepancies were resolved through discussion.

Results

Study Selection

Figure 1.1 presents an overview of the search, screening and selection process (Page et al, 2021). Twelve papers were eligible for inclusion for the current review.

Figure 1.1
PRISMA Flowchart.



A total of 44 papers were excluded at this stage, due to being published in a language other than English (n=2); the wrong publication type (for example, conference proceedings; n=17); conducted in a HIC (n=3); delivered to a different population (for example, adult participants only, n=4); having both adult and youth populations in one dataset (n=8); trauma exposure other than war and conflict (n=2); and not including measures assessing for specific trauma-related difficulties (n-8). This left twelve papers which met all eligibility criteria.

Study Characteristics

See Table 1.2 for study characteristics of the twelve papers included in this review. Sample sizes varied between 8 and 817 participants; two studies had under 20 participants, five studies had 32-64 participants, and the remaining five studies had 102-817 participants. The total age range of participants was 6-18 years across all papers – two studies included only children in their sample (i.e. until the age of 12 years); three studies included only adolescents in their sample (i.e. minimum age 13 years) and seven studies included both children and adolescents. Only two papers included children aged below 8 years, although there was no explanation as to whether this informed the design of the study or intervention selected. Four studies were randomised control trials (RCTs), five were experimental pre-test post-test, one was a simple case series with pre-post comparisons, and two were trials. Nine studies were conducted in the Middle East; the remaining three were in Indonesia, Pakistan and Kenya. Four studies were conducted in the same countries as where the researchers resided: Turkey, Pakistan, Iraq and Syria. Five studies were conducted in countries abroad from the researchers' place of residence, four of which were HICs. The remaining three papers were conducted with researchers based both in the country where the research took place, and with other researchers living in HICs. Table 1.3 further details research locations and teams.

Ten studies explored intervention effectiveness on reducing PTSD symptoms, with four utilising waitlist controls. El-Khani et al (2018) tested both feasibility and effectiveness of adding a parenting component to Teaching Recovery Techniques (TRT) – this then informed

their following study exploring effectiveness of the intervention in more depth (El-Khani et al, 2021).

Ali et al (2019) aimed to teach TRT to participants, with no mention of testing intervention effectiveness. Getanda & Vostanis (2020) aimed to investigate feasibility of a psychosocial intervention in a Kenyan school, with use of a waitlist control.

Four studies included interventions for caregivers as part of the intervention for children and adolescents. Of these, three studies included parent-reported measures on children's difficulties and on parenting skills. An additional study involved parents and teachers in the intervention's activities (El-Khodary & Samara, 2020). Another study also delivered the intervention to caregivers but made no further mention about how this may have impacted the social support for children and adolescents (Perilli et al, 2019). Three studies did not include caregivers in the intervention but reported feedback on social support following treatment. The remaining three studies did not report on social support.

Table 1.2.
Study Characteristics of Included Studies

Author(s) (Year) Country	**Study Design**	**Sample Characteristics** **Referred/ Exposed**	**Trauma Measures** **When completed**	**Setting (Format) Intervention**	**Facilitators, Training and Supervision**	**Delivery**	**Outcome of Trauma Reactions** **Effect size (*d*)** **Social Support**	**Social Support, Measures and Outcome**
Ali et al (2019) **Iraq**	Experimental pre-test post-test design	N=102 (female=54; male=48) 13-18 years (m=15.4) 20 parents Iraqi (100%) Exposed	Baghdad Trauma Checklist CRIES-8 Measures at baseline then two weeks post-test.	School (group) TRT	Psychologists, psychiatrists and social workers. 2-day training Half-day meeting with school staff.	2-hour sessions of TRT across five weeks.	Significant reduction of PTSD-related symptoms for those above the clinical cut-off. Overall sample non-significant. *d*=N/A	One psychoeducation session for parents. Parents encouraged to partake in additional groups. No measures. Low parent engagement. Positive feedback from participant and teachers.
Barron et al (2016) **Palestine**	RCT	N=139 (female=83; male=56) 11-15 Years (m=13.57) Palestinian (100%) Exposed – screened for inclusion	EWSQ CRIES-13 ADES Pre-assessment two weeks before intervention, post-assessment two weeks after.	School (group) TRT or wait list	School counsellors. 3-day training. 1 day familiarisation session. Monthly supervision in pairs and small groups.	5 sessions.	Significant reduction of PTSD symptoms in participants who were at clinically significant levels. *d*=0.88	None reported.

Author(s) (Year) Country	**Study Design**	**Sample Characteristics** **Referred/ Exposed**	**Trauma Measures** **When completed**	**Setting (Format) Intervention**	**Facilitators, Training and Supervision**	**Delivery**	**Outcome of Trauma Reactions** **Effect size** (*d*) **Social Support**	**Social Support, Measures and Outcome**
Dawson et al (2018) **Indonesia**	Controlled trial	N=64 (female=31, male =33) 7-14 years (m=10) Indonesian Exposed – screened for inclusion	UCLA-PTSD-RI (Part III) (completed by parents) Pre-treatment, post-treatment and 3-month follow-up	Setting N/A (Individual appointments) CBT or PS	NGO lay-counsellors. 2-week training and 12 weeks of practice with cases. Weekly online supervision.	1-hour sessions over 5 weeks for children.	Significant decrease in PTSD symptoms in both treatment groups. *d*=-0.17 Reduction in symptoms reported by parents and children. No detectable differences between treatments.	One 1-hour long session for caregivers for both treatment groups. UCLA-PTSD-RI (Part III) was completed by parents but no measure was used for social support. No social support outcome reported.
El-Khani et al (2018) **Turkey**	Experimental pre-test post-test design	14 mothers; 16 children (female=8, male=8) 6-12 Years (m=9.94) Syrian 100% Refugees Exposed – screened for inclusion	CRIES-13 Assessment measures one week before intervention, and two weeks after.	School (group) TRT+P	Teachers. 3-day training course. Online supervision.	5 weekly 2-hour long sessions for participants.	Significant decline in Intrusion scores on CRIES *d*= N/A	5 caregiver sessions on psychoeducation and parenting skills. SCARED, SDQ, CAPES, PS, IES-R and DASS. Decrease in behavioural difficulties and intensity of difficulties. Reduction in caregiver laxness and overreactivity; and increase in parent competence and confidence.

Author(s) (Year) Country	**Study Design**	**Sample Characteristics** **Referred/ Exposed**	**Trauma Measures** **When completed**	**Setting (Format) Intervention**	**Facilitators, Training and Supervision**	**Delivery**	**Outcome of Trauma Reactions** **Effect size** (*d*) **Social Support**	**Social Support, Measures and Outcome**
El-Khani et al (2021) **Lebanon**	Three-arm RCT	119 caregivers (Female=102; male=17) N of children N/A 9-12 years (m=N/A) Syrian (100%) Refugees Exposed – screened for inclusion	CRIES-13 1 week before intervention, 2 weeks after, and 12 weeks after.	School (group) TRT+P or TRT or waitlist	Teachers already trained in TRT. Extra training on +P component over 2 days.	2-hour sessions over 5 weeks.	Greatest and fastest significant improvement in TRT+P group for both children and caregivers. Both TRT & TRT+P significant reduction in PTSD symptoms at follow-up, compared to wait list. *d*=N/A	5 caregiver sessions on psychoeducation and parenting skills. SCARED, SDQ, PS, PSOC, IES-R and DASS. Greatest improvement in TRT+P. TRT also demonstrated improvement. Decrease in caregivers' self-report of own difficulties.
El-Khodary & Samara (2020) **Palestine**	Experimental pre-test post-test design (single subject)	N=572 (female=331; male=241). 12-18 years (m=14.37) Palestinian 100% Exposed	W-TECH PTSDSS Before intervention and two months after intervention.	School (group) Psychosocial support counselling program	30 social workers and school counsellors. Trained by researcher.	4-hours for 5 consecutive days.	Greater improvement in girls' PTSD symptoms. *d*=N/A Parent and teacher participation positively influenced mental health during and after intervention.	Parents and teachers contributed to activities. No measures for social support. Theorised parent and teacher involvement improved children's difficulties both during and after intervention.

Author(s) (Year) Country	**Study Design**	**Sample Characteristics** **Referred/ Exposed**	**Trauma Measures** **When completed**	**Setting (Format) Intervention**	**Facilitators, Training and Supervision**	**Delivery**	**Outcome of Trauma Reactions** **Effect size** (*d*) **Social Support**	**Social Support, Measures and Outcome**
Getanda & Vostanis (2020) **Kenya**	Cross-over randomised control design	N=54 (female 59%; male 41%) 14-17 Years (m=N/A) Kikuyu (50%), Luo (20.4%), Luhya (9,7%) and other (9.7%) All internally displaced Exposed – screened for inclusion	SLES CRIES-13 1 day before intervention, immediately after intervention, and 1 week after intervention.	School (group) WfR or waitlist	Paraprofessional (social care background).	Six sessions over three consecutive days	Overall significant decrease in PTSD symptoms compared to wait list. *d*=N/A	None reported.
Gormez et al (2017) **Turkey**	Prospective experimental intervention pre/post test	N=32 (female=20; male=12) 10-15 Years (m=12.41) Syrian (100%) Refugees Exposed – screened for inclusion	CPTS-RI Details of when not included in paper.	School (group) Psychological treatment program	Teachers. 2-day training course. Hourly supervision after each session.	8 sessions, lasting 70-90 mins each	Significant improvement in trauma symptoms, especially intrusive symptoms. *d*=N/A	Theorised that teacher-delivery led to therapeutic milieu created in school environment where there was better understanding and communication. No measures used.

Author(s) (Year) Country	**Study Design**	**Sample Characteristics** **Referred/ Exposed**	**Trauma Measures** **When completed**	**Setting (Format) Intervention**	**Facilitators, Training and Supervision**	**Delivery**	**Outcome of Trauma Reactions Effect size** (*d*) **Social Support**	**Social Support, Measures and Outcome**
Gul & Irshad (2018) **Pakistan**	Experimental pre-test post-test	N=60 (sex N/A) 10-15 Years (m=N/A) Exposed – screened for inclusion	PTSD CAR Details of when not included in paper.	School (N/A) TIP Art Therapy and behaviour therapy or waitlist	Therapist	8-10 sessions depending on progress in each appointment.	Significant difference pre and post treatment on PTSD symptoms (re-experiencing *d*=3.023, avoidance of stimuli *d*=0.79, increased arousal *d*=2.026).	None reported.
Kubitary & Alsaleh (2018) **Syria**	Therapeutic trial	41 (all male) 13-17 years (m=14.94) Syrian 24 originally living in Damascus; 17 war victim refugees who fled to Damascus Exposed	DTS KAWES Details of when not included in paper.	School (N/A) TRPPT	Psychologist	Five weeks	Significant difference in PTSD symptoms in overall sample, *d*=0.4 Significant reduction in war experience difficulties overall, *d*=0.38, as well as in war victim refugee group, *d*=0.63	Received feedback from participants, teachers and families about the increased quality of life and morale in community.

Author(s) (Year) Country	**Study Design**	**Sample Characteristics** **Referred/ Exposed**	**Trauma Measures** **When completed**	**Setting (Format) Intervention**	**Facilitators, Training and Supervision**	**Delivery**	**Outcome of Trauma Reactions** **Effect size** (*d*) **Social Support**	**Social Support, Measures and Outcome**
Panter-Brick et al (2018) **Jordan**	Experimental and RCTs	N=817 (43.08% female) 12-18 years (m=14.37) Syrian (54.58% (refugees); Jordanians Referred then screened for inclusion	HI and HD scales. Traumatic Events Checklist Details of when not included in paper.	Community (group) PSA programme or waitlist	Lay facilitators. 16-day training programme. Weekly meetings.	16 sessions over 8 weeks.	No discernible impacts PTS reactions compared to control group, *d*=0.14.	Participants reported increase in number of friends, and trust built with peers through activities. Families also observed positive impact.
Perilli et al (2019) **Turkey**	Simple case series with pre- post-test comparison	N=8 (female=4; male=4) 9-18 Years (m=11.3) Syrian 100% Refugees (unaccompanied or with mum and/or siblings) Exposed	CRIES-8 Before intervention and 45 days after intervention ended.	Orphanage (group) EMDR-IGTP – offered to children and adults, although insufficient data on adults.	EMDR therapists and cultural mediators.	3 group sessions, each lasting 60-90 mins.	Non-significant reduction in PTSD difficulties. Greater recovery for younger ages and males. *d*=N/A. Mediators were sometimes distressed when participants recalled memories.	None reported.

Measures	**Interventions**	**Other**
ADES: Adolescent Dissociative Experiences Scale CAPES: Child Adjustment and Parenting Efficacy Scale CPTS-RI: Child post-traumatic Stress Reaction Index CRIES-8: Children's Revised Impact of Event Scale (8 items) CRIES-13: Children's Revised Impact of Event Scale (13 items) DASS: Depression-Anxiety Stress Scale DTS: Davidson Trauma Scale EWSQ: Exposure to War and Stressors Questionnaire HI and HD Scales: Human Insecurity and Human Distress IES-R: Impact of Events Scale Revised KAWES: Kubitary-Alsaleh War Experiences Scale PS: Parenting Scale PSOC: Parenting Sense of Competence PTSD CAR: Post-Traumatic Stress Disorder Evaluation Scale Children and Adolescent Questionnaire PTSDSS: Post-Traumatic Stress Disorders Symptom Scale SCARED: Screen for Childhood Anxiety Related Disorders SDQ: Strengths and Difficulties Questionnaire SLES: Stressful Life Events Scale UCLA-PTSD-RI (Part III): University of California at Los Angeles Posttraumatic Stress Disorder Reaction Index for DSM-5 W-TECH: War-Traumatic Events Checklist	CBT: Cognitive Behaviour Therapy EMDR-IGTP: Eye Movement Desensitisation Reprocessing Integrative Group Treatment Protocol PSA: Profound Stress Attunement PS: Problem Solving counselling TIP: Trauma Intervention Program art therapy combined with behaviour therapy TRPPT: Treatment by Repeating Phrases of Positive Thoughts TRT: Teaching Recovery Techniques TRT+P: Teaching Recovery Techniques + Parenting WfR: Writing for Recovery	*d*: Cohen's *d* effect size N/A: Information not available in paper PTS: Post-traumatic stress PTSD: Post-traumatic stress disorder RCT: Randomised control trial

Key Abbreviations in Table 1.2

Table 1.3.
Details of Study Location

Author(s) (Year)	Study Location and Type of Conflict	Researcher Location and Occupation
Ali et al (2019)	Iraq Ongoing war and subsequent community violence, includes internally displaced peoples (IDP)	Iraq Consultant Psychiatrist, Consultant Clinical Psychologist
Barron et al (2016)	Palestine Ongoing military occupation resulting in violence	Palestine, Scotland and Norway Reader and Directors of Psychology Centres
Dawson et al (2018)	Indonesia Civil unrest and conflict	Australia and New Zealand Postdoctoral fellow, Clinical Psychologist, Professor of Psychology, Professor of Psychiatry
El-Khani et al (2018)	Turkey Syrian refugees from ongoing war in Syria	England Humanitarian Psychologist, Research Associate, Research Assistant, Clinical Psychologist
El-Khani et al (2021)	Lebanon Syrian refugees from ongoing war in Syria	Austria and England Humanitarian Psychologist, Research Associate, Public Health Professional, Epidemiologist, Clinical Psychologist
El-Khodary & Samara (2020)	Palestine Military Operation "Protective Edge" and ongoing blockade in Gaza	Palestine and England Assistant Professor, Professor
Getanda & Vostanis (2020)	Kenya Socio-political and ethnic violence	England Psychologist, Professor
Gormez et al (2017)	Turkey Syrian refugees from ongoing war in Syria	Turkey Psychiatrist, Psychologist, Research Assistant
Gul & Irshad (2018)	Pakistan IDP	Pakistan Psychologist
Kubitary & Alsaleh (2018)	Syria Ongoing war in Syria	Syria Student, Psychotherapist
Panter-Brick et al (2018)	Jordan Syrian refugees from ongoing war in Syria	Jordan, Scotland and United States Professor, Biologist, Researcher, Anthropologist, Director
Perilli et al (2019)	Turkey Syrian refugees from ongoing war in Syria	Syria and Italy Psychologist, Director, Research Fellow, Therapist

Quality Appraisal

Study quality varied; CCAT scores ranged from 28% to 78% (see Table 1.4). Two studies were rated as low on overall quality, three studies had some quality concerns, and the remaining seven were considered good quality overall. All studies showed risk of bias in individual components of the CCAT.

Most studies provided concise and coherent accounts of literature, with clear rationale for their aims. However, three studies were difficult to interpret due to unclear structure and presentation of information. This may be due to cross-cultural differences in research, particularly where studies are not published in researchers' native language. Overall, there was a lack of methodological rigor in the studies, although those with higher rated quality suggest that this is developing with time.

A lack of control in most studies means that only tentative conclusions can be drawn from findings. Nine studies did not conduct follow-up investigations, and therefore the long-term effects of treatments are unknown.

