The use of community-based interventions in reducing morbidity from the psychological impact of conflict-related trauma among refugee populations: A systematic review of the literature

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Abstract

With large numbers of refugee arrivals and numerous barriers to accessing services it is especially important that resources are efficiently and effectively directed to address the health needs of refugees. Ten databases were utilised to conduct the review, returning 156 titles which were assessed for validity based on specified criteria. The 14 critically appraised articles included in this review consist of experimental research and discussions on best practice. Articles consistently demonstrated the benefit of community-based mental health service in improving mental health outcomes. Themes of cultural awareness, language, setting, and post-migration stressors emerged across the articles. In addition, the studies also point to the gaps in research of a longitudinal nature and ones that deal with scattered populations post migration. Community-based interventions proved valuable for improving the mental health of refugees. However, additional interventions and evaluations are required to draw consistent and conclusive judgments on best practice in dealing with refugee mental health issues.

Introduction

Refugees often originate from countries with long-term war or conflict situations, where they may have experienced profound psychological trauma and hardship before departure [1]. The objective of this study is to present a review of the literature documenting the impact of community-based interventions aiming to reduce morbidity caused by the psychological impact of conflict-related trauma experienced by refugee populations, presenting the available evidence in an easily accessible format. The broader aim of this study is to use the information gleaned from current and past research to design and ultimately implement a community-based mental health intervention for some of Melbourne's refugees groups.

Refugees have often experienced multiple stressful events before and during their flight, with imprisonment, rape, ethnic cleansing, physical violence and torture being just some instances of crimes committed against refugees from war-torn regions. Some have witnessed violence against or the death of loved ones, and many have left behind members of their immediate family.

It has been noted that the main health issues faced by adult refugees [2, 8] settling in Australia are dental, preventive, sexual and reproductive, and mental. These health issues, combined with the specific trauma in regions of conflict and the subsequent journey to Australia, make the health concerns of refugees especially pressing. In general, refugees may have increased morbidity, decreased life expectancy, and a susceptibility to illness and poor health habits [3].

Mental health issues specific to refugees

Recent studies from Europe, Africa, the Middle East, South America, and Asia have acknowledged that refugees often suffer from symptoms of depression, anxiety, post-traumatic stress disorder (PTSD) and general health problems more than immigrants who leave their home country for economic and family reunion reasons [4]. The World Health Organisation (WHO) [5] supports this view with an estimate that, of the people who experience traumatic events as a result of armed conflicts, ten percent will have serious mental health problems and another ten percent will develop behaviours that will hinder their ability to function effectively.

Research since 1980 has demonstrated that PTSD is the most frequently reported psychiatric consequence of traumatic events and of man-made disasters in particular, with torture and conflict-related incidences being the most common precursor to a diagnosis of PTSD even among vastly different populations around the world such as the Middle East, South America, and South East Asia [6].

The combination of post-migration stressors including the demands of acculturation, poor nutrition, lack of access to care, decreased support systems and a possible increase in care-giving responsibilities, coupled with continued tensions and upheaval in the country of origin are thought to exacerbate the already high levels of stress and risk of depression experienced by refugees [7].

Unfortunately, data about the status of refugee health can be conflicting and difficult to compare due to differences in the methods and instruments used for data collection, analyses, and reporting. Methodological issues such as translation and cultural

differences, inadequate resources and the difficulty associated with gaining access to displaced populations also present problems in researching this area [8].

There are several options for the treatment of PTSD in current research. The list includes many of the methods explored by authors of the studies presented in this literature review (cognitive behavioural approaches, creative therapies, play therapy, family/group therapy). However, there are many others that were not utilised in the literature on refugees that may be viable options for refugee programs.

The main treatments that were not explored and which may be most applicable to refugees are Eye Movement Desensitization and Reprocessing (usually used in collaboration with cognitive behavioural therapy) and medication [3].

Other methods currently employed in the treatment of PTSD in the broader population would have to be considered within the context of refugee groups as some may not be appropriate to the setting or to cultural ideas on acceptable forms of expression. These include Psychodynamic Therapy and Hypnosis [3], both of which rely on high levels of emotional expression and a safe environment of trust.