No studies reported the validity or reliability of the selected interventions used in the studies' locations. This may reflect how underdeveloped this research is, particularly in having robust and standardised interventions for this population. However, efforts were made to translate and back translate manuals (Ali et al, 2019); and El-Khani et al (2018, 2021) adopted a manualised approach which has been used on their populations of interest before. This suggests that the evidence base is slowly evolving.

Sampling was either through convenience or self-selection methods, threatening external validity of results. Some rates of attrition were impacted by mobility of populations and outbreaks of violence; one study was terminated early and did not recruit the full intended sample (Dawson et al, 2018). Only three studies included intention to treat (ITT) analysis where pre-test data was available. Where there were between-group designs, participants were randomly allocated to a condition in all studies. One study did not provide descriptive statistics about child participants (El-Khani et al, 2021).

All studies included self-reported trauma-specific measures, thus increasing risk of participant bias. Five studies addressed this through additional interviews and/or measures rated by others (e.g. teachers, caregivers), although one study noted poor caregiver attendance (Ali et al, 2019). Two studies used measures which were not validated for their population, and language barriers may have further impacted data gathered. Two studies did not include any information about ethical approval.

Analyses were mostly appropriate for study aims, although seven studies did not report effect sizes. One study did not utilise between-participant analyses, despite including a control group to compare differences between the groups (Gul & Irshad, 2018). The reason for this decision was not reported.

Research locations posed some logistic and security concerns, causing two studies to delegate and supervise tasks remotely. This then raises questions about the evaluation process of the research conducted. Two studies monitored programme fidelity, although one was limited in this process due to security concerns of recording sessions - fidelity was therefore assessed through self- and other-report (Barron et al, 2016). These restrictions on fidelity monitoring may have impacted intervention validity. The other studies which did not include fidelity ratings explained this was not conducted due to similar fears.

Table 1.4. *Quality Appraisal CCAT Score of Included Studies.*

Paper	Preliminaries /5	Introduction /5	Design /5	Sampling /5	Data Collection /5	Ethical Matters /5	Results /5	Discussion /5	Total Score /40	Total Percentage
Ali et al (2019)	3	3	2	1	4	2	3	4	22	55%
Barron et al (2016)	4	4	4	4	4	3	4	4	31	78%
Dawson et al (2018)	4	5	3	4	4	3	4	4	31	78%
El-Khani et al (2018)	3	4	4	4	4	2	4	4	29	73%
El-Khani et al (2021)	3	4	4	3	3	3	2	3	25	63%
El-Khodary & Samara (2020)	2	4	2	3	3	3	2	2	21	52%
Getanda &Vostanis (2020)	3	4	3	3	3	3	3	5	27	68%
Gormez et al (2017)	3	4	2	2	3	3	3	4	24	60%
Gul & Irshad (2018)	1	1	2	2	2	0	2	1	11	28%
Kubitary & Alsaleh (2018)	1	2	2	2	2	2	3	2	16	40%
Panter-Brick et al (2018)	4	4	4	3	3	4	4	4	30	75%
Perilli et al (2019)	3	4	3	3	4	2	4	3	26	65%

Table Key

1-2=Low Quality

3=Average Quality

4-5=Good Quality

Narrative Synthesis

Individual-based Interventions

Dawson et al (2018) was the only study which conducted individual-based interventions, either trauma-focused CBT (TF-CBT) or Problem Solving (PS) counselling. Both interventions involved one-hour weekly sessions for five weeks and included a session for caregivers. In both treatment groups, there was a significant decrease in PTSD symptoms with a low effect size, reported by both children and caregivers. No differences in effects were described between the two groups. Children who received PS found their acquired skills particularly valuable within the context of poor living conditions (e.g. hunger, poor sanitation), suggesting that PS could be especially viable and useful for this population.

Community-based Interventions

Eye Movement Desensitisation Reprocessing Integrative Group Treatment Protocol (EMDR-IGTP)

Perilli et al (2019) conducted group EMDR for a small sample of Syrian orphan refugees (n = 8). This entailed three assessments and three treatment sessions, which were between 60-90 minutes long each. Participants used drawings to depict their experiences. There was a suggested but non-significant improvement on PTSD symptoms, with greater recovery noted for younger children and for males. No effect size was reported, and analyses were limited due to the small sample size. The authors reported that mediators were sometimes distressed during the intervention, due to shared experiences in the community.

Psychosocial Programme

Panter-Brick et al (2018) investigated the impact of a Profound Stress Attunement (PSA) based programme called “The Advancing Adolescents” (“Nubader” in Arabic), which is regularly conducted by the Mercy Corps. This group-programme was offered twice weekly for eight weeks, aiming to establish a “safe space” in the community; facilitate self-expression and social support; and provide structured activities. Participants chose between fitness, technical skills, arts, and vocational skills, which was particularly favoured. There were no discernible impacts to PTSD reactions between

treatment and waitlist groups. Anecdotally, participants and families reported an increase in friendships and trust in the community.

School-based Interventions

Teaching Recovery Techniques (TRT)

TRT is an evidence-based, manualised intervention adopting a TF-CBT, skills-based approach for youth affected by displacement and conflict (El-Khani et al, 2018). It is delivered in a group format in five weekly two-hour sessions, with two psychoeducation sessions for caregivers; and aims to develop and enhance coping strategies for children and adolescents.

For adolescents in Iraq, a significant reduction in PTSD symptoms was observed in participants who were originally above the clinical cut-off (Ali et al, 2019). However, this reduction was non-significant in the overall study sample. Parent engagement was minimal, as it was not perceived as a priority – although participants and teachers provided positive feedback about the intervention (Ali et al, 2019). Researchers reflected that schools' noisy environments can affect the learning of relaxation techniques (Ali et al, 2019).

For adolescents in Palestine, 41% of participants no longer met the criteria for a PTSD diagnosis following treatment (Barron et al, 2016). The intervention was also a protective factor for dissociation despite continued military violence.

In both studies, the intervention was cost-effective and easy to deliver (Ali et al, 2019; Barron et al, 2016).

TRT +Parenting (+P)

El-Khani et al (2018; 2021) added the +P component to the TRT programme, where three additional parenting sessions were provided to promote self-regulation and enhance caregiver skills in addressing child difficulties. Acceptability was explored through caregiver interviews (El-Khani et al, 2018).

In their feasibility study, a significant decline in intrusive symptoms for the small sample of children was observed (El-Khani et al, 2018). Caregivers also reported enhancements in managing children's difficulties, with significant improvement found in parental efficacy.

In their study comparing TRT+P with TRT, children enrolled in TRT+P displayed the highest and fastest levels of improvement in self-report measures (El-Khani et al, 2021). A significant reduction in self-reported parental mental health difficulties was also noted, evidencing the value of working with the family unit.

TRT+P was highly feasible to conduct and did not require facilitators to have prior psychological training (El-Khani et al, 2018). Recruitment was rapid, with high levels of retention (El-Khani et al, 2021) and engagement (El-Khani et al, 2018); implying the accessibility and perceived benefits of the intervention.

Treatment by Repeating Phrases of Positive Thoughts (TRPPT)

Kubitary and Alsaleh (2018) investigated TRPPT: a cognitive positive therapeutic intervention delivered over five weeks. This involved thought monitoring, positive affirmations and cognitive restructuring (Kubitary & Alsaleh, 2018). The intervention significantly reduced PTSD symptoms and difficulties related to war experiences with a medium effect size. The latter was also observed for internally displaced individuals. Participants, families and teachers reported a positive impact on child difficulties, and for quality of life for both participants and the community. Researchers asserted that TRPPT was feasibly delivered and replaced costly healthcare-based individual intervention (Kubitary & Alsaleh, 2018).

Group Psychological Treatment Program

One study investigated a CBT-based programme for referred youth presenting with severe trauma-related difficulties (Gormez et al, 2017). Due to lack of resources, this manualised group program was developed to meet local children and adolescents' needs. Eight sessions were provided, lasting 70-90 minutes long, and entailed psychoeducation, relaxation, processing experiences, problem solving and relapse management. Clinically significant improvements were detected in trauma-related difficulties, particularly in intrusive symptoms. Participants and teachers reported the intervention had created a

therapeutic environment at school, leading to better understanding and communication. Authors reflected that the programme provided opportunity for educators to learn transferrable skills, which may have contributed to this.

Psychosocial Counselling Support

A week-long support programme conducted in four-hour sessions over five consecutive days (El-Khodary & Samara,2020), aiming to increase safety and resilience, reduce trauma symptoms, and improve daily functioning. This entailed psychoeducation, cognitive-behavioural techniques, discussion of past trauma, emotional expression exercises, and group activities. There was not a significant improvement in PTSD symptoms in the overall sample. However, a significantly greater improvement of PTSD symptoms was observed in females compared to males (El-Khodary & Samara, 2020). Males reported more exposure to war events than females, suggesting gender role differences in the community or self-reporting differences (El-Khodary & Samara, 2020). Parents and teachers also participated in activities, and this was thought to enhance participants' mental health both during and after the intervention.

Writing for Recovery (WfR)

One study in the review investigated this psychosocial educational group intervention (Getanda & Vostanis, 2020). Instead of trauma-reprocessing, WfR builds coping strategies to enhance and protect youth mental health (Getanda & Vostanis, 2020) and offers a psychoeducation session to increase understanding and practice of strategies in the family. To optimise accessibility, the researchers held focus groups with stakeholders to ensure cultural sensitivity and identify local needs. An overall decrease in PTSD symptoms was found, and it was theorised that youth who find emotional expression difficult may have their needs better met through a writing-based approach. There was, however, an increase in depressive symptoms, potentially due to the processing of traumatic experiences. Most participants provided positive feedback about the programme, suggesting its acceptability for the target population. The programme was found to be cost-effective and feasible, which also demonstrates its applicability in the setting (Getanda & Vostanis, 2020).

Trauma Intervention Program (TIP) Art & Behaviour Therapy

Art therapy and deep muscle relaxation was provided to participants for two months (Gul & Irshad, 2018). The study found a significant decrease in PTSD symptoms although this was a within-participant analysis, as opposed to comparing results with the wait list control. It was theorised that children who prefer nonverbal methods of communication would benefit from this approach (Gul & Irshad, 2018).

Emerging Patterns Following Narrative Synthesis

Idea webbing (Clinkenbeard, 1991; Popay et al, 2016) of intervention characteristics, effects and impact on social supports can be observed in Appendix 1.3 (Page 110) with the colour blue representing individual-based, green representing community-based and yellow representing school-based interventions. Individual-based interventions in the included papers offered either TF-CBT or Problem Solving. These interventions alongside parental involvement appeared to reduce trauma-related difficulties, and problem solving was reported to be particularly valuable for participants. Community-based interventions offered EMDR or Psychosocial approaches, which had suggested improvements on trauma symptoms. Friendships and trust in the community were reported to have increased following community-based psychosocial intervention. School-based interventions were most prevalent in the included studies, and offered TF-CBT, Psychosocial or Problem-Solving interventions, as well as sessions for caregivers. Reductions in trauma symptoms were reported, particularly for intrusion-type symptoms, and some studies suggested a possible mediating effect of traditional gender roles. School-based social support interventions appeared to improve communication and understanding amongst participants, families and teachers. Involvement of caregivers and teachers enhanced mental health recovery and encouraged increased practise of strategies at home. Caregivers also indicated increased confidence in managing participants' difficulties.

Discussion

This systematic review presents the characteristics and effects of interventions on PTSD symptoms and social support in war-affected youth in LMICs, between 2016 and 2022.

The high number of feasibility trials in the included papers means that conclusions at this stage must be tentative, due to lack of power. More robust research is required to build this evidence base, including observations of feasibility and acceptability, however the results of this review present a working understanding of the current existing literature as it stands. Most interventions were offered within schools. With only one intervention being delivered individually it can be assumed that delivering interventions collectively either in the community or school is more feasible in low-resource settings, as previous literature suggests (Raj et al, 2021; Jordans et al, 2016). One paper flagged that the school's noisy environment interfered with some delivery of the intervention (Ali et al, 2019) which suggests further refinement and consideration for this when designing school-based interventions. Additionally, facilitators who share traumatic experiences with trauma-exposed youth can become, understandably, distressed, which poses questions of how ethical it is to ask community members to deliver interventions (Perilli et al, 2019). Parental involvement appeared to be largely beneficial, although one paper reported parental engagement was poor as parents believed the intervention was not a priority (Ali et al, 2019). Further accessibility and discussion with families is therefore required prior to service implementation; indeed, some papers cited the use of focus groups with stakeholders and interviews with caregivers to improve cultural adaptation of the intervention and optimise engagement (Getanda & Vostanis, 2020; El-Khani et al, 2018). The papers cited largely positive feedback from participants, families, teachers and the wider community which tentatively suggests that interventions in this setting, and with this population, may be acceptable and feasibly delivered although further research is required.

Characteristics of Interventions

Although this literature is still young, most interventions in this review were either based on TF-CBT or a Psychosocial approach and offered in a group format. Parent-training components, where

included, were focused on psychoeducation or parenting strategies. There was a particular focus on TRT in the literature, which may suggest an emerging standardised treatment for this population. Literature also reports that a practical element of intervention, such as vocational or problem-solving skills, is valuable to this population (Panter-Brick et al, 2018; Dawson et al, 2018). The papers included in this review provided interventions lasting from one week to eight weeks, potentially demonstrating the sustainability of such models in these settings. Further research may help explore the feasibility of longer-term interventions in these settings.

Task delegation was present for some papers, whereby school staff and other local community members were involved with treatment delivery which echoes other research in this field (Raj et al, 2021). Whilst the benefits of such involvement were reported, including cost-effectiveness, developing skills and increased understanding within the community regarding mental health (Gormez et al, 2017; Barron et al, 2016), one paper reported that community workers became distressed when delivering intervention, as they related to disclosures of traumatic events (Perilli et al, 2019). This demonstrates the ethical dilemma of task-delegating; whilst it can enhance community understanding and relationships (Hanratty et al, 2019; Purgato et al, 2018), careful consideration must be given regarding risk of harm to facilitators who are from the community, with protective and preventive measures implemented, such as regular supervision or improved identification of suitable candidates. This would support the workforce and increase feasibility of task-shifting further, particularly in vulnerable communities.

Intervention Effects and Trauma Reactions

Individual-based and school-based interventions reported reductions in PTSD symptoms observed through measures and reports by participants, caregivers and teachers, compared to community-based interventions which reported more social benefits as opposed to symptom-specific improvements. One study found TRT to be a protective factor for dissociation, despite ongoing military occupation (Barron et al, 2016), and an intervention for caregivers supported recovery from PTSD symptoms (El-Khani et al, 2021). These findings suggest that there is promise in the interventions being delivered, in potentially reducing trauma-related difficulties. Interestingly, one study reported girls to have a

greater recovery than boys, suggesting gender to be a potential mediating factor (El-Khodary & Samara, 2020). This is consistent with previous findings (Jordans et al, 2016); it is theorised that perhaps traditional gender roles influence trauma presentation and recovery, for example with males being exposed to greater violence and societal expectations to be stoic (El-Khodary & Samara, 2020). An alternative explanation for these findings may be due to girls reporting a higher level of difficulty than boys before the intervention (El-Khodary & Samara, 2020). Boys reported more somatic symptoms than girls, which suggests that there may a difference in how symptoms are expressed, which may have implications on the measures used to investigate difficulties. Future research should therefore explore the role of gender (including non-binary identities), using relevant measures to better understand this trend observed in the reviewed studies (Clark et al, 2018).

One study reported an increase in depressive symptoms following intervention (Getanda & Vostanis, 2020). This may be due to the short period in which intervention was offered, whereby participants were more vulnerable to increased depressive symptoms due to processing memories of traumatic events in such a short time (Getanda & Vostanis, 2020). This again, demonstrates the ethical risks which must be considered whilst conducting this research, where risk of harm for participants must be contained wherever possible. As the literature in this area matures, a better understanding of these effects will support study and intervention development.

Social Support

Studies which involved families, school staff and wider communities received positive feedback and reported an improvement in communication and understanding for participants, families, and schools. This supports claims that family and community participation can enhance recovery (El-Khani et al, 2021). Additionally, these findings suggest that systemic work is particularly valued, not only for children, but also for settings which are exposed to ongoing violence and stress, and therefore may need increased support.

Family and community involvement can challenge stigma of mental health difficulties and increase community understanding (Monnapula-Mazabane et al, 2022). Ali et al (2019) noted that parents did not prioritise TRT, which suggests that interventions should prioritise efforts in engaging families.

Other projects invited stakeholders to focus groups and implemented caregiver interviews, to improve cultural adaptation of the intervention and to optimise familial engagement. This resulted in community and caregiver investment (El-Khani et al, 2018; Getanda & Vostanis, 2020), which may be a critical step in research exploring interventions in LMICs. Most papers in this review involved researchers from, or based in, HICs which potentially could have caused barriers in conducting successful and collaborative interventions due to cross-cultural differences and expectations. Indeed, both studies which implemented such steps reported positive engagement with the intervention, although this was also largely reported in the other studies which included caregivers. Further research must encompass measurement of social support to provide empirical evidence of these claims, and ideally, include stakeholders in the design and implementation of interventions when working cross-culturally.

Areas for Improvement

Studies had a wide range of quality ratings in this review. Whilst the majority were deemed good quality, individual criterion scores indicated areas for improvement. For example, the lack of control groups for many studies meant that results can only be interpreted tentatively and with caution; likewise, lack of follow-up assessments meant that the long-term benefits of intervention are not known. These findings echo Jordans et al (2016) who reported that despite improved progress in study design and evidence base from 2009, there is still a lack of rigour for many studies. Greater clarity and transparency are required when reporting study design, research process, recruitment, data analysis and findings. This will support the development of further interventions; for example, WfR (Getanda & Vostanis, 2020) and art therapy (Gul & Irshad, 2018) propose an accessible intervention for children who have complex needs and emotion literacy difficulties, however better research design is required to ascertain generalisability of results. On the other hand, however, the setting of conflict- and war-affected LMICs will pose many challenges for research design and conduct, and this must be considered when critically appraising the literature. The development of culturally sensitive quality appraisal tools applicable for such settings must be designed with such factors in mind, and future reviews in this literature area must stay aware of these potential barriers also.

Continued development of manualised interventions must be prioritised to build validity and reliability of treatment approaches. Similarly, program fidelity was a challenge in the literature due to understandable concerns around security for facilitators. Creativity and adaptability are therefore required when designing future studies, to adhere to the ethical responsibilities of research for both facilitator safety and to ensure proper conduct of interventions.

Review Strengths

To our knowledge, this systematic review was the first to investigate the effect of intervention on both PTSD symptoms and social support in war-affected youth in LMICs. Findings support existing policy around a multi-layered support system (IASC, 2007) and further develops the evidence base for treating children and young people in this population. Data extraction and quality appraisal were both rigorous in nature, minimising the risk of bias, as supported by interrater reliability. The review adhered to PRISMA guidelines (Page et al, 2021) to optimise reporting.

Review Limitations

The search strategy in this review may have introduced several limitations. For example, focusing on only primary research can increase risk of publication bias. Low-resource settings have limited opportunities and financial resources for research and development (Acharya & Pathak, 2019), and therefore, by only including primary research, reports in the grey literature may have been missed. Additionally, this review only included studies published in English despite investigating interventions from LMICs, thereby increasing the risk of omitting valuable research findings published in languages other than English which may offer insightful perspectives.

Although this review was considered an update from the work of Jordans et al (2016), the date filters applied in the search strategy may have further limited relevant papers, particularly regarding social support which has not been included in previous reviews in this subject. Furthermore, the exclusion criteria applied in this review meant that studies including both adults and children were excluded if data were not separated by age, which reduced the number of suitable papers to be included. Moreover, participant characteristics were not explicitly mentioned in the included papers (for

example gender identity, sexuality, disability etc.) and further studies may wish to consider these non-represented groups in order to diversify evidence bases.

The inclusion criteria listed quantitative methodology only, with use of trauma-related outcome measures – thus, multi-faceted trauma difficulties were excluded from search results and synthesis. Thus, presentations other than PTSD and CPTSD will have been missed from this review, again limiting the breadth of research that could have been included. Furthermore, qualitative literature was excluded which would have provided rich and unique data about the experiences of interventions.

This review only considered trauma-related outcome measures in the synthesis, and therefore readers should be made aware that there may have been observed benefits in other outcomes (for example, anxiety, sleep, behaviour etc) which have been missed from this report. Therefore, a review considering these presentations, and one which includes qualitative methodology would be worthwhile to explore the impact of interventions on a wider range of presentations.

Quality appraisal of the included studies suggested an improvement in research quality since the previous review on this topic (Jordans et al, 2016), although future research must limit risk of bias through consideration of recruitment strategies, larger sample sizes and applying rigour where possible. This will further improve our knowledge of how interventions are impacting war- and conflict-exposed children and adolescents suffering from trauma-related difficulties in LMICs. Nonetheless, this review provides a narrative report of what interventions are emerging as effective and feasible for these settings and this population, and as the literature grows and refines, the focus for future reviews can evolve from a descriptive nature to a more statistical approach. More importantly, however, this review demonstrates the difficulty in applying a quality appraisal tool developed in a HIC for feasibility and exploratory research in LMIC. The implication of this is that research in LMICs will be scored as lower than research conducted in countries where there is greater resource and investment, and, additionally, that research will be appraised from a largely Western perspective without consideration of Global South standards and views. This further marginalises research in other settings, which is already scarce, and therefore it is imperative we consider these limitations whilst conducting such reviews. The CCAT was chosen for this review due to its applicability to a

wide variety of methodologies and designs, and at least provides some method of appraising existing research whilst we highlight the need, and urgency, for quality appraisal tools to be developed or revised for low-resource settings.

Future Research

Future research must prioritise rigorous study design with clear and transparent reporting, to continue building the evidence base. The ethical implications of this literature must be considered within research planning and conduct; risk of harm to participants and facilitators alike must be prioritised, assessed, and managed appropriately. Future research should ensure recruitment processes consider those vulnerable to traumatisation and distress; wellbeing could be protected through reflective practice and regular supervision. Longer interventions may additionally protect participants from suffering adverse effects of short-lived treatment, and papers included in this review highlighted the need for future research to have longer follow-up periods. Longitudinal research may therefore be appropriate to explore not only longer interventions but also long-term effects of interventions.

Whilst there has been an increase in interventions including families and parents since previous recommendations (Jordans et al, 2016), more research is required to provide empirical evidence of how interventions can impact social support for children and adolescents. Efforts to check cultural sensitivity and adaptation of interventions, as well as to optimise engagement, should be prioritised, possibly through focus groups with stakeholders.

Some subgroups were noted to benefit more from interventions, demonstrating the need for further investigation on whether there is effect modification of interventions by sex or age, and subsequently whether tailored or adapted interventions may be beneficial in some groups. Only two studies in this review included children under the age of 8 years, and none below the age of 6 – this reiterates Jordans et al (2016) recommendation for studies to include this age group. Additionally, inclusion of under-represented groups will help improve the generalisability of findings and diversify the evidence base.

As research continues to inform global mental health practice, appropriate tools that are sensitive and validated in other settings, such as LMICs, must be developed, for example, critical appraisal tools. This will help improve validity of findings and the evidence base overall. Future systematic reviews would benefit from including multi-faceted trauma difficulties to capture a more accurate picture of how war and conflict can impact youth, as well as including qualitative research and grey literature to encompass rich and valuable data.

Clinical Implications

Treating trauma-related difficulties in children and adolescents affected by war and conflict in LMICs continues to be an evolving area. This review found school-based interventions delivered in group settings to be the most prevalent in this literature, suggesting the feasibility and cost-effectiveness of these adaptations. Effective interventions identified in this review suggest a length of 1-8 weeks for delivery, and an adaptation of CBT techniques, although the implementation of practical based tasks may also be useful for this vulnerable population to develop and enhance fundamental life skills. Interventions were mostly delivered by school staff and members of the community, demonstrating task-shifting to be another cost-effective and feasible implementation for low-resource settings – regular supervision and reflective practice should be implemented to support those involved. Systemic working with families, school staff and community members can be helpful in supporting individuals during and after intervention; as well as improving understanding, communication and practice of skills learned from intervention outside of sessions. These findings demonstrate evidence base growth, and feasibility and exploratory studies building on the papers included in this review will refine our understanding of what approaches are most effective for war and conflict-exposed children and adolescents in LMICs.

Conclusions

The evidence base for treating trauma difficulties in war-affected youth in LMICs is developing, but requires further study with continued efforts of rigour in research practice required. An improvement in this and increase in research overall would allow for eventual quantitative synthesis through meta-analysis to interpret effect sizes, in order to fully report on effectiveness of interventions. Reductions

in PTSD symptoms were noted in a range of interventions, and involvement of caregivers, schools and community members appears to improve social support for children and adolescents. Future research can build evidence with more robust designs and findings, and efforts should consider investigation of subgroups (such as sex and age) and directly measure the impact of interventions on social support.

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Chapter 2

Major Research Project

Complex Post-Traumatic Stress Disorder and Autobiographical Memory in Children and Adolescents: A Cross-Cultural Study Between Glasgow and Bethlehem.

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Plain Language Summary

Title Autobiographical Memory in Youth with PTSD and CPTSD in Glasgow and Bethlehem.

Background

The persistent war and conflict seen in countries like Palestine can be the result of many problems such as political violence, racial tensions, or settler colonialism. Children and adolescents who are exposed to war and conflict are at risk of exposure to multiple and prolonged traumatic events. Research conducted outside of conflict zones show that such experiences can be linked to multifaceted mental health difficulties, including Post-Traumatic Stress Disorder (PTSD) and Complex Post-Traumatic Stress Disorder (CPTSD). Difficulties can include problems with how people see themselves, their emotions and Autobiographical Memory (AM) - the ability to remember personal events. When someone has experienced trauma, they can start to recall less specific memories about themselves. Not much is known about these specific changes in mental functioning seen in children and adolescents living through war and conflict. For example, traumatic events in the UK are usually interpersonal events, compared to Palestinians who may experience interpersonal trauma in addition to military trauma. Research is yet to determine whether Palestinian children present the same trauma-related symptoms that children in the West do, and whether AM ability may differ between the two populations also. It may be that the type and severity of a traumatic event can influence how PTSD and CPTSD symptoms present, and this in turn may change the way treatment offered to people suffering with CPTSD.

Aims and Questions

This study aimed to understand how PTSD and CPTSD symptoms present in children and adolescents living in Bethlehem and Glasgow. We were interested in investigating whether the reported symptoms were related to the amount and type of trauma exposure. We wanted to also understand the profiles of AM in this population. Our research questions were:

1) How do PTSD and CPTSD characteristics compare between youth from Glasgow and Bethlehem?

2) What is the relationship between trauma event and symptom patterns?
3) What patterns of AM function do we observe in children following a traumatic event?

Methods

Participants were aged 8-17 years. The Glasgow sample were recruited from National Health Service Greater Glasgow and Clyde Child and Adolescent Mental Health Services, although COVID-19 impacted this significantly. The Palestinian sample was provided through an existing dataset which was collected as part of a larger research study that is currently being conducted by the University of Glasgow and the Guidance and Training Centre for the Child and Family (GTC) in Bethlehem. Due to low numbers from Glasgow, only the Bethlehem data were explored in this study.

Participants were shown flashcards with positive and negative words on them and asked to recall a personal memory associated with them. They also undertook an interview and completed five self-report surveys which measured PTSD and CPTSD symptoms, and traumatic experiences.

Main Findings

Results showed that children and adolescents had symptoms typical of people who are diagnosed with PTSD and CPTSD. There was a pattern seen between interpersonal trauma and trauma difficulties, but not for military trauma. There was also a possibility that participants remembered fewer specific memories when they were given a negative word to respond to, and this seemed to happen at a fast rate. There was not a big enough group of participants to explore any of these findings further, but this study has shown some notable preliminary patterns that could be investigated in future studies with a larger group of participants. The more we understand about trauma in children and adolescents, the more we can develop and improve treatment options for them.

Abstract

Research has suggested that there may be a dose-response pattern in volume of trauma exposure and the resulting symptom expression of trauma-related difficulties. The inclusion of CPTSD in the ICD-11 describes disturbances in self-organisation and interpersonal relatedness following exposure to chronic and/or repeated traumatic events. Repeated and cumulative traumatic events may also impact Autobiographical Memory (AM) functioning. Studies investigating these concepts have largely originated in the West, where trauma exposure is typically related to interpersonal violence – little has been explored in settings where there is also exposure to military-based trauma in addition to interpersonal events. It is yet to be confirmed whether children and adolescents in Palestine experience disturbances in self-organisation, interpersonal relatedness and AM. This cross-sectional observation study aimed to investigate trauma profiles, cumulative trauma exposure, and autobiographical memory in children and adolescents in Bethlehem and Glasgow. There were insufficient numbers recruited in the Glasgow sample so analyses were primarily focused on the Bethlehem cohort through use of within-participant analyses. Most participants reported clinical levels of negative appraisals, with almost a third meeting diagnostic criteria for PTSD and CPTSD. No participants reported clinical levels of avoidance and intrusion symptoms. A possible dose-response pattern was observed between cumulative interpersonal trauma and trauma symptoms, although not for military exposure. Using the AM test, functional avoidance and truncated search patterns were observed in response to negative cue words. These preliminary results contribute some observations about trauma in Palestinian youth, and future research with a larger sample size is required to better understand these emerging phenomena. Improving knowledge in this area will contribute to prevention and intervention of trauma-related difficulties in children and adolescents cross-culturally.

Keywords: trauma, children, adolescents, autobiographical memory

Introduction

Exposure to repeated traumatic events can lead to a response pattern labelled as Complex PTSD (Courtois, 2004; International Classification of Disorders, World Health Organisation, 2020)) which is marked by interpersonal problems, deterioration in self-esteem, and affective dysregulation (Cook et al, 2005; Brewin et al, 2017). Autobiographical Memory (AM), involving the recall of personally experienced events, is also impacted by trauma exposure and can contribute to altered self-concept (Puetz et al, 2020). Few studies have assessed this association in children and adolescents (Puetz et al, 2020) but research on Adverse Childhood Events (ACEs) has shown that as trauma exposure increases, there is a corresponding increase in the complexity of trauma-related symptoms and difficulties (Karatzias et al, 2020; Anda et al, 2006). This intersection between trauma, AM functioning, and CPTSD in young people requires further research; as does the role of cross-cultural factors in shaping this association, particularly trauma events which differ in nature (e.g., military violence) (Puetz et al, 2020). We begin by introducing key concepts and evidence relating to complex PTSD and its manifestations in trauma exposed youth.

Key Concepts

Traumatic events are defined as incidents where an individual is exposed to actual or threat of death and/or serious injury (American Psychiatric Association (APA), 2013). Such events can include interpersonal violence, natural disasters, war, and accidents; and trauma exposure in youth is estimated to be around 31.1% (Lewis et al, 2019). The symptoms can vary by developmental stage; for example, pre-school children exposed to trauma may exhibit regression in their development, separation anxiety and somatic complaints; school-age children may present with night terrors, social avoidance and distractibility; and adolescents may become oppositional, engage in high-risk behaviours and have eating disturbances (Lubit et al, 2003). By the age of 18 years, one in four youth exposed to trauma can develop Post-Traumatic Stress Disorder (PTSD; Lewis et al, 2019).

PTSD as a diagnosis was first used in the 1970s to describe reactions of some veterans of the Vietnam war (van der Kolk et al, 2005), and has since been applied to a wide range of populations. The current

diagnostic criteria for PTSD lists six symptoms of three core elements which are all required to meet a diagnosis: avoidance of traumatic reminders; re-experiencing traumatic event(s) in the present, paired with feelings of distress; and a sense of threat which can present as hypervigilance (International Classification of Disorders (ICD-11), World Health Organisation (WHO), 2020).

Although PTSD has been used to conceptualise difficulties of trauma-exposed individuals, the limitations of this diagnosis have become apparent in capturing the complexity of symptoms in those who have experienced complex trauma (Courtois, 2004). The criteria of Complex Post-Traumatic Stress Disorder (CPTSD) was therefore developed (Maercker et al, 2013) and has now been included in the ICD-11 (WHO, 2020). CPTSD diagnostic criteria list three core clusters from the PTSD criteria and adds three extra clusters: affective dysregulation, disrupted relationships and negative self-concept (ICD-11, WHO, 2019). These additional features are pervasive, and present across numerous situations and relationships, compared to PTSD symptoms alone which only occur when there are reminders of the traumatic event (Cloitre et al, 2013). Research supports the validity of this new diagnosis (Perkonnig et al, 2016), suggesting features of traumatic exposure impact symptom expression (Karatzias et al, 2020). One implication for treatment planning is that knowing the trauma profile may identify which symptom clusters to prioritise and address (Karatzias et al, 2020).

Autobiographical Memory

Autobiographical memory (AM) refers to the ability to recall personal experiences (McCrory et al, 2017), helping individuals stay oriented in the present, solve social problems, regulate emotions, and maintain a sense of self (Conway & Pleydell-Pearce, 2000; Park et al, 2002). Trauma can affect AM functioning through phenomena such as dissociation and flashbacks. Some people learn to cope with aversive emotional memories by avoiding detailed recall, thereby developing an overgeneral memory (OGM) style characterised by less detailed and vivid personal memories (Puetz et al, 2020). OGM supports coping with aversive memories by prioritising abstract information processing over more specific perceptual and sensory experiences (Kuyken et al, 2006). Although adaptive in the short-term, long-term consequences of OGM include disrupted self-concept (Puetz et al, 2020) and

vulnerability in developing future psychiatric disorders (McCrory et al, 2017; Puetz et al, 2020). The effect of trauma exposure on AM at critical life periods is therefore an important area of research.