Barriers for refugees in accessing mainstream health services

Access to health care is influenced by an individual's financial circumstances, knowledge of the system, language, literacy, geography, culture and ability to access transport. To access health services in Australia, refugees need to be able to speak/read English (or have access to translation) in order to locate a clinic, understand how to make an appointment, have time and transportation to travel to the clinic, effectively communicate their symptoms, pay for services (and understand Medicare), and determine the

subsequent steps should they be referred to pathology, pharmacy or a specialist.

Recent studies have recognised that refugees have specific mental health needs and, at times, unique symptoms, such as somatic manifestations and delusions, making it difficult for health professionals to effectively diagnose and treat them [9, 10, 8]. Refugees, and minority groups in general, have been shown to be less likely to seek health care than the general population [11, 12], often waiting until symptoms become more severe.

There are also cultural differences that influence the kind of responses refugees have to the experience of accessing health services. This can range from terminology differences to the acceptability of types of care in treatment. An example of this is counselling, a Western concept, and one that is not appropriate for all refugees as some cultures are unaccustomed to discussing private matters with people outside of their family [13].

Community-based interventions

Typically, community-based health interventions aim to empower local groups to take control of diagnosing and solving their own health problems [14, 15]. Community participation in health outcomes is evident in a variety of forms. Some studies have used the receipt of health services or education to define participation, while others have specified that the community must be involved in the planning phases of a project for it to be considered true participation [16, 15].

The impact of establishing community links with refugee populations who have lost said links should not be underestimated. Collective action helps create ties where those ties

to people, culture and history have been lost. Programs to reduce morbidity due to mental health issues must be more mobile than other health services [11, 17] rather than expect the patient to seek them out.

Suggested formats of community-based interventions primarily focus on outreach, workshops, train-the-trainer models, employment of refugees and mentoring programs. There is also a strong focus on self-help, inclusion, empowerment and advocacy to improve the bond of community members and recognise the choices they can make about their health [11, 17, 18]. Activities for refugees can vary from professional roles (e.g. provision of advice from those with medical training) to leadership, (e.g. facilitation of group sessions) to administration (such as poster creation and registration)

Method

Nine health and medical databases (Cochrane Library, Health and Medical Complete, Health and Society, JAMA & Archives, Meditext, MEDLINE, PILOTS, PsychINFO, PubMed) as well as Google Scholar were searched for relevant items. The search terms used were primarily "refugee", "mental health", "community", "treatment", and "intervention". The search terms used were selected based on a preliminary test search. This followed an agreed method of searching with the variables of 'population', 'the condition of interest', 'intervention', and 'outcome' [19, 20, 21]. The timeframe chosen was 1994 to 2009 as the results aimed to be as relevant as possible to the present situation globally.

The first round of exclusions was based on search results which featured a title and an abstract of each article. Articles were included for full review if they fitted the following criteria: (1) the population studied were refugees rather than voluntary migrants; (2)

mental health was the primary focus of the study; (3) the intervention accessed community-based support, such as schools, local buildings and use of paraprofessionals; (4) results of the intervention were noted and discussed; (5) articles were published in English.

Results

The search produced a total of 156 titles across the ten databases (refer Figure I); nine articles were immediately excluded as duplicates. Of the remaining 147 articles, 133 were excluded based on the absence of one or more of the inclusion criteria visible in the title or abstract. The majority of these exclusions were based on either the fact that the population group in the study was not refugees or the study did not include an intervention.

Fourteen articles were selected for further review after reading the abstract. An additional twelve articles were identified through citation snowballing and considered suitable for full review. The total number of articles selected for further review was 26.

The 26 articles were critically appraised according to methodology by O'Rourke [19] and Portney [22]. They were assessed for validity based on sampling bias (subjects), internal validity (design), reliability (procedures) and attrition bias (data analysis), and each article was graded according to their ability to meet these criteria (Table I). After full review, it was decided that twelve were not appropriate for inclusion as they had insufficient evidence to prove their validity. Inadequate validity was generally determined by the absence of explanation of the subject selection, or by the absence of measurements taken at regular intervals to inform an evaluation of the intervention. These articles provided background information regarding the mental health issues of

refugees but were not formally included in the literature review. Therefore, a total of fourteen articles were selected for discussion. Of these, eight are descriptions and evaluations of mental health interventions aimed at refugees, and the remaining six are discussions of treatment methodologies for mental health issues of refugees from conflict areas. A summary of the articles is given in Appendix 1.