Studies with adults have demonstrated an association between greater OGM and severity of PTSD symptoms (Kuyken et al, 2006). Adolescents with higher numbers of traumatic events and higher distress have also exhibited more OGM (de Decker et al, 2003). Sense of threat, defined as experiencing potential and actual harm during an event (McLaughlin et al, 2014), can provoke increased dissociation during the event, causing greater fragmentation of AM and, consequently, OGM (Conway & Pleydell-Pearce, 2000). These findings raise questions about whether there is a gradient for AM ability, depending on sense of threat experienced combined with type and dose of trauma exposure; and about when OGM develops following traumatic experiences. Building an understanding about AM function in young people who have recently experienced, or are still experiencing, traumatic events could inform knowledge and interventions for difficulties associated with CPTSD and PTSD (Puetz et al, 2020).

The Importance of Studying Cross-Cultural Factors

A wide variety of events can lead to PTSD and CPTSD reactions including natural disasters, medical emergencies, witnessing violence, war, and abuse (Puetz et al, 2020). But, there is limited data to guide understanding of how different traumatic events can influence symptom presentation (Puetz et al, 2020); for example, military violence exposure may have different personal meaning and implications compared to other forms of interpersonal trauma. Most research has been conducted in affluent Westernised countries, where trauma is conceptualised within a medical perspective and there are expected trauma reactions in children (Ziadni et al, 2011). Studies in contexts of conflict often describe children exhibiting signs of positive adjustment and resilience in the face of adversity (Veronese et al, 2012). Palestinian children report happiness, life satisfaction and optimism despite daily exposure to military violence (Veronese et al, 2012) such as exposure to tear gas, checkpoints, firearms, house invasions and demolitions, aerial bombardment and administrative detention (Barron et al, 2016). One explanation for this contrast between Palestinian children's verbal reports and the reality of living in Palestine is the collectivist nature of Palestinian community which promotes

strength and resilience (Marshall, 2014) and healing practices including faith-based practices (Barron & Abdallah, 2015). Researchers argue this experience is disregarded within models of posttraumatic responses (Al-Krenawi et al., 2007), particularly relating to Palestinian culture whereby survival despite military occupation is seen as a form of resistance (Marshall, 2014) - “To exist is to resist” (Rijke & Van Teeffelen, 2014). Such experiences may impact how these events are perceived, understood, and encoded in memory and could explain potential variations between trauma-related difficulties within occupied Palestine and other countries.

Aims

To investigate similarities and differences in PTSD and CPTSD presentations across trauma-exposed youth in Glasgow and Bethlehem. To examine whether type and dose of traumatic event exposure have different impacts on AM across cultural and linguistic contexts.

Primary Research Question

1) How do CPTSD and PTSD profiles compare in youth from Glasgow and Bethlehem?

Secondary Research Questions

2) What is the pattern of trauma exposure (type, intensity, volume, frequency) and are there relationships between trauma dose and symptom patterns?
3) Is the association between trauma and AM functioning seen in adults replicated in trauma-exposed young people?

Hypotheses

This study is descriptive in nature, due to the lack of previous research in this area. The aim is to explore traumatic exposure across countries and report any observations found. One exploratory hypothesis posed is that higher CPTSD symptoms will be associated with greater OGM.

Methods

Ethical Approval

Ethical approval was provided by the National Health Service (NHS) Research Ethics Service (reference 21/WA/0390; Appendix 2.1, page 112) and the Institutional Review Board of An Najah University, Palestine (reference Int,R. Nov. *2021/8*; Appendix 2.2, page 113). The Glasgow arm of the study was sponsored by NHS Greater Glasgow & Clyde (GG&C).

Design

A cross-sectional observational design, using within- and between-subject analyses.

Recruitment

The recruitment target was twenty participants each from Glasgow and Bethlehem, to allow preliminary comparisons across measures of trauma exposure and symptomatology and autobiographical memory.

Glasgow

Glaswegian participants were under the care of, and receiving treatment from, NHSGGC Child and Adolescent Mental Health Services (CAMHS) Complex Trauma Pathway and Forensic CAMHS (FCAMHS), and had a history of single or multi-event trauma. Those who were deemed at high risk of increased distress from clinical instability in the presence of potential triggers were not included.

The researcher met with both teams, initially to alert them to the study, and then to prompt and discuss recruitment efforts. Participant Information Sheets (PIS; Appendix 2.3, page 114) along with consent forms (Appendix 2.4, page 115) were distributed to the teams.

Clinicians identified potential participants and discussed the study with them and their caregivers, using the PIS. Clinicians gathered initial consent from those curious about the study to pass on their contact details to the researcher using initial contact forms. Those interested were invited to a more detailed discussion and given a 48-hour decision period to consider whether they wanted to take part. Interested participants and caregivers were invited to a research appointment where informed consent

was sought from participants and caregivers. Case managers and social workers were informed of participants' involvement in the study.

Recruitment efforts were adversely affected by the COVID-19 pandemic and subsequent disruption to NHS services (Brunier & Drysdale, 2020). As a result, it was not possible to analyse these data as originally planned.

Bethlehem

Bethlehem's Guidance and Training Centre for Family and Child (GTC) provides mental health services for children and families. Twenty-one participants (12 male, nine female) aged between 10 and 18 years (mean 16.9) who were receiving treatment from the GTC were recruited by their clinicians, in parallel to the current study, as part of an ongoing funded research programme (iNOMAD) conducted by GTC and the University of Glasgow (see Appendix 2.5, page 116). Of these, 13 participants lived in a city, seven in a village and one in an internally displaced refugee camp. Data for this population were received via a password-protected shared drive set up by researchers from the GTC and accessed by the researcher and academic supervisors of this project.

The active case list of the GTC service was reviewed by clinical staff and potentially eligible patients were identified. Those meeting inclusion criteria had their caregiver approached and were given information about the study. Once they had enough information to make an informed choice, they were invited to give consent to participate. Those who agreed were then seen by research workers for completion of the study measures.

Measures

The measures in this section were administered both in Glasgow and Bethlehem, the latter using equivalent Arabic-language versions.

International Trauma Questionnaire-Child and Adolescent Version (ITQ-CA; Cloitre et al, 2018).

A self-report measure assessing PTSD and CPTSD symptoms in 7–17-year-olds. The tool uses six items which measure PTSD symptoms, and five address CPTSD. The first item asks participants to

identify the experience that causes them the most difficulty, and to indicate when it occurred. Following this, participants are invited to consider whether the symptoms listed have been present for them over the last month using the scale of 'not at all', 'a little bit', 'moderately', 'quite a bit' and 'extremely'. These items are based on the ICD-11 diagnostic criteria for both disorders. A score of 2 or more on each symptom must be met to meet a diagnosis of PTSD or CPTSD. The validity for the PTSD and CPTSD subscales were found to have suitable validity, $\alpha = \geq .77$, and reliability, $\alpha = \geq .79$ (Cloitre et al, 2018). An Arabic translation of the ITQ-CA created for the iNOMAD study was used in the current project (see Appendix 2.5, page 116).

Child Post-Traumatic Cognitions Inventory (CPTCI; Meiser-Stedman et al, 2009).

This 25-item self-report tool measures cognitions in youth following traumatic experiences; with moderate internal consistency (α>.75) and test-retest reliability (r=.70) (Meiser-Stedman et al, 2009). Possible responses for each item are 'don't agree at all', 'don't agree a bit', 'agree a bit', or 'agree a lot'. The item scores can be summed into a total which, if between the range of 46-48 (or greater), indicate cognitions typical of children and adolescents with PTSD (McKinnon et al, 2016). The Arabic version of the CPTCI was developed through translation and back-translation to English by a bilingual research collective (Palosaari et al, 2013). For the iNOMAD study in Palestine (see Appendix 2.5, page 116), the measure was translated to include "neutral" as an option.

Children's Revised Impact of Events Scale (CRIES-13; Children and War Foundation, 2005).

A 13-item self-report tool that measures distress, avoidance and flashbacks over the last week. It includes three subscales: Arousal, Avoidance and Intrusion. The tool is used for screening purposes, whereby a total of 17 or more on the Intrusion subscale and Avoidance subscale indicates a very high probability of PTSD diagnosis (Children and War Foundation, 2005). The total scale score has an internal consistency of α=0.84 (Verlinden et al, 2013), with good test re-test reliability (Verlinden et al, 2014). The Arabic version has been translated and back-translated to English, and has demonstrated high reliability in previous research (Ali et al, 2021; Thabet et al, 2008).

Military Event Scale (MES).

This tool has been developed for use in the West Bank as there was no suitable prior measure, as part of the iNOMAD study (see Appendix 2.6, page 117). It was based on previous literature using similar measures (Thabet & Vostanis, 1999). It comprises of 20 items measuring frequency of exposure to military events, on a Likert scale of 0-5 (0 being 'Not once', 5 being 'Once a week'). A sample of this measure can be found in Appendix 2.6 (Page 117).

Traumatic Events Screening Inventory (TESI-C; Ford et al, 2002).

A 16-item semi-structured interview assessing children's experiences of traumatic events. In this study, this measure was used to sum the number of events disclosed to the researcher, through only recording 'yes' or 'no' to each event.

Autobiographical Memory Test (AMT; Williams, 2000).

The AMT is a structured assessment of autobiographical recall based on Crovitz's classic single word cueing paradigm (Williams & Broadbent, 1986). Age-adapted versions have been developed for use with adolescent clinical populations (Kuyken et al, 2006) and children (Valentino et al, 2009). We used the adapted version for children and adolescents (Williams, 2000) in which 10 flash cards are presented at random to participants, with one word printed on each card, alternating between positive and negative words (5 of each). Table 2.1 depicts these below, in Arabic and English; the Arabic version of this test has been developed as part of the ongoing iNOMAD research project (see Appendix 2.5, page 116).

Table 2.1.
AMT Cue Words.

Positive Cue Words		**Negative Cue Words**	
Excited	متحمس	Bored	زهقان
Happy	سعيد	Failure	فاشل
Lucky	محظوظ	Hopeless	يأسان
Relaxed	مسترخي	Lonely	وحيد
Relieved	مطمن	Sad	زعلان

Research workers from GTC attended two online training workshops to learn how to administer and score this task. The workshops were facilitated by the academic supervisors of this thesis portfolio, who are all working clinicians and academics – two are fluent in both English and Arabic. The writer of this paper attended as a participant. Remote training workshops between the United Kingdom and the Middle East have been successfully delivered with good feasibility (El-Khani et al, 2021).

Participants of this study were given practice trials prior to official testing, to ensure they understood the task and practise recall of specific memories. Orientation to the recall of specific memories was given when necessary. Participants had 30 seconds to recall an AM per cue, with response latency measured to code response times. Memories were coded as specific, extended, categorical or no memory. A further explanation of these categories with example statements is provided in Appendix 2.7 (Page 118). The 10 words used reliably elicit positive and negative personal memories (Williams & Broadbent, 1986).

Research Procedure

Glaswegian participants were given the option of completing the research study over one or two sessions, with breaks taken as and when required. Demographics were collected for all participants, including age and gender.

The first section of the study required participants to complete the self-reported measures.

The second phase involved the researcher conducting the Autobiographical Memory Test (AMT; Williams, 2000) and Traumatic Events Screening Inventory (TESI-C; Ford et al, 2002) with participants. Responses were recorded on Dictaphone for analysis purposes. This section took up to an hour to complete.

The same sequence of administration was completed with the participants from Palestine. The only difference was that participants from Palestine completed all measures within the same session.

Analysis

Due to recruitment challenges, the data for the Glasgow cohort were not included in analyses. Therefore, only Bethlehem data were used; there was no missing data from this dataset. Data handling and analysis was conducted via SPSS version 28 (IBM Corp, 2021). ITQ-CA scores were summed and transformed into "yes" or "no" for meeting the criteria of PTSD or CPTSD. A similar process was applied for the CRIES-13 for meeting the clinical threshold of Intrusion and Avoidance subscales, and for the cPTCI-25 total scores meeting clinical threshold. For each item of the MES, scores were dichotomised into 'yes' or 'no', and a total score was then calculated to reflect an estimate of the accumulated number of trauma types. The TESI-C total scores for 'yes' and 'no' were summed in a similar fashion. For the AMT, the number of specific, general and no response categories were summed for each participant into a new variable to capture the proportion of each memory type provided. A similar process was conducted to depict the number of categories for positive versus negative cue words. The response latencies for this task were averaged for each participant for overall response time, AM and OGM; as well as for positive cue words and negative cue words.

Data were visually screened and descriptive statistics for all variables were explored. Assumptions of normality and distribution were violated, and therefore non-parametric analyses were conducted. Fisher's Exact tests were conducted to investigate the association between categorical variables, with confidence intervals calculated using R Statistical Software (v4.1.2; R Core Team 2021). Spearman's correlations were used to explore associations between cumulative trauma exposure, trauma symptoms, memory categories, and response times.

Results

This section firstly presents recruitment outcomes and sample characteristics followed by descriptive statistics of the variables measured. Then, proportions of cumulative trauma exposure are explored, along with associations with trauma profiles. AM functioning is then described, and patterns between AM results, trauma profiles and cumulative trauma exposure are explored. Finally, a post hoc power analysis is presented.

Recruitment Outcome

Glasgow

Twenty-two potential participants were approached by their clinicians, twelve of whom consented to initial phone contact. Eight consented to participate, four completed all measures, two withdrew, and the remaining two participants ran out of time to complete the study measures.

Bethlehem

The GTC clinic case record for young people seen from 2019 to April 2021 was screened for those who had been exposed to traumatic experiences and were potentially eligible for the study. This yielded a list of 92 potentially eligible people who were then screened to determine if they could travel to GTC from Bethlehem and adjacent city areas. People who could not travel because of military checkpoints and other restrictions on movement were not approached. The remaining 30 young people were offered the chance to participate and of these 21 agreed.

Sample Characteristics

All participants recruited from Bethlehem completed the study in its entirety, with no dropouts or missing data. Table 2.2 below displays the demographic characteristics of the sample recruited in Bethlehem.

Table 2.2
Descriptive Statistics of All Measures.

Participant Characteristics	**Responses N=21 n(%)**
Sex	
Male	12 (57%)
Female	9 (43%)
Place of Living	
City	13 (62%)
Village	7 (33%)
Internally Displaced Refugee Camp	1 (5%)

Descriptive Statistics

Table 2.3 below presents the descriptive statistics of measures used.

Table 2.3
Descriptive Statistics of All Measures.

Measure	Mean (SD)	Median (Range)	Proportion of Participants Meeting Clinical Cut-Off
ITQ-CA	32.62 (15.96)	35 (52)	
			PTSD 29%
			CPTSD 29%
cPTCI	15.57 (16.65)	78 (62)	95%
CRIES-13	33.24 (7.91)	33 (27)	0%
TESI-C	9.52 (3.89)	8	
MES	7.05 (3.47)	12	

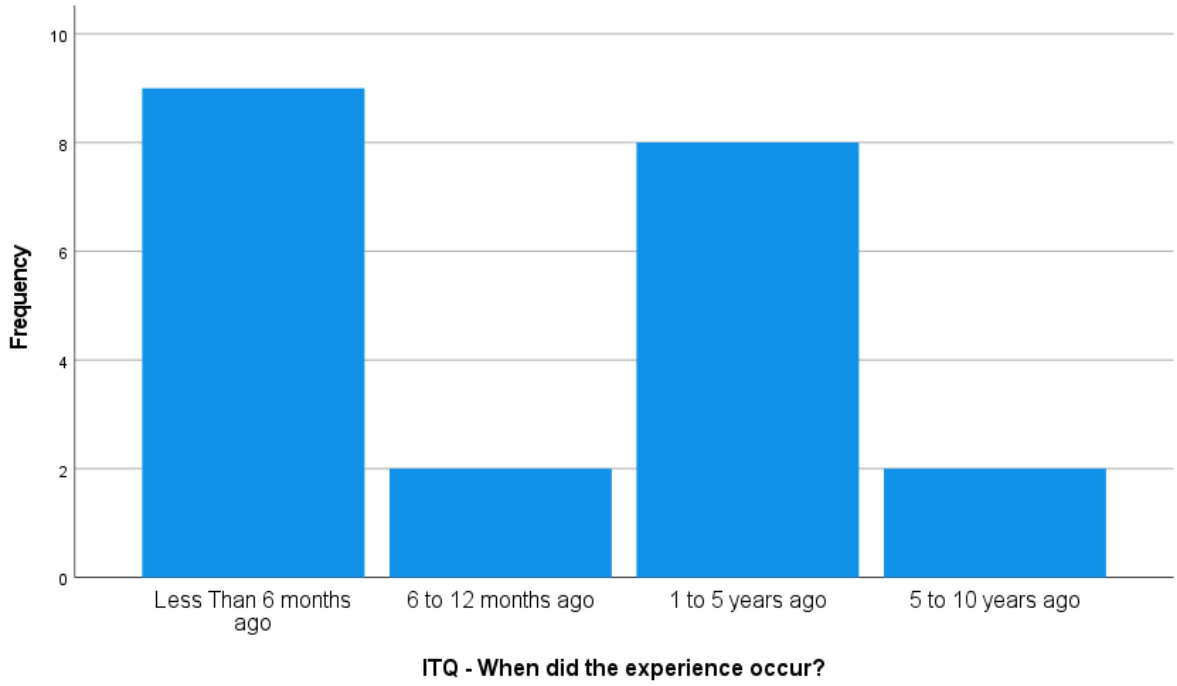
Participants met the clinical cut-off for both the ITQ-CA and cPTCI, but not the CRIES-13.

Cumulative Trauma Exposure

Event Recency

Figure 2.1 displays how much time had lapsed since participants' most traumatic event occurred.

Figure 2.1
Recency of Specified Traumatic Events.



Most participants indicated that the traumatic event which caused them the greatest difficulty occurred less than 6 months ago, or 1-5 years ago. To run a 2x2 Fisher's Exact Test, the four response options on this item were collapsed into two: 'less than 6 months ago' and 'over 6 months ago'. The test indicated no significant association between event recency and PTSD diagnosis, X^2 (N=21) = 0.59 (95% CI 0.04-5.7), p=0.66, and likewise for event recency and CPTSD diagnosis, X^2 (N=21) = 0.59 (95% CI 0.0-5.7), p=0.65.

Interpersonal Trauma

The number of interpersonal traumatic events in the current study ranged from 2 to 16 events, measured by TESI-C. Table 2.4 below portrays frequency of type of interpersonal events experienced.

Table2.4

Frequency of Types of Trauma Exposure Based on TESI-C Responses.

Interpersonal Traumatic Event	Number of Participants Responded	% Yes (n)
Bad accident	21	43% (9)
Witnessed bad accident	21	81% (17)
Natural disaster	21	19% (4)
Known someone unwell or died	21	67% (14)
Hospitalisation	21	48% (10)
Separated from caregiver	21	14% (3)
Physical abuse	21	38% (8)
Threatened	21	38% (8)
Theft (victim or witnessed)	21	14% (3)
Kidnapped (victim or witnessed)	21	10% (2)
Attacked by animal	21	76% (16)
Witnessed familial domestic abuse	21	62% (13)
Family imprisoned or threatened by police/army	21	43% (9)
Witnessed public violence	21	81% (17)
Witnessed media reports of violence	21	81% (17)
Sexual abuse	21	14% (3)
Other events not included in measure	21	57% (12)

The range of cumulative interpersonal traumatic events in this sample was 2-16, with the median as 8.

Military Trauma

The number of military events experienced by participants in this study ranged from 1 to 13 events, as measured by the MES. Table 2.5 below demonstrates the frequency of type of military events experienced.

Table 2.5.
Frequency of Trauma Exposure Types as Measured by MES.

Military Traumatic Event	Number of Participants Responded	% Yes (n)
Witnessed military training	21	29% (6)
Heard bombing/shooting	21	67% (14)
Harassment to family	21	38% (8)
Victim of harassment	21	38% (8)
Victim of torture	21	0% (0)
Family tortured	21	33% (7)
Neighbour's house invaded	21	38% (8)
Victim of house invasion	21	24% (5)
Disruption to school	21	19% (4)
School disruption for peers	21	29% (6)
Talk of military attack/harassment	21	76% (16)
Witnessed assault	21	10% (2)
Heard of others' loved ones killed or attacked	21	48% (10)
Tear gas	21	52% (11)
Arrested	21	5% (1)
Media pictures of injuries or dead bodies	21	100% (21)

The range of cumulative military traumatic events in this sample was 1-13, with a median of 7.

Cumulative Trauma Exposure and Trauma Profiles

Table 2.6 depicts results of Spearman's rank correlation analyses conducted between measures of trauma symptoms and cumulative trauma exposure.

Table2.6.
Correlations and 95% CI Between Trauma Exposure and Trauma Profiles.

	Negative Appraisals	Intrusion Symptoms	Avoidance Symptoms	PTSD Score	CPTSD Score
Interpersonal Trauma	-0.41 (-0.72 – 0.05)	0.09 (-0.37 – 0.51)	0.16 (-0.3-0.56)	0.47* (0.03-0.76)	-0.29 (-0.06 – 0.18)
Military Exposure	-0.19 (-0.59 – 0.27)	-0.3 (-0.65 – 0.18)	-0.09 (-0.51-0.37)	0.19 (-0.28 – 0.58)	-0.15 (-0.55 – 0.32)

**p< .05*

The above table presents some shared variance between cumulative trauma and symptoms, despite the small dataset. Small effect sizes were found between cumulative military exposure and negative appraisals, intrusion symptoms and PTSD diagnosis. A small effect size was also detected between cumulative interpersonal trauma and avoidance symptoms, and CPTSD diagnosis. There was a moderate but non-significant association found between volume of interpersonal trauma and negative appraisals. A significant association with medium effect was found between interpersonal trauma and PTSD scores, suggesting that PTSD scores increase with increased exposure to interpersonal trauma events. It must be noted however, that all correlations have wide CI scores, suggesting that conclusions from this data can only be tentative at this stage until further investigation is conducted with a larger sample size.

Autobiographical Memory

Categories

Table 2.7 below displays the proportions of memory type categories recalled in this study. Most specific memories recalled were in response to positive cue words. This contrasts with general and no response memories, where most of those recalled were in response to negative cue words.

Table2.7.
Mean Percentages, SD and Range of AMT Categories.

Memory	Positive Cue Words	Negative Cue Words	Total
	M % (SD) [range]	M % (SD) [range]	M % (SD) [range]
Specific	53% (4.15) [7-18]	30% (2.95) [3-11]	41% (2.23) [1-8]
General	31% (2.07) [3-8]	55% (2.61) [9-15]	39% (2.21) [0-8]
Associative	8% (2.07) [0-5]	2% (0.55) [0-1]	6% (0.75) [0-2]
No Response	9% (1.64) [0-4]	13% (1.64) [1-5]	11% (1.37) [0-4]

Response Latencies

Table 2.8 displays the means and standard deviations (SD) of response latencies for the AMT task.

Table2.8.
Median and Range of Response Latency.

Response Time (seconds)	**Median** (Range)
Overall	9.05 (20.88)
Positive Cues	10 (24.02)
Negative Cues	10.5 (20.1)
Specific Memories	8.75 (20.89)
General Memories	5.57 (18.19)

The above presents similar response times for overall, positive and negative cues. Participants appeared to recall general memories at a faster rate than other categories. Given the small sample size, this difference was not investigated further.

Memory, Trauma Profile and Cumulative Trauma Exposure

Table 2.9 below depicts Spearman's rho correlation analysis results between AMT results, measures of trauma profiles and cumulative trauma exposure.

Table 2.9.
Correlations between AMT, Trauma Symptoms and Cumulative Trauma Exposure.

Variable	ITQ PTSD	ITQ CPTSD	Negative Appraisals	CRIES Intrusion	CRIES Avoidance	Interpersonal Trauma	Military Trauma
Specific Recall	0.28 (-0.18-0.64)	-0.18 (-0.58 - 0.29)	-0.3 (-0.66 – 0.17)	0.15 (-0.31 – 0.57)	0.45* (0.00-0.74)	0.31 (-0.17 -0.65)	0.28 (-0.18 - 0.65)
General Recall	-0.24 (-0.62 – 0.22)	-0.09 (-0.51 - 0.37)	-0.13 (-0.54 – 0.33)	-0.16 (-0.56 – 0.30)	-0.31 (-0.66- 0.15)	-0.26 (-0.63 -0.21)	0.15 (-0.31 - 0.56)
Overall Response Time	-0.22 (-0.60 – 0.25)	0.14 (-0.32 - 0.55)	0.26 (-0.21 – 0.63)	0.29 (-0.42 - 0.47)	0.09 (-0.37 -0.51)	0.22 (-0.25 –0.60)	0.59 (-0.39 - 0.49)

**p< .05*

The above presents some associations detected in the relationships between AMT data, cumulative trauma and trauma-related difficulties despite the small sample size. For specific recall, small effect sizes were found with both PTSD and CPTSD diagnoses, intrusive symptoms, and cumulative military trauma. A medium effect size was detected between specific recall and negative appraisals, and cumulative interpersonal trauma. A significant and moderate relationship was found between specific recall and avoidance symptoms - the positive direction of this relationship suggests that high avoidance symptoms are associated with a higher number of specific memories recalled. There should be caution in interpreting this result definitively however, due to the wide confidence intervals found.

For general recall, small effect sizes were detected with PTSD diagnosis, negative appraisals, intrusive symptoms, and cumulative trauma. A medium effect size was detected between general recall and avoidance symptoms, although this was negative, suggesting that low avoidance symptoms are associated with more general recall. the wide confidence intervals here also indicate that this result is best interpreted with care.

Overall response latency was found to have a small effect size with both PTSD and CPTSD diagnoses, negative appraisals, intrusive symptoms and cumulative interpersonal trauma. A moderate but non-significant relationship between overall response latency and volume of military events. Further investigation is required to explore this in more depth.

Post Hoc Power Analysis

The limited number of significant results and wide confidence intervals suggest that the sample size was small for a sufficiently powered analysis of effects. To explore the effect sizes and numbers of participants potentially needed in future studies, a post hoc power analysis was conducted using G*Power version 3.1 (Faul et al., 2007). To achieve 80% power for a medium-sized effect (r=0.5), at a significance criterion of α=.05, the study would have needed N=84 for the reported correlational analyses. But, despite the small sample examined here, there are interesting preliminary effects and associations which warrant further exploration in subsequent studies.

Discussion

Despite the recruitment challenges and the preliminary nature of this investigation, it is still valuable to examine these results in light of the study aims. These were to explore PTSD and CPTSD presentations and AM in trauma-exposed youth in both Glasgow and Bethlehem. Whilst comparison between the two locations were not possible, this study presents some preliminary observations of and associations between trauma exposure, symptom patterns and AM functioning in Palestinian children and adolescents.

Trauma Profiles

Under a third of participants met the scale thresholds for a diagnosis of PTSD or CPTSD. This is consistent with existing literature that suggests that only a quarter of children and adolescents exposed to trauma in the West go on to develop PTSD (Lewis et al, 2019). Although the scales used need to be interpreted cautiously because they were developed and tested in Western settings, the patterns seen here do suggest that some Palestinian children in this clinic had comparable profiles to those seen in other non-military conflict settings.

No participant in this study met the clinical threshold for symptoms of avoidance or intrusion. It may be that the context of inescapable, daily exposure to occupation and apartheid in Palestine (Human Rights Watch, 2021), means that avoidance and intrusion difficulties are less likely pronounced at a clinical level because exposure is continuous. It is therefore possible that symptoms of avoidance and intrusion may not be valid representations of distress in relation to military exposure – however they may still present in relation to other traumatic exposures, such as interpersonal violence or accidents. Further research is needed to better understand how types of trauma events may influence symptom exposure.

Almost all participants indicated a level of negative appraisals about perceived vulnerability and personal change since the event that is typical of a PTSD presentation (McKinnon et al, 2016), and, can be interpreted by Janoff-Bulman's (1985) theory of shattered assumptions. This proposes that individuals develop fundamental assumptions about themselves being competent and worthy, and the world being predictable and benevolent. Following a traumatic event, the theory suggests that such assumptions are "shattered" because the event does not comply with the previously held beliefs about the self and the world (Janoff-Bulman, 1985). This may explain why negative appraisals were reported so highly in the present study's sample, due to participants living in a context of ongoing military occupation. Researchers argue that the concept of 'post-traumatic stress' fails to capture the impact of daily military violence on Palestinian children (Barron & Abdallah, 2015). They instead propose the developmental trauma disorder (DTD) model (van der Kolk et al, 2009) which may better capture and explain the impact of chronic exposure and difficulties in Palestinians. Applying this model could provide a helpful guide in exploring such difficulties in future research (Barron & Abdallah, 2015). It may be beneficial for future research to investigate levels of distress, as opposed to specific disorders, to help develop a better understanding of how the ongoing military occupation of Palestine is impacting children and adolescents.

Trauma Exposure and Symptom Patterns

A wide range of cumulative interpersonal trauma reported in this study, which demonstrates how military occupation can strain interpersonal relationships and wellbeing, through stressors such as

housing stability, financial security, and access to and quality of public services (Oudeh et al, 2016). Such factors may therefore increase the likelihood of interpersonal trauma exposure. The current study suggests and association between interpersonal trauma dose and PTSD scores. The trends in the data also suggest that interpersonal trauma exposure is associated with more negative appraisals, avoidance symptoms, and CPTSD symptoms. The same was found for military exposure and negative appraisals, intrusion symptoms, and PTSD scores. Previous research in Palestine has found that cumulative trauma exposure in more contexts (as in military and interpersonal trauma) predicted higher rates of PTSD (El-Khodary & Samara, 2020). Such results suggest a tentative relationship between cumulative interpersonal trauma ('trauma dose') and symptom patterns, as suggested by Karatzias et al (2020).

Research has found that higher levels of betrayal in trauma exposure is associated with more trauma-related difficulties (Martin et al, 2013), which demonstrates how subjective appraisal of a trauma event can be a predictor of trauma symptoms (Udwin et al, 2000). The Palestinian concept of 'Sumud' (Arabic for 'steadfastness') is a cultural construct of resilience in the face of military brutality and occupation (Hammad & Tribe, 2021). It is collectively applied as a meta-cognitive framework for Palestinians to make sense of trauma exposure whilst yielding a sense of purpose and self-determination. The concept 'to exist is to resist' (Rijke & Van Teefelen, 2014) is also employed by Palestinians to live despite the ongoing occupation; indeed, life satisfaction has been found to mitigate the impact of trauma exposure in Palestinian children (Veronese et al, 2017). These cultural concepts have also been found to contribute to children's recovery from traumatic events (Punamaki et al, 2001). Such cultural influences may therefore protect Palestinians from developing significant difficulties in response to military trauma alone.

Autobiographical Memory

Specific memories were mostly recalled in response to positive cue words. Negative cue words appeared to elicit more general memories or no responses, and response times appeared quicker when general memories were produced. These findings lightly suggest the presence of OGM; that there was

functional avoidance and truncated search pattern when participants responded to negative cue words, as theorised by Williams (2006).

The non-significant but positive and moderate relationship found between response latency and military exposure warrants further investigation in future research. If the same pattern is found in a bigger sample then this would suggest that exposure to military-related events may be recalled more rapidly. Additionally, results suggested that as avoidance symptoms increased, recall of specific memories also increased; and that as avoidance symptoms decreased, general memory recall increased. These results are unexpected, because avoidance in memory recall is understood to present as less specific and more general (Williams, 2006) – given the small sample size, it is possible that these findings are not representative of the larger population and further investigation is required. Other trends suggested in the data included an association between increased specific recall styles and increased intrusive symptoms, PTSD symptoms, exposure to interpersonal trauma and exposure to military trauma increased; and decreased specific recall styles with decreased negative appraisals and CPTSD symptoms. Additionally, there was a suggested increase in general recall styles as the volume of military trauma exposure increased, which fits with findings of previous research (Williams, 2006) – conversely, general recall appeared to decrease as scores on negative appraisals, intrusions, avoidance, PTSD symptoms, CPTSD symptoms and interpersonal exposure decreased. The data also suggested that response latencies decreased with the decrease of PTSD symptoms but otherwise increased with the increase of CPTSD symptoms, exposure to interpersonal trauma, negative appraisals and intrusions, which has been found in previous literature (Williams, 2006). Collectively, these provisional characteristics are worth further examination in a future, well-powered study to understand AM, trauma profiles and exposure in Palestinian youth, and explore potential associations between OGM and self-concept (Puetz et al, 2020) in this population.

Limitations

This current study provides some initial observations on how Western-developed measures can translate and apply to this population – like previous research, the cPTCI appears an applicable tool for measuring negative appraisals in a clinical Palestinian population (Palosaari et al, 2013). However,

the Arabic version of the CRIES-13 was found to have good reliability in previous research (Ali et al, 2021; Thabet et al, 2008) which contradicts our results where no participants met the clinical threshold for this measure – this may reflect our small sample size. The ITQ-CA has been translated and developed to an Arabic-speaking population as part of the iNOMAD study (see Appendix 2.5, page 116), and this study suggests that some participants' difficulties were identified on this tool. This study represents a larger issue in research, however, whereby the bias of Western assessment and conceptualisation of trauma may not be well translated and applicable to other populations. More research studies in this field, exploring such concepts in the Global South, is imperative to develop culturally sound assessment tools and approaches.