Populations

In general, the interventions reported were aimed at a particular age group of refugees. Of the seven experimental studies two were child-focused [23, 24] in Indonesia and the UK, one focused on adolescents [25] in Uganda, three focused on adults [26, 27, 28] in Mexico, Uganda and the USA, and one focused on adults, adolescents and children combined [29] in the USA.

The studies describe interventions with several refugee groups: some treatments aimed at all refugees with no separation by race, while others chose focus regions such as Indonesia [23], Bosnia [28], Rwanda [32], Guinea [26], Uganda [25,27] or Timor [37]. Eight of the observations/interventions took place in a developing country where refugees have settled temporarily after fleeing their country of origin (some in refugee camps or in a neighbouring area). The remaining observations/interventions took place in the developed countries of resettlement: USA, UK, Canada, and Australia. Of the eight experimental studies, only three took place post-resettlement. The remaining five occurred within the country of origin or neighbouring refugee camp. Studies were not excluded based on the difference of being post-migration or temporary relocation as the review endeavoured to find a broad range of treatments that could be adapted to the Australian setting.

The small number of post-migration interventions available for review makes it difficult to generalise the best ways of structuring future mental health programs for refugees in Australia.

There was a substantial 'community' aspect to the studies, whether it was a school community or local clinic, or home visits in areas where groups of refugees had settled. Community consultation was more common in the studies undertaken in the country of origin [26, 27] rather than in post-migration countries. This approach is logical given the necessity to use existing community facilities and support mechanisms such as schools and refugee camp clinics to implement the program.

Conditions

There was overall consistency in the mental health issues and symptoms mentioned across the articles, and despite some local terms being applied in the diagnosis the same response to conflict-related trauma was evident across cultures and locations. Only one intervention undertaken in Uganda [25] focused on a single mental health aspect: depression; the remaining programs looked at mental health problems in a more general sense.

In most cases local measurement tools were designed or existing tools were adapted to the local diagnosis of symptoms and behaviours. In all studies, the first step was to construct a well-recognised definition, evidenced by the reference to one or more well-respected authorities such as the American Psychiatric Association [25, 27, 28], World Health Organisation and World Medical Association [26, 23] or the Department of Health [24, 29]. The adaptation of a generic definition was particularly well-described and applied in the two studies by Bolton et al [25, 27], where important mental health issues

were identified by the study participants, their caregivers and knowledgeable locals. This gave participants a role in their own health assessment and included symptoms that may not have been captured by generic diagnosis.

There was a wide range of symptoms observed in the refugee populations featured in the studies, many of which were acknowledged as not fitting a particular diagnosis. Studies reported that Bosnian adults demonstrated PTSD [28], Ugandan children and adolescents suffered from depression, anxiety and socially unacceptable behaviours such as bullying and sexually explicit comments [25], and that the criteria for function impairment were met by resettled refugees [29].

Interventions

A variety of treatment approaches and locations were investigated in the articles: cognitive behavioural therapy; group interpersonal psychotherapy; art and play; outreach; one-on-one psychosocial therapy; and school-based therapy. Group therapy or education was utilised in all studies--with the exception of Bosnian refugees in the US [28]--either as the prime treatment effort or as part of a toolkit of offerings. Where children were involved there was a great emphasis on art and story-telling as therapy.

School-based and play models

Three different approaches to school-based interventions with 10-17 year olds were discussed [23, 24, 30] and, despite mixed results, the authors suggested the aspects of the programs which were most effective to participating children that could be adapted for future programs. A common aspect with all three school-based approaches was the use of interpreters and training of existing teachers to better recognise the needs of refugee children.

An observation of an early school-based intervention was conducted by Miller & Billings [30] with Guatemalan children in refugee camps. According to Miller & Billings, in the late 1980s it was recognised that play and creative therapy, drama, and art were desirable approaches to improving mental health outcomes for children. In this intervention school teachers lead children aged between 7 and 15 years through five week-long workshops. Unfortunately this research did not produce a formal evaluation and statistical analysis of their intervention. However, it was noted that the qualitative outcomes of the intervention--particularly increased teaching methodologies and child expression capacity--were valuable to both teachers and children alike.

More than ten years after this study, Tol et al [23] used a similar method in working with Indonesian children aged between 7 and 15 years in the violence-affected village of Poso, Indonesia. Using appropriate evaluation and statistical analysis, it was found that a fifteen-session program of trauma-processing activities, cooperative play and creative expression were effective in reducing PTSD symptoms and maintaining hope. However, the program did not reduce traumatic stress-related physical symptoms (for example dizziness, fainting and trembling) or depression or anxiety symptoms; it only mildly improved functional impairment for girls. It was also evident in this study that testing for maintenance of improvements is an essential element of trial interventions. At the six-month follow-up, this program found that the impact of the intervention remained, but it had decreased in magnitude, indicating that support mechanisms may need to be in place post-intervention.

In contrast to the short, intensive programs described by Tol et al [23], the year-long interventions in three schools in the UK discussed by Fazel et al [24] involved a complex

system of teacher referral and clinical guidance. In this model teachers were responsible for screening, assessment and referral of children and adolescent refugees (aged between 4 and 19 years) to clinical services. Mental health professionals worked closely with teachers to make decisions on the treatment for participants in the study, and more responsibility was given to teachers as the intervention progressed. The options were: refer the child to a mental professional; meet with the parents at the school to suggest local resources; or the teacher (using strategies introduced by mental health professional) and the student have direct meetings to discuss issues. Fazel et al speculate that improvements in hyperactivity and emotional symptoms scales could be due to the teachers' increased awareness and sensitivity to managing refugee groups, combined with the involvement of parents and local resources [24]. Notably, the improvement did not apply to all scales of measurement and it was only the children receiving a direct clinical intervention from the service who showed an improvement in their peer problems score.

Home-based individual psychotherapy model

There was only one instance of individual psychotherapy as a lone approach to mental health needs of refugees [28]. All other studies included individual sessions as a component of their intervention, but not the sole response. Schulz et al [28] explored the impact of cognitive behavioural therapy with Bosnian refugees who suffered from symptoms of PTSD. They found that positive outcomes, in the form of reduced PTSD symptoms and improved functioning, were generally achieved over the average 17 sessions with a clinician. Although the aforementioned article did not include full statistical analysis and evaluation of the intervention, the qualitative outcomes were noted in case examples from clients [28]. As with most interventions with refugees there were interpreters and adaptation to standard clinical methodologies was applied.

Community-based group psychotherapy models

Bolton et al [25, 27] designed and implemented two group-therapy focused models aimed at reducing depression symptoms in refugees situated in Uganda. Both used randomised control trials and included extensive statistical analysis and program evaluation. The first trial, conducted over sixteen weeks, used an interpersonal psychotherapy approach which was highly effective in reducing depression and improving functioning: notably it found that women improved on the functioning scale more than men [27].

The second Randomised Control Trial (RTC) undertaken by Bolton and colleagues aimed at 14-17 year olds and used group interpersonal psychotherapy and creative play (CP) to combat depressive symptoms. Interpersonal group therapy (IPT-G) created a significant decline in depressive symptoms post-intervention, while creative play had no impact on these symptoms [25]. A gender analysis of the results indicated that in general the girls improved more significantly than the boys as a result of IPT-G.

Stepakoff et al [26] worked with Liberian and Sierra Leonean trauma sufferers living in refugee camps. The model included group therapy and a second stage of community empowerment and education campaigns to assist in trauma-related mental health issues. Ten weeks of 1-2 hour sessions with groups guided by paraprofessionals (fellow refugees living in the camp) indicated significant reductions in trauma symptoms and increases in measures of daily functioning and social support [26]. The program emphasised localisation of methods and sharing of ideas among the facilitators of group sessions. This flexibility and adaptation was believed to have led to the qualitative evaluations of appreciation from participants. It is unfortunate that the statistical analysis

in the Stepakoff et al [26] study did not include gender stratification to determine if there was a difference in response to group therapy from men and women.