The recruitment for the Glasgow cohort of this study was largely disrupted by the COVID-19 pandemic (Brunier & Drysdale, 2020), and therefore the primary aim of the study was not achieved. Numbers of those who did participate potentially demonstrates the complex difficulties of those accessing the services of interest, and perhaps indicates the poor feasibility of conducting research on this population. Both services were approached to recruit young people who have a similar cumulative trauma dose to young people in Palestine, but perhaps the pattern of engagement replicates the above theories about interpersonal trauma and subsequent difficulties. If trauma exposure is completely interpersonal, then that would indicate high levels of betrayal, which is related to higher levels of trauma difficulties (Martin et al, 2013). This may explain some of the recruitment challenges for the Glasgow cohort, and therefore, the feasibility of conducting research on this population. Contrastingly, the Bethlehem cohort had a mixture of both interpersonal trauma and military trauma, the latter of which may be appraised differently from interpersonal events. This may explain the differences in engagement, and the feasibility of conducting such research in these populations. For future projects working with such complex presentations, recruitment efforts would need to increase to recruit the number of participants required for this research. It may be beneficial to have clinicians who already know participants to conduct some of the research tasks, where a level of trust and rapport is already established.

The sample of treatment seeking Palestinian participants were selected by clinicians from the GTC, increasing the risk of sample bias. It may be that recruiting from a wider sample, for example outside of clinical settings or self-identifying, may show different results. The small sample size in the Bethlehem cohort meant that analyses conducted were limited and the wide CIs threatened the validity of results. Therefore, the results in this study must be interpreted with caution. Additionally, the small group of participants limited the opportunity to have a true representation of a general population, including underrepresented groups such as gender minorities, sexuality, and disability. It would therefore be important to consider the inclusion of such minorities in future studies as research expands.

Additionally, this research took place during the acute phase of the Covid-19 pandemic where services were disrupted, and travel restrictions were in place (Brunier & Drysdale, 2020). As such, this posed difficulty in cross-cultural research teams, and research practices were required to adapt – including this study.

Despite these limitations, this exploratory study presents some interesting preliminary results in a young research area (Puetz et al, 2020) and therefore provides some potential directions for future research in this field. Increasing our knowledge of trauma patterns, dose and AM functioning would in turn inform preventative and treatment approaches for children and adolescents experiencing chronic and/or extreme traumatic events.

Research Implications

This study contributes to the continued debate of adapting Western research and clinical practices to the international community. Results in our small sample may suggest that some measures, or indeed some diagnostic criteria, potentially do not translate into the clinical difficulties experienced in Palestinian youth. Researchers and clinicians alike should hold this potential in mind whilst assessing for difficulties in this population. Additional effort and consideration should be made towards having true diversity in research samples, to have better representation of a general population and underrepresented groups. It is hoped that, as the evidence base continues to expand, we will gain a

better understanding of the nature of trauma exposure and symptom expression and AM development in youth, whilst developing culturally sensitive tools to assess for such concepts. This, in turn, will lead to effective and targeted interventions for children and adolescents affected by trauma worldwide.

Clinical Implications

Whilst this study focused on Palestinian youth living in Bethlehem, there are still clinical implications to consider more broadly across different populations. This not only includes working within global mental health settings, but also in well-resourced clinical settings in the West. In June 2022, the rate of asylum applications for the United Kingdom (UK) increased by 77% since the year 2019 due to increased displacement from war and conflict, including Syria and Ukraine (UK Government Home Office, 2022). As such, clinicians and services must be prepared to develop their knowledge and adapt their practice accordingly to meet the needs of a more diverse population including refugees, asylum seekers, people born in the UK who experience intergenerational trauma, as well as other underrepresented groups (such as gender minorities). The present study demonstrates the variety of ways trauma experiences can manifest as difficulties, and, as suggested by Hyland et al (2017), the arising challenge for clinicians is to assess whether the diagnoses of PTSD or CPTSD capture a person's difficulties. Thus, assessments must expand beyond standardised diagnostic criteria to encompassing other features, such as AM functioning and self-concept, and to be sensitively attuned to the symptoms expressed with individuals, particularly when diagnostic criteria and measures have been developed in largely homogeneous samples which do not reflect minority groups (Leong & Park, 2016).

Conclusion

This exploratory study aimed to investigate trauma profiles in Palestinian and Scottish youth, although recruitment efforts for the Scottish cohort were greatly disrupted. As such, this study provides some observations about trauma profiles, trauma dose and AM functioning in Palestinian children and adolescents. It appears that our sample reported some symptoms consistent with PTSD and CPTSD diagnoses, although avoidance and intrusion symptoms did not meet clinical threshold.

Some emerging associations were detected between trauma symptoms and cumulative interpersonal trauma, lightly suggesting a dose-response pattern. Additionally, OGM was potentially present in response to negative cue words. Further research, with a larger sample size, is required to make sense of these results and better understand these concepts.

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Appendices

Chapter 1: Systematic Review

Appendix 1.1 Search Strategy for Each Database

Ovid MEDLINE

Ovid MEDLINE(R) and In-Process, In-Data-Review & Other Non-Indexed Citations <1946 to May 25, 2022>

1 (Child* or Adolescen* or Preadolescen* or Pre-adolescen* or Youth* or Young people or Young person* or Infant* or Pe?diatric*).tw. 2160749

2 exp adolescent/ or exp child/ or exp infant/ 3849208

3 1 or 2 4358492

4 (war or wars or warfare or conflict or conflicts).tw. 126353

5 exp violence/ or exp armed conflicts/ or exp warfare/ 145702

6 4 or 5 248992

7 ("middle income population*" or "low income countr*" or "low income nation*" or "low income population*" or "lower income countr*" or "lower income nation*" or "lower income population*" or "underserved countr*" or "underserved nation*" or "underserved population*" or "underserved world" or "under served countr*" or "under served nation*" or "under served population*" or "under served world" or "deprived countr*" or "deprived nation*" or "deprived population*" or "deprived world" or "poor countr*" or "poor nation*" or "poor population*" or "poor world" or "poorer countr*" or "poorer nation*" or "poorer population*" or "poorer world" or "developing econom*" or "developing countr*" or "less developed econom*" or "lesser developed econom*" or "under developed econom*" or "underdeveloped econom*" or "middle income econom*" or "low income econom*" or "lower income econom*" or "low gdp" or "low gnp" or "low gross domestic" or "low gross national" or "lower gdp" or "lower gnp" or "lower gross domestic" or "lower gross national" or lmic or LAMIC or "LAMI countr*" or "third world" or "transitional countr*" or Africa or Asia or Caribbean or "West Indies" or "South America" or "Latin America" or "Central America" or "Atlantic Islands" or "Commonwealth of Independent States" or "Pacific Islands" or "Indian Ocean Islands" or "Eastern Europe" or Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia* or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelarus or Byelorussian or Belarus or Belorussia* or Belize or Bhutan or Bolivia or Bosnia or Her?egovina or Botswana or Bra?il or Bulgaria or "Burkina Fas?o" or "Upper Volta" or Burundi or Urundi or Cambodia or "Khmer Republic" or Kampuchea or Camero?n* or Cape Verde or "Central African Republic" or Chad or Chile or China or Colombia or Comor?s or "Comoro Islands" or Mayotte or Congo or Zaire or "Costa Rica" or "Cote d'Ivoire" or "Ivory Coast" or Croatia or Cuba or Cyprus or Czechoslovakia or "Czech Republic" or Slovakia or "Slovak Republic" or Djibouti or "French Somaliland" or Dominica or "Dominican Republic" or "East Tim?r" or Timor Leste or Ecuador or Egypt or "United Arab Republic" or "El Salvador" or Eritrea or Estonia or Ethiopia or Fiji or Gabon or "Gabonese Republic" or Gambia or Gaza or "Georgia? Republic" or Ghana or "Gold Coast" or Greece or Grenada or Guatemala or Guinea or Guam or Gu?ana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or "Isle of Man" or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizia or "Kyrgyz Republic" or Kirghiz* or "Lao PDR" or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or "Malagasy Republic" or Malaysia or Malay? or Sabah or Sarawak or

Malawi or Nyasaland or Mali or Malta or "Marshall Islands" or Mauritania or Mauritius or "Agalega Islands" or Melanesia or Mexico or Micronesia or "Middle East" or Moldov?a or Moldovian or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanma? or Burma or Namibia or Nepal or "Netherlands Antilles" or "New Caledonia" or Nicaragua or Niger* or "Northern Mariana Islands" or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Poland or Portugal or "Puerto Rico" or R?mania or Roumania or Russia* or R?anda or "Saint Kitts" or "St Kitts" or Nevis or "Saint Lucia" or "St Lucia" or "Saint Vincent" or "St Vincent" or Grenadines or Samoa or "Samoan Islands" or "Navigator Island" or "Navigator Islands" or "Sao Tome" or "Saudi Arabia" or Senegal or Serbia or Montenegro or Seychelles or "Sierra Leone" or Slovenia or "Sri Lanka" or Ceylon or "Solomon Islands" or Somalia or Sudan or Surinam* or Swaziland or Syria* or Tajikistan or Tad?hikistan or Tadzhik or Tanzania or Thailand or Togo or "Togolese Republic" or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmen* or Tuvalu or Uganda or Ukraine or Uruguay or USSR or "Soviet Union" or "Union of Soviet Socialist Republics" or Uzbek* or Vanuatu or "New Hebrides" or Venezuela or Vietnam or "Viet Nam" or "West Bank" or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia or "Africa, Northern" or "Africa South of the Sahara" or "Africa, Central" or "Africa, Eastern" or "Africa, Southern" or "Africa, Western" or "Asia, Central" or "Asia, Southeastern" or "Asia, Western" or "Caribbean Region" or "West Indies" or "South America" or "Latin America" or "Central America" or "Atlantic Islands" or "Commonwealth of Independent States" or "Pacific Islands" or "Indian Ocean Islands" or "Europe, Eastern").tw,in. 6942370

8 exp Developing Countries/ 79342

9 7 or 8 6966442

10 (task shifting or task sharing or task-shifting or task-sharing or therapy or treatment or intervention or psychotherapy or counseling or counselling or training or psychoeducation or promotion or prevention or Program* or Support or Parenting or family therapy or family-therapy or primary care or primary health care or community health or community care or therapeutics or home visiting).tw. 8454624

11 exp Psychotherapy/ 211880

12 exp Mental Health Services/ 102850

13 10 or 11 or 12 8567386

14 (traum* or posttraumatic stress or complex traum* or PTSD or CPTSD).tw. 413072

15 exp psychological trauma/ or exp sexual trauma/ or exp stress disorders, post-traumatic/ or exp stress disorders, traumatic, acute/ 40143

16 14 or 15 419211

17 3 and 6 and 9 and 13 and 16 1643

OVID EMBASE

Embase 1947-Present, updated daily

1 (Child* or Adolescen* or Preadolescen* or Pre-adolescen* or Youth* or Young people or Young person* or Infant* or Pe?diatric*).tw. 2987307

2 exp child/ 3301504

3 exp adolescent/1813689

4 1 or 2 or 3 4942657

5 (war or wars or warfare or conflict or conflicts).tw. 170044

6 exp war/ or exp war crime/ or exp war exposure/ 40000

7 exp ethnic conflict/ 140

8 5 or 6 or 7 185136

9 ("middle income population*" or "low income countr*" or "low income nation*" or "low income population*" or "lower income countr*" or "lower income nation*" or "lower income population*" or "underserved countr*" or "underserved nation*" or "underserved population*" or "underserved world" or "under served countr*" or "under served nation*" or "under served population*" or "under served world" or "deprived countr*" or "deprived nation*" or "deprived population*" or "deprived world" or "poor countr*" or "poor nation*" or "poor population*" or "poor world" or "poorer countr*" or "poorer nation*" or "poorer population*" or "poorer world" or "developing econom*" or "developing countr*" or "less developed econom*" or "lesser developed econom*" or "under developed econom*" or "underdeveloped econom*" or "middle income econom*" or "low income econom*" or "lower income econom*" or "low gdp" or "low gnp" or "low gross domestic" or "low gross national" or "lower gdp" or "lower gnp" or "lower gross domestic" or "lower gross national" or lmic or LAMIC or "LAMI countr*" or "third world" or "transitional countr*" or Africa or Asia or Caribbean or "West Indies" or "South America" or "Latin America" or "Central America" or "Atlantic Islands" or "Commonwealth of Independent States" or "Pacific Islands" or "Indian Ocean Islands" or "Eastern Europe" or Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia* or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelarus or Byelorussian or Belarus or Belorussia* or Belize or Bhutan or Bolivia or Bosnia or Her?egovina or Botswana or Bra?il or Bulgaria or "Burkina Fas?o" or "Upper Volta" or Burundi or Urundi or Cambodia or "Khmer Republic" or Kampuchea or Camero?n* or Cape Verde or "Central African Republic" or Chad or Chile or China or Colombia or Comor?s or "Comoro Islands" or Mayotte or Congo or Zaire or "Costa Rica" or "Cote d'Ivoire" or "Ivory Coast" or Croatia or Cuba or Cyprus or Czechoslovakia or "Czech Republic" or Slovakia or "Slovak Republic" or Djibouti or "French Somaliland" or Dominica or "Dominican Republic" or "East Tim?r" or Timor Leste or Ecuador or Egypt or "United Arab Republic" or "El Salvador" or Eritrea or Estonia or Ethiopia or Fiji or Gabon or "Gabonese Republic" or Gambia or Gaza or "Georgia? Republic" or Ghana or "Gold Coast" or Greece or Grenada or Guatemala or Guinea or Guam or Gu?ana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or "Isle of Man" or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizia or "Kyrgyz Republic" or Kirghiz* or "Lao PDR" or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or "Malagasy Republic" or Malaysia or Malay? or Sabah or Sarawak or Malawi or Nyasaland or Mali or Malta or "Marshall Islands" or Mauritania or Mauritius or "Agalega Islands" or Melanesia or Mexico or Micronesia or "Middle East" or Moldov?a or Moldovian or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanma? or Burma or Namibia or Nepal or "Netherlands Antilles" or "New Caledonia" or Nicaragua or Niger* or "Northern Mariana

Islands" or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Poland or Portugal or "Puerto Rico" or R?mania or Roumania or Russia* or R?anda or "Saint Kitts" or "St Kitts" or Nevis or "Saint Lucia" or "St Lucia" or "Saint Vincent" or "St Vincent" or Grenadines or Samoa or "Samoan Islands" or "Navigator Island" or "Navigator Islands" or "Sao Tome" or "Saudi Arabia" or Senegal or Serbia or Montenegro or Seychelles or "Sierra Leone" or Slovenia or "Sri Lanka" or Ceylon or "Solomon Islands" or Somalia or Sudan or Surinam* or Swaziland or Syria* or Tajikistan or Tad?hikistan or Tadzhik or Tanzania or Thailand or Togo or "Togolese Republic" or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmen* or Tuvalu or Uganda or Ukraine or Uruguay or USSR or "Soviet Union" or "Union of Soviet Socialist Republics" or Uzbek* or Vanuatu or "New Hebrides" or Venezuela or Vietnam or "Viet Nam" or "West Bank" or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia or "Africa, Northern" or "Africa South of the Sahara" or "Africa, Central" or "Africa, Eastern" or "Africa, Southern" or "Africa, Western" or "Asia, Central" or "Asia, Southeastern" or "Asia, Western" or "Caribbean Region" or "West Indies" or "South America" or "Latin America" or "Central America" or "Atlantic Islands" or "Commonwealth of Independent States" or "Pacific Islands" or "Indian Ocean Islands" or "Europe, Eastern").tw,in. 10332764

10 exp middle income country/ or exp developing country/ 115231

11 9 or 10 10368660

12 (task shifting or task sharing or task-shifting or task-sharing or therapy or treatment or intervention or psychotherapy or counseling or counselling or training or psychoeducation or promotion or prevention or Program* or Support or Parenting or family therapy or family-therapy or primary care or primary health care or community health or community care or therapeutics or home visiting).tw. 12010953

13 exp psychosocial intervention/ 942

14 12 or 13 12011111

15 (traum* or posttraumatic stress or complex traum* or PTSD or CPTSD).tw. 584215

16 exp posttraumatic stress disorder/ 72044

17 15 or 16 601672

18 4 and 8 and 11 and 14 and 17 1032

EBSCO HOST PsycInfo

Thursday, June 02, 2022 2:29:52 PM

#	Query	Limiters/Expanders	Last Run Via	Results
S12	S1 AND S4 AND S5 AND S8 AND S11	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - APA PsycInfo	806
S11	S9 OR S10	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - APA PsycInfo	145,554
S10	TI ((traum* or "posttraumatic stress" or "complex traum*" or PTSD or CPTSD)) OR AB ((traum* or "posttraumatic stress" or "complex traum*" or PTSD or CPTSD))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - APA PsycInfo	138,972
S9	DE "Trauma" OR DE "Collective Trauma" OR DE "Complex Trauma" OR DE "Emotional Trauma" OR OR DE "Intergenerational Trauma" OR DE "Posttraumatic Growth" OR DE "Posttraumatic Stress" OR DE "Racial Trauma" OR DE "Trauma Reactions" OR DE "Traumatic Experiences" OR DE "Traumatic Loss" OR DE "Trauma Screening" OR DE "Trauma Measures" OR DE "Stress and Trauma Related Disorders" OR DE "Acute	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search	64,318