Multi-faceted case management model

Birman et al [29] describe a community-based model aimed at mental health needs of refugee children, adolescents and families who resettled in the US. The model includes: assessment; individual, family, and group therapy; creative play (art, dance); and support services (translation, travel) managed through a US clinic with a large refugee population. A particular component noted as pertinent to successful programs was the recognition of 'other' stressors in a refugee's life that impact mental health--settlement issues, finance, employment. Without acknowledging and assisting with these issues an intervention to address mental health will be lacking [29]. This community-based model found interesting results in their evaluation of services, discovering that while those receiving services improved over time, the improvement was not related to the 'quality' of services. Unfortunately, as there was no control group with which to compare, it may be difficult to determine the impact of this conclusion. However, it could be speculated that as more serious cases received more frequent services, improvement was on par with less serious cases receiving services appropriate to their needs. Another interpretation could be that *any* level of service makes an impact if it is comprehensive and encompasses the necessary elements of mental health care.

It was interesting to note that even though the articles collected spanned ten years, the debate and critique of the appropriate methodology to adopt in working with refugees was not resolved in this time [31, 32, 33, 34, 35, 36, 37]. Conclusions drawn in these articles were mainly around the key components to developing a model, such as culturally appropriate approaches and staff understanding of the needs of this group.

Timeframes

There were two distinct approaches to time in therapeutic models across interventions and discussions: intensive short-term models, mostly undertaken in developing countries, and support-focused long-term models. The intensive short-term models ranged from 5 to 17 weekly 1-2 hour sessions [23, 25, 26, 27, 28] while the support-focused long-term model gave clients interventions from 1 to 3 years [24, 29].

Outcomes

In all articles, the authors reported lessons learned from every intervention and model introduced, with recommendations and suggestions for the future. Even when results were not statistically significant, the authors noted factors that would be changed for future interventions of a similar type. The interventions reported no statistically significant negative impacts.

The impact of gender on results and outcomes was generally well-reported, with statistical analysis of this factor occurring in most studies. Different results for women and men were acknowledged in some studies, particularly in regards to improved functioning for women in Indonesia [23], and in the use of group therapy where women in Uganda appeared to gain more than men [27].

Interestingly, despite the higher prevalence of interventions targeted at children and adolescents, it was the adult groups that showed more significant improvements to their mental health post-intervention. In all four studies featuring children and teens, there were varied quantitative results demonstrating reduced mental health morbidity. In contrast, adult interventions in Uganda [27] and Guinea [26] showed reductions in

trauma and depressive symptoms and improved functioning over the duration of the study and during follow-up.

There was also an acknowledgement of the qualitative results of the interventions across both child and adult programs, which all authors included in their evaluations. These were related to creative expressions of psychosocial themes [23], opportunities for shy children to speak in a safe environment [25], training of community members who were able to continue services with little supervision post-intervention [26] and teachers gaining new perspectives and techniques [24].

A review of these programs provides a good basis for the development of a program working with refugees in Australia as the interventions can be tailored for implementation. It will be important to consider age, personality type and relationship with the mental health professional/paraprofessional in the study design.

Discussion

The studies included in this review show that community-based mental health services in both resettlement countries and countries of origin can improve several different health outcomes for refugee populations. The results were positive and statistically significant in most studies excepting one [23], although even this study discussed positive qualitative outcomes. All interventions led to suggestions for future design and implementation, which should help inform the design of other community-based interventions.

Themes

The underlying themes in the literature were cultural sensitivity, local adaptations to therapeutic methods, training of paraprofessionals and the use of native languages. There was a large emphasis on the use of appropriate locations for psychological approaches: whether in the home or school, the location was noted to be easily accessible and a 'safe' environment for sharing thoughts [28, 29].

Authors were also keen to note that there is value in addressing the ‘other’ needs of resettlement clients that act as stressors/barriers to their recovery [33, 34, 35, 37]. These needs included finances, employment and other practicalities of life. It also became apparent that the more 'successful' models used a multidisciplinary approach to acknowledge different genders, age groups and mental health needs.