	Stress Disorder" OR DE "Adjustment Disorders" OR DE "Attachment Disorders" OR DE "Posttraumatic Stress Disorder" OR DE "Prolonged Grief Disorder"		Database - APA PsycInfo	
S8	S6 OR S7	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - APA PsycInfo	2,063,449
S7	TI (("task shifting" or "task sharing" or "task-shifting" or "task-sharing" or therapy or treatment or intervention or psychotherapy or counseling or counselling or training or psychoeducation or promotion or prevention or Program* or Support or Parenting or "family therapy" or "family-therapy" or "primary care" or "primary health care" or "community health" or "community care" or therapeutics or "home visiting")) OR AB (("task shifting" or "task sharing" or "task-shifting" or "task-sharing" or therapy or treatment or intervention or psychotherapy or counseling or counselling or training or psychoeducation or promotion or prevention or Program* or Support or Parenting or "family therapy" or "family-therapy" or "primary care" or "primary health care" or "community health" or "community care" or therapeutics or "home visiting"))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - APA PsycInfo	2,057,612
S6	DE "Intervention" OR DE "Crisis Intervention" OR DE "Early Intervention" OR DE "Family Intervention" OR DE "Group Intervention" OR DE "School Based Intervention" OR DE "Workplace Intervention" OR DE "School Based Intervention" OR DE "Response to Intervention" OR DE "School Based Mental Health Services" OR DE "Crisis Intervention Services" OR DE "Hot Line Services" OR DE "Suicide Prevention Centers" OR DE "Crisis Intervention" OR DE "Debriefing (Psychological)" OR DE "Suicide Prevention"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - APA PsycInfo	130,319
S5	TI (("middle income population*" or "low income countr*" or "low income nation*" or "low income population*" or "lower income countr*" or "lower income nation*" or "lower income population*" or "underserved countr*" or "underserved nation*" or "underserved population*" or "underserved world" or "under served countr*" or "under served nation*" or "under served population*" or "under served world" or "deprived countr*" or "deprived nation*" or "deprived population*" or "deprived world" or "poor countr*" or "poor nation*" or "poor population*" or "poor world" or "poorer countr*" or "poorer nation*" or "poorer	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search	708,955

population*" or "poorer world" or "developing econom*" or "developing countr*" or "less developed econom*" or "lesser developed econom*" or "under developed econom*" or "underdeveloped econom*" or "middle income econom*" or "low income econom*" or "lower income econom*" or "low gdp" or "low gnp" or "low gross domestic" or "low gross national" or "lower gdp" or "lower gnp" or "lower gross domestic" or "lower gross national" or lmic or LAMIC or "LAMI countr*" or "third world" or "transitional countr*" or Africa or Asia or Caribbean or "West Indies" or "South America" or "Latin America" or "Central America" or "Atlantic Islands" or "Commonwealth of Independent States" or "Pacific Islands" or "Indian Ocean Islands" or "Eastern Europe" or Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia* or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelarus or Byelorussian or Belarus or Belorussia* or Belize or Bhutan or Bolivia or Bosnia or Her#egovina or Botswana or Bra#il or Bulgaria or "Burkina Fas#o" or "Upper Volta" or Burundi or Urundi or Cambodia or "Khmer Republic" or Kampuchea or Camero#n* or Cape Verde or "Central African Republic" or Chad or Chile or China or Colombia or Comor#s or "Comoro Islands" or Mayotte or Congo or Zaire or "Costa Rica" or "Cote d'Ivoire" or "Ivory Coast" or Croatia or Cuba or Cyprus or Czechoslovakia or "Czech Republic" or Slovakia or "Slovak Republic" or Djibouti or "French Somaliland" or Dominica or "Dominican Republic" or "East Tim#r" or Timor Leste or Ecuador or Egypt or "United Arab Republic" or "El Salvador" or Eritrea or Estonia or Ethiopia or Fiji or Gabon or "Gabonese Republic" or Gambia or Gaza or "Georgia# Republic" or Ghana or "Gold Coast" or Greece or Grenada or Guatemala or Guinea or Guam or Gu#ana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or "Isle of Man" or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizia or "Kyrgyz Republic" or Kirghiz* or "Lao PDR" or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or "Malagasy Republic" or Malaysia or Malay# or Sabah or Sarawak or Malawi or Nyasaland or Mali or Malta or "Marshall Islands" or Mauritania or Mauritius or "Agalega Islands" or Melanesia or Mexico or Micronesia or "Middle East" or Moldov#a or Moldovian or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanma# or Burma or Namibia or Nepal or "Netherlands Antilles" or "New Caledonia" or Nicaragua or Niger* or "Northern Mariana Islands" or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Poland or Portugal or "Puerto Rico" or R#mania or Roumania or Russia* or R#anda or "Saint Kitts" or "St Kitts" or Nevis or "Saint Lucia" or "St Lucia" or "Saint Vincent" or "St Vincent" or Grenadines or Samoa or "Samoan Islands" or "Navigator Island" or "Navigator Islands" or "Sao Tome" or "Saudi Arabia" or Senegal or Serbia or Montenegro or Seychelles or "Sierra Leone" or Slovenia or "Sri Lanka" or Ceylon or "Solomon Islands" or Somalia or Sudan or Surinam* or Swaziland or Syria* or	Database - APA PsycInfo

Tajikistan or Tad#hikistan or Tadzhik or Tanzania or Thailand or Togo or "Togolese Republic" or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmen* or Tuvalu or Uganda or Ukraine or Uruguay or USSR or "Soviet Union" or "Union of Soviet Socialist Republics" or Uzbek* or Vanuatu or "New Hebrides" or Venezuela or Vietnam or "Viet Nam" or "West Bank" or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia or "Africa, Northern" or "Africa South of the Sahara" or "Africa, Central" or "Africa, Eastern" or "Africa, Southern" or "Africa, Western" or "Asia, Central" or "Asia, Southeastern" or "Asia, Western" or "Caribbean Region" or "West Indies" or "South America" or "Latin America" or "Central America" or "Atlantic Islands" or "Commonwealth of Independent States" or "Pacific Islands" or "Indian Ocean Islands" or "Europe, Eastern")) OR AB (("middle income population*" or "low income countr*" or "low income nation*" or "low income population*" or "lower income countr*" or "lower income nation*" or "lower income population*" or "underserved countr*" or "underserved nation*" or "underserved population*" or "underserved world" or "under served countr*" or "under served nation*" or "under served population*" or "under served world" or "deprived countr*" or "deprived nation*" or "deprived population*" or "deprived world" or "poor countr*" or "poor nation*" or "poor population*" or "poor world" or "poorer countr*" or "poorer nation*" or "poorer population*" or "poorer world" or "developing econom*" or "developing countr*" or "less developed econom*" or "lesser developed econom*" or "under developed econom*" or "underdeveloped econom*" or "middle income econom*" or "low income econom*" or "lower income econom*" or "low gdp" or "low gnp" or "low gross domestic" or "low gross national" or "lower gdp" or "lower gnp" or "lower gross domestic" or "lower gross national" or lmic or LAMIC or "LAMI countr*" or "third world" or "transitional countr*" or Africa or Asia or Caribbean or "West Indies" or "South America" or "Latin America" or "Central America" or "Atlantic Islands" or "Commonwealth of Independent States" or "Pacific Islands" or "Indian Ocean Islands" or "Eastern Europe" or Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia* or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelarus or Byelorussian or Belarus or Belorussia* or Belize or Bhutan or Bolivia or Bosnia or Her#egovina or Botswana or Bra#il or Bulgaria or "Burkina Fas#o" or "Upper Volta" or Burundi or Urundi or Cambodia or "Khmer Republic" or Kampuchea or Camero#n* or Cape Verde or "Central African Republic" or Chad or Chile or China or Colombia or Comor#s or "Comoro Islands" or Mayotte or Congo or Zaire or "Costa Rica" or "Cote d'Ivoire" or "Ivory Coast" or Croatia or Cuba or Cyprus or Czechoslovakia or "Czech Republic" or Slovakia or "Slovak Republic" or Djibouti or "French Somaliland" or Dominica or "Dominican Republic" or "East Tim#r" or Timor Leste or Ecuador or Egypt or "United Arab Republic" or "El Salvador" or Eritrea or Estonia or Ethiopia or Fiji or Gabon or "Gabonese Republic" or Gambia or Gaza or "Georgia# Republic" or Ghana or "Gold Coast" or Greece or Grenada or Guatemala or

Guinea or Guam or Gu#ana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or "Isle of Man" or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizia or "Kyrgyz Republic" or Kirghiz* or "Lao PDR" or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or "Malagasy Republic" or Malaysia or Malay# or Sabah or Sarawak or Malawi or Nyasaland or Mali or Malta or "Marshall Islands" or Mauritania or Mauritius or "Agalega Islands" or Melanesia or Mexico or Micronesia or "Middle East" or Moldov#a or Moldovian or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanma# or Burma or Namibia or Nepal or "Netherlands Antilles" or "New Caledonia" or Nicaragua or Niger* or "Northern Mariana Islands" or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Poland or Portugal or "Puerto Rico" or R#mania or Roumania or Russia* or R#anda or "Saint Kitts" or "St Kitts" or Nevis or "Saint Lucia" or "St Lucia" or "Saint Vincent" or "St Vincent" or Grenadines or Samoa or "Samoan Islands" or "Navigator Island" or "Navigator Islands" or "Sao Tome" or "Saudi Arabia" or Senegal or Serbia or Montenegro or Seychelles or "Sierra Leone" or Slovenia or "Sri Lanka" or Ceylon or "Solomon Islands" or Somalia or Sudan or Surinam* or Swaziland or Syria* or Tajikistan or Tad#hikistan or Tadzhik or Tanzania or Thailand or Togo or "Togolese Republic" or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmen* or Tuvalu or Uganda or Ukraine or Uruguay or USSR or "Soviet Union" or "Union of Soviet Socialist Republics" or Uzbek* or Vanuatu or "New Hebrides" or Venezuela or Vietnam or "Viet Nam" or "West Bank" or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia or "Africa, Northern" or "Africa South of the Sahara" or "Africa, Central" or "Africa, Eastern" or "Africa, Southern" or "Africa, Western" or "Asia, Central" or "Asia, Southeastern" or "Asia, Western" or "Caribbean Region" or "West Indies" or "South America" or "Latin America" or "Central America" or "Atlantic Islands" or "Commonwealth of Independent States" or "Pacific Islands" or "Indian Ocean Islands" or "Europe, Eastern")) OR AF (("middle income population*" or "low income countr*" or "low income nation*" or "low income population*" or "lower income countr*" or "lower income nation*" or "lower income population*" or "underserved countr*" or "underserved nation*" or "underserved population*" or "underserved world" or "under served countr*" or "under served nation*" or "under served population*" or "under served world" or "deprived countr*" or "deprived nation*" or "deprived population*" or "deprived world" or "poor countr*" or "poor nation*" or "poor population*" or "poor world" or "poorer countr*" or "poorer nation*" or "poorer population*" or "poorer world" or "developing econom*" or "developing countr*" or "less developed econom*" or "lesser developed econom*" or "under developed econom*" or "underdeveloped econom*" or "middle income econom*" or "low income econom*" or "lower income econom*" or "low gdp" or "low gnp" or "low gross domestic" or "low gross

national" or "lower gdp" or "lower gnp" or "lower gross domestic" or "lower gross national" or lmic or LAMIC or "LAMI countr*" or "third world" or "transitional countr*" or Africa or Asia or Caribbean or "West Indies" or "South America" or "Latin America" or "Central America" or "Atlantic Islands" or "Commonwealth of Independent States" or "Pacific Islands" or "Indian Ocean Islands" or "Eastern Europe" or Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia* or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelarus or Byelorussian or Belarus or Belorussia* or Belize or Bhutan or Bolivia or Bosnia or Her#egovina or Botswana or Bra#il or Bulgaria or "Burkina Fas#o" or "Upper Volta" or Burundi or Urundi or Cambodia or "Khmer Republic" or Kampuchea or Camero#n* or Cape Verde or "Central African Republic" or Chad or Chile or China or Colombia or Comor#s or "Comoro Islands" or Mayotte or Congo or Zaire or "Costa Rica" or "Cote d'Ivoire" or "Ivory Coast" or Croatia or Cuba or Cyprus or Czechoslovakia or "Czech Republic" or Slovakia or "Slovak Republic" or Djibouti or "French Somaliland" or Dominica or "Dominican Republic" or "East Tim#r" or Timor Leste or Ecuador or Egypt or "United Arab Republic" or "El Salvador" or Eritrea or Estonia or Ethiopia or Fiji or Gabon or "Gabonese Republic" or Gambia or Gaza or "Georgia# Republic" or Ghana or "Gold Coast" or Greece or Grenada or Guatemala or Guinea or Guam or Gu#ana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or "Isle of Man" or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizia or "Kyrgyz Republic" or Kirghiz* or "Lao PDR" or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or "Malagasy Republic" or Malaysia or Malay# or Sabah or Sarawak or Malawi or Nyasaland or Mali or Malta or "Marshall Islands" or Mauritania or Mauritius or "Agalega Islands" or Melanesia or Mexico or Micronesia or "Middle East" or Moldov#a or Moldovian or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanma# or Burma or Namibia or Nepal or "Netherlands Antilles" or "New Caledonia" or Nicaragua or Niger* or "Northern Mariana Islands" or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Poland or Portugal or "Puerto Rico" or R#mania or Roumania or Russia* or R#anda or "Saint Kitts" or "St Kitts" or Nevis or "Saint Lucia" or "St Lucia" or "Saint Vincent" or "St Vincent" or Grenadines or Samoa or "Samoan Islands" or "Navigator Island" or "Navigator Islands" or "Sao Tome" or "Saudi Arabia" or Senegal or Serbia or Montenegro or Seychelles or "Sierra Leone" or Slovenia or "Sri Lanka" or Ceylon or "Solomon Islands" or Somalia or Sudan or Surinam* or Swaziland or Syria* or Tajikistan or Tad#hikistan or Tadzhik or Tanzania or Thailand or Togo or "Togolese Republic" or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmen* or Tuvalu or Uganda or Ukraine or Uruguay or USSR or "Soviet Union" or "Union of Soviet Socialist Republics" or Uzbek* or Vanuatu or "New Hebrides" or Venezuela or Vietnam or "Viet

	Nam" or "West Bank" or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia or "Africa, Northern" or "Africa South of the Sahara" or "Africa, Central" or "Africa, Eastern" or "Africa, Southern" or "Africa, Western" or "Asia, Central" or "Asia, Southeastern" or "Asia, Western" or "Caribbean Region" or "West Indies" or "South America" or "Latin America" or "Central America" or "Atlantic Islands" or "Commonwealth of Independent States" or "Pacific Islands" or "Indian Ocean Islands" or "Europe, Eastern"))			
S4	S2 OR S3	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - APA PsycInfo	148,223
S3	TI ((war OR wars OR warfare OR conflict OR conflicts)) OR AB ((war OR wars OR warfare OR conflict OR conflicts))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - APA PsycInfo	146,262
S2	DE "War" OR DE "Nuclear War"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - APA PsycInfo	15,195
S1	TI ((Child* or Adolescen* or Preadolescen* or Youth* or "Young people" or "Young person*" or Infant* or Pe#diatric*)) OR AB ((Child* or Adolescen* or Preadolescen* or Youth* or "Young people" or "Young person*" or Infant* or Pe#diatric*))	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen -	1,005,530

ProQuest ASSIA

Set#	Searched for	Databases	Results
S1	ti((Child* or Adolescen* or Preadolescen* or Pre-adolescen* or Youth* or "Young people" or "Young person*" or Infant* or Pe?diatric*)) OR ab((Child* or Adolescen* or Preadolescen* or Pre-adolescen* or Youth* or "Young people" or "Young person*" or Infant* or Pe?diatric*))	Applied Social Sciences Index & Abstracts (ASSIA)	288325
S2	MAINSUBJECT.EXACT("Young people") OR MAINSUBJECT.EXACT.EXPLODE("Children")	Applied Social Sciences Index & Abstracts (ASSIA)	154196
S3	(ti((Child* or Adolescen* or Preadolescen* or Pre-adolescen* or Youth* or "Young people" or "Young person*" or Infant* or Pe?diatric*)) OR ab((Child* or Adolescen* or Preadolescen* or Pre-adolescen* or Youth* or "Young people" or "Young person*" or Infant* or Pe?diatric*))) OR (MAINSUBJECT.EXACT("Young people") OR MAINSUBJECT.EXACT.EXPLODE("Children"))	Applied Social Sciences Index & Abstracts (ASSIA) These databases are searched for part of your query.	303286
S4	ti((war or wars or warfare or conflict or conflicts)) OR ab((war or wars or warfare or conflict or conflicts))	Applied Social Sciences Index & Abstracts (ASSIA)	35267
S5	MAINSUBJECT.EXACT.EXPLODE("Wars") OR MAINSUBJECT.EXACT.EXPLODE("Conflict")	Applied Social Sciences Index & Abstracts (ASSIA)	12372
S6	(ti((war or wars or warfare or conflict or conflicts)) OR ab((war or wars or warfare or conflict or conflicts))) OR (MAINSUBJECT.EXACT.EXPLODE("Wars") OR MAINSUBJECT.EXACT.EXPLODE("Conflict"))	Applied Social Sciences Index & Abstracts (ASSIA) These databases are searched for part of your query.	40058

S7	ti(("task shifting" or "task sharing" or task-shifting or task-sharing or therapy or treatment or intervention or psychotherapy or counseling or counselling or training or psychoeducation or promotion or prevention or Program* or Support or Parenting or "family therapy" or family-therapy or "primary care" or "primary health care" or "community health" or "community care" or therapeutics or "home visiting")) OR ab(("task shifting" or "task sharing" or task-shifting or task-sharing or therapy or treatment or intervention or psychotherapy or counseling or counselling or training or psychoeducation or promotion or prevention or Program* or Support or Parenting or "family therapy" or family-therapy or "primary care" or "primary health care" or "community health" or "community care" or therapeutics or "home visiting"))	Applied Social Sciences Index & Abstracts (ASSIA)	545455
S8	MAINSUBJECT.EXACT.EXPLODE("Psychosocial intervention") OR MAINSUBJECT.EXACT.EXPLODE("Psychological intervention")	Applied Social Sciences Index & Abstracts (ASSIA)	2044
S9	(ti(("task shifting" or "task sharing" or task-shifting or task-sharing or therapy or treatment or intervention or psychotherapy or counseling or counselling or training or psychoeducation or promotion or prevention or Program* or Support or Parenting or "family therapy" or family-therapy or "primary care" or "primary health care" or "community health" or "community care" or therapeutics or "home visiting")) OR ab(("task shifting" or "task sharing" or task-shifting or task-sharing or therapy or treatment or intervention or psychotherapy or counseling or counselling or training or psychoeducation or promotion or prevention or Program* or Support or Parenting or "family therapy" or	Applied Social Sciences Index & Abstracts (ASSIA) These databases are searched for part of your query.	545486

	family-therapy or "primary care" or "primary health care" or "community health" or "community care" or therapeutics or "home visiting"))) OR (MAINSUBJECT.EXACT.EXPLODE("Psychosocial intervention") OR MAINSUBJECT.EXACT.EXPLODE("Psychological intervention"))		
S10	ti((traum* or "posttraumatic stress" or "complex traum*" or PTSD or CPTSD)) OR ab((traum* or "posttraumatic stress" or "complex traum*" or PTSD or CPTSD))	Applied Social Sciences Index & Abstracts (ASSIA)	27395
S11	MAINSUBJECT.EXACT.EXPLODE("Chronic posttraumatic stress disorder") OR MAINSUBJECT.EXACT.EXPLODE("Psychological trauma") OR MAINSUBJECT.EXACT.EXPLODE("Traumatic life events") OR MAINSUBJECT.EXACT.EXPLODE("Posttraumatic stress disorder") OR MAINSUBJECT.EXACT.EXPLODE("Traumatic stress") OR MAINSUBJECT.EXACT.EXPLODE("Combat related posttraumatic stress disorder")	Applied Social Sciences Index & Abstracts (ASSIA)	7897
S12	(ti((traum* or "posttraumatic stress" or "complex traum*" or PTSD or CPTSD)) OR ab((traum* or "posttraumatic stress" or "complex traum*" or PTSD or CPTSD))) OR (MAINSUBJECT.EXACT.EXPLODE("Chronic posttraumatic stress disorder") OR MAINSUBJECT.EXACT.EXPLODE("Psychological trauma") OR MAINSUBJECT.EXACT.EXPLODE("Traumatic life events") OR MAINSUBJECT.EXACT.EXPLODE("Posttraumatic stress disorder") OR MAINSUBJECT.EXACT.EXPLODE("Traumatic stress") OR MAINSUBJECT.EXACT.EXPLODE("Combat related posttraumatic stress disorder"))	Applied Social Sciences Index & Abstracts (ASSIA) These databases are searched for part of your query.	27581

S13	((ti((Child* or Adolescen* or Preadolescen* or Pre-adolescen* or Youth* or "Young people" or "Young person*" or Infant* or Pe?diatric*)) OR ab((Child* or Adolescen* or Preadolescen* or Pre-adolescen* or Youth* or "Young people" or "Young person*" or Infant* or Pe?diatric*))) OR (MAINSUBJECT.EXACT("Young people") OR MAINSUBJECT.EXACT.EXPLODE("Children"))) AND ((ti((war or wars or warfare or conflict or conflicts)) OR ab((war or wars or warfare or conflict or conflicts))) OR (MAINSUBJECT.EXACT.EXPLODE("Wars") OR MAINSUBJECT.EXACT.EXPLODE("Conflict"))) AND ((ti(("task shifting" or "task sharing" or task-shifting or task-sharing or therapy or treatment or intervention or psychotherapy or counseling or counselling or training or psychoeducation or promotion or prevention or Program* or Support or Parenting or "family therapy" or family-therapy or "primary care" or "primary health care" or "community health" or "community care" or therapeutics or "home visiting")) OR ab(("task shifting" or "task sharing" or task-shifting or task-sharing or therapy or treatment or intervention or psychotherapy or counseling or counselling or training or psychoeducation or promotion or prevention or Program* or Support or Parenting or "family therapy" or family-therapy or "primary care" or "primary health care" or "community health" or "community care" or therapeutics or "home visiting"))) OR (MAINSUBJECT.EXACT.EXPLODE("Psychosocial intervention") OR MAINSUBJECT.EXACT.EXPLODE("Psychological intervention"))) AND ((ti((traum* or "posttraumatic stress" or "complex traum*" or PTSD or CPTSD)) OR ab((traum*	Applied Social Sciences Index & Abstracts (ASSIA) These databases are searched for part of your query.	520

	or "posttraumatic stress" or "complex traum*" or PTSD or CPTSD))) OR (MAINSUBJECT.EXACT.EXPLODE("Chronic posttraumatic stress disorder") OR MAINSUBJECT.EXACT.EXPLODE("Psychological trauma") OR MAINSUBJECT.EXACT.EXPLODE("Traumatic life events") OR MAINSUBJECT.EXACT.EXPLODE("Posttraumatic stress disorder") OR MAINSUBJECT.EXACT.EXPLODE("Traumatic stress") OR MAINSUBJECT.EXACT.EXPLODE("Combat related posttraumatic stress disorder")))		

Appendix 1.2 CCAT Tool

Crowe Critical Appraisal Tool (CCAT) Form (v1.4)

Reference | Reviewer

This form must be used in conjunction with the CCAT User Guide (v1.4); otherwise validity and reliability may be severely compromised.

Citation

	Year

Research design (add if not listed)

❑ Not research		Article | Editorial | Report | Opinion | Guideline | Pamphlet | ...
❑ Historical		...
❑ Qualitative		Narrative | Phenomenology | Ethnography | Grounded theory | Narrative case study | ...
❑ Descriptive, Exploratory, Observational		A. Cross-sectional | Longitudinal | Retrospective | Prospective | Correlational | Predictive | ...
		B. Cohort | Case-control | Survey | Developmental | Normative | Case study | ...
Experimental	❑ True experiment	Pre-test/post-test control group | Solomon four-group | Post-test only control group | Randomised two-factor | Placebo controlled trial | ...
	❑ Quasi-experiment	Post-test only | Non-equivalent control group | Counter balanced *(cross-over)* | Multiple time series | Separate sample pre-test post-test [no Control] [Control] | ...
	❑ Single system	One-shot experimental *(case study)* | Simple time series | One group pre-test/post-test | Interactive | Multiple baseline | Within subjects *(Equivalent time, repeated measures, multiple treatment)* | ...
❑ Mixed Methods		Action research | Sequential | Concurrent | Transformative | ...
❑ Synthesis		Systematic review | Critical review | Thematic synthesis | Meta-ethnography | Narrative synthesis | ...
❑ Other		...

Variables and analysis

Intervention(s), Treatment(s), Exposure(s)	Outcome(s), Output(s), Predictor(s), Measure(s)	Data analysis method(s)

Sampling

Total size		Group 1		Group 2		Group 3		Group 4		Control	
Population, sample, setting									

Data collection (add if not listed)

Audit/Review	a) Primary | Secondary | ... b) Authoritative | Partisan | Antagonist | ... c) Literature | Systematic | ...	Interview	a) Formal | Informal | ... b) Structured | Semi-structured | Unstructured | ... c) One-on-one | Group | Multiple | Self-administered | ...
Observation	a) Participant | Non-participant | ... b) Structured | Semi-structured | Unstructured | ... c) Covert | Candid | ...	Testing	a) Standardised | Norm-ref | Criterion-ref | Ipsative | ... b) Objective | Subjective | ... c) One-on-one | Group | Self-administered | ...

Scores

Preliminaries		Design		Data Collection		Results		Total [/40]	
Introduction		Sampling		Ethical Matters		Discussion		Total [%]	

General notes

Appraise research on the merits of the research design used, not against other research designs.

Category Item	Item descriptors [☑ Present; ☒ Absent; ■ Not applicable]	Description [Important information for each item]	Score [0–5]
1. Preliminaries			
Title	1. Includes study aims ❑ and design ❑		
Abstract (assess last)	1. Key information ❑ 2. Balanced ❑ and informative ❑		
Text (assess last)	1. Sufficient detail others could reproduce ❑ 2. Clear/concise writing ❑, table(s) ❑, diagram(s) ❑, figure(s) ❑		
		Preliminaries [/5]	
2. Introduction			
Background	1. Summary of current knowledge ❑ 2. Specific problem(s) addressed ❑ and reason(s) for addressing ❑		
Objective	1. Primary objective(s), hypothesis(es), or aim(s) ❑ 2. Secondary question(s) ❑		
	Is it worth continuing?	**Introduction [/5]**	
3. Design			
Research design	1. Research design(s) chosen ❑ and why ❑ 2. Suitability of research design(s) ❑		
Intervention, Treatment, Exposure	1. Intervention(s)/treatment(s)/exposure(s) chosen ❑ and why ❑ 2. Precise details of the intervention(s)/treatment(s)/exposure(s) ❑ for each group ❑ 3. Intervention(s)/treatment(s)/exposure(s) valid ❑ and reliable ❑		
Outcome, Output, Predictor, Measure	1. Outcome(s)/output(s)/predictor(s)/measure(s) chosen ❑ and why ❑ 2. Clearly define outcome(s)/output(s)/predictor(s)/measure(s) ❑ 3. Outcome(s)/output(s)/predictor(s)/measure(s) valid ❑ and reliable ❑		
Bias, etc	1. Potential bias ❑, confounding variables ❑, effect modifiers ❑, interactions ❑ 2. Sequence generation ❑, group allocation ❑, group balance ❑, and by whom ❑ 3. Equivalent treatment of participants/cases/groups ❑		
	Is it worth continuing?	**Design [/5]**	
4. Sampling			
Sampling method	1. Sampling method(s) chosen ❑ and why ❑ 2. Suitability of sampling method ❑		
Sample size	1. Sample size ❑, how chosen ❑, and why ❑ 2. Suitability of sample size ❑		
Sampling protocol	1. Target/actual/sample population(s): description ❑ and suitability ❑ 2. Participants/cases/groups: inclusion ❑ and exclusion ❑ criteria 3. Recruitment of participants/cases/groups ❑		
	Is it worth continuing?	**Sampling [/5]**	
5. Data collection			
Collection method	1. Collection method(s) chosen ❑ and why ❑ 2. Suitability of collection method(s) ❑		
Collection protocol	1. Include date(s) ❑, location(s) ❑, setting(s) ❑, personnel ❑, materials ❑, processes ❑ 2. Method(s) to ensure/enhance quality of measurement/instrumentation ❑ 3. Manage non-participation ❑, withdrawal ❑, incomplete/lost data ❑		
	Is it worth continuing?	**Data collection [/5]**	
6. Ethical matters			
Participant ethics	1. Informed consent ❑, equity ❑ 2. Privacy ❑, confidentiality/anonymity ❑		
Researcher ethics	1. Ethical approval ❑, funding ❑, conflict(s) of interest ❑ 2. Subjectivities ❑, relationship(s) with participants/cases ❑		
	Is it worth continuing?	**Ethical matters [/5]**	
7. Results			
Analysis, Integration, Interpretation method	1. A.I.I. method(s) for primary outcome(s)/output(s)/predictor(s) chosen ❑ and why ❑ 2. Additional A.I.I. methods (e.g. subgroup analysis) chosen ❑ and why ❑ 3. Suitability of analysis/integration/interpretation method(s) ❑		
Essential analysis	1. Flow of participants/cases/groups through each stage of research ❑ 2. Demographic and other characteristics of participants/cases/groups ❑ 3. Analyse raw data ❑, response rate ❑, non-participation/withdrawal/incomplete/lost data ❑		
Outcome, Output, Predictor analysis	1. Summary of results ❑ and precision ❑ for each outcome/output/predictor/measure 2. Consideration of benefits/harms ❑, unexpected results ❑, problems/failures ❑ 3. Description of outlying data (e.g. diverse cases, adverse effects, minor themes) ❑		
		Results [/5]	
8. Discussion			
Interpretation	1. Interpretation of results in the context of current evidence ❑ and objectives ❑ 2. Draw inferences consistent with the strength of the data ❑ 3. Consideration of alternative explanations for observed results ❑ 4. Account for bias ❑, confounding/effect modifiers/interactions/imprecision ❑		
Generalisation	1. Consideration of overall practical usefulness of the study ❑ 2. Description of generalisability (external validity) of the study ❑		
Concluding remarks	1. Highlight study's particular strengths ❑ 2. Suggest steps that may improve future results (e.g. limitations) ❑ 3. Suggest further studies ❑		
		Discussion [/5]	
9. Total			
Total score	1. Add all scores for categories 1–8		
		Total [/40]	

Appendix 1.3 Narrative Synthesis - Idea Webbing

Access via https://osf.io/rpq5b/files/osfstorage/63a1abf7c71a71007c1520ff

Appendices

Chapter 2: Major Research Project

Appendix 2.1 NHS Ethical Approval

Ymchwil Iechyd a Gofal Cymru
Health and Care Research Wales

Ariennir gan Lywodraeth Cymru
Funded by Welsh Government

Wales Research Ethics Committee 3
Cardiff

Mailing address:
Health and Care Research Wales
Castlebridge 4
15-19 Cowbridge Road East
Cardiff, CF11 9AB

telephone: 02920 785738
email: Wales.REC3@wales.nhs.uk
website: www.hra.nhs.uk

31 January 2022

Professor Hamish McLeod
Department of Clinical Psychology, Administration Building
Gartnavel Royal Hospital, 1055 Great Western Road
Glasgow
G12 0XH

Dear Professor McLeod

Study title:	**Complex Post-Traumatic Stress Disorder (CPTSD) and Autobiographical Memory in Children and Adolescents: A Cross-Cultural Study Between Glasgow and Bethlehem.**
REC reference:	**21/WA/0390**
Protocol number:	**V0.5 08/11/2021**
IRAS project ID:	**301000**

Thank you for your letter of 25th January 2022, responding to the Research Ethics Committee's (REC) request for further information on the above research and submitting revised documentation.

The further information was considered in correspondence by a Sub-Committee of the REC [at a meeting held on 31st January 2022. A list of the Sub-Committee members is attached.

Confirmation of ethical opinion
On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

Appendix 2.2 An Najah University Ethical Approval

An-Najah National University
Faculty of Medicine & Health Sciences
Institutional Review Board

جامعة النجاح الوطنية
كلية الطب وعلوم الصحة
لجنة اخلاقيات البحث العلمي

Ref: Int,R. Nov. *2021/8*

IRB Approval Letter

Title of Research:
Improving the Understanding of Complex Trauma in Palestinian

Submitted by:

Caesar Hakim,Hamish McLeod, Andrew Gumley, Amira Oudeh, Jala Rizeq

Approved:
3rd Nov. 2021

Your Study Title **"Improving the Understanding of Complex Trauma in Palestinian."** reviewed by An-Najah National University IRB committee and was approved on 3rd Nov.2021

Hasan Fitian, MD

IRB Committee Chairman

IRB

Appendix 2.3 PIS

Access via https://osf.io/rpq5b/files/osfstorage/62e333ef6e463700c1e9956f

Appendix 2.4 Consent/Assent Forms

Access via https://osf.io/rpq5b/files/osfstorage/62e333903f1ed300bf411ef0

Appendix 2.5 INOMAD Study Protocol

Access via https://osf.io/rpq5b/files/osfstorage/63593b6abf00d902c31d7952

Appendix 2.6 MES

Access via https://osf.io/rpq5b/files/osfstorage/62e334bd4fcb2d00b5071935

Appendix 2.7 AMT Categories and Examples

Access via https://osf.io/rpq5b/files/osfstorage/62e33b9b6f968a00c220285e

Appendix 2.8 Original MRP Protocol

Access via https://osf.io/rpq5b/files/osfstorage/62e330bb51748d00b2287288