Cultural sensitivity

Approaches to cultural sensitivity were varied and evident in differing degrees across the studies. One goal apparent across both interventions and ‘best practice’ discussions empowered local professionals or leaders into shaping program goals, strategy and methods [31]. Another common modelling concept was to include local healing methods [35] and link individuals to local healers [33], sometimes replacing typical Western methods. These approaches were not only evident in studies undertaken in the country of origin but also upon resettlement.

An emphasis on language and interpretation was consistent across all studies, regardless of location. The translation of materials and the use of locals as interpreters were key factors in the interventions and discussions on ‘best practice’. An interesting observation by Schulz et al [28] was that sharing in an acquired language is less

emotionally charged, so clients were asked to write in their native language to ensure that they dealt with the real emotions provoked by the trauma. In the US, 'language-matching' clients to service providers was found to effectively engage and retain refugees in the treatment, but not to impact clinical outcomes [29].

It was not only translation that arose as an issue of language, but the local understanding of mental health. Critique articles argued that psychological concepts such as PTSD and depression may be known in other cultures, but perhaps recognised, named and treated differently than in the West [31, 32, 35]. The application of local terms and symptoms for mental health conditions was effective in the Ugandan studies of Bolton and colleagues [25, 27], as well as in Mozambique [38], Sudan and Cambodia [35]. The localisation of psychological concepts alters the way programs function as even their evaluation, using common checklists and DSM definitions, may not be applicable. This adds another level of complexity to program design and makes it imperative to include community consultation as part of the process.

Community involvement

Ramaliu and Thurston [34] argue that best practices of community participation include: mobilising community systems; participatory community assessment; comprehensive communication strategies; commitment to community input; and adaptability to changing needs. Their model--which is supported by other authors [26, 31, 33, 35, 37]--commences with the community, rather than outsiders, defining their own mental health needs.

Employment and training of locals, some with existing levels of medical experience, was considered effective across those studies using this method [26, 27, 30, 35]. Even when

patient outcomes were not significant it was considered valuable to provide the community with newly-trained locals who could carry on the support after the intervention concluded.

A common theme that emerged from mental health programs in developing countries was supporting existing community structures for the intervention [23, 31, 32, 37]. This approach not only builds the relationship with locals but also ensures that the goals of the intervention continue to be met long after the research has concluded. This aspect is less important in post-migration settings, as structures are well established, but in refugee camps and post-conflict regions; rebuilding the community becomes part of the journey to recovery for both individuals and the entire population.

Settlement

Although the stress of being in the midst of a conflict situation has ended, refugees who migrate to a different country experience further pressures as they attempt to acculturate to the new environment. In discussions on best practice and intervention models [33, 34, 35, 37], it was suggested that addressing the ‘basic’ needs of refugees will aid them in their recovery from conflict-related trauma. Some of the barriers to accessing mental health services--such as concerns over housing, employment, immigration, training, benefits and children--are also barriers to recovery.

These post-migration stressors can compound the anxiety and depression already experienced [37]; therefore, it is important that mental health professionals do not limit their discussions with refugees to pre-migration traumas. Loss of a culture and home can have a similarly dramatic impact on mental health as the physical torture or death of

loved ones, especially when settling into a new place that is unfamiliar and possibly even--given current global immigration and asylum seeker policies--unfriendly [37].

Multidisciplinary approach

Certain psychological approaches had more impact on males as opposed to females, children as opposed to adults, and different cultures, as evidenced by the results of some studies. For instance, in Uganda it was discovered that adolescent girls with depressive symptoms responded to group psychotherapy better than boys of the same age [25], yet for adults with the same intervention there was no significant gender difference [27].

Best practice discussions suggested having flexibility to change protocols according to the needs of individuals and communities. One such suggestion was a case management model [29], which allowed clients to move among professionals in different fields including psychologists, traditional healers, language teachers and clinicians. Another suggestion was for centrally-trained paraprofessionals to implement what they had learned and to receive supportive follow-up visits in their home communities from workshop trainers [30]. The involvement of families and communities was a further counteraction to solely therapy-based interventions. This was especially evident in school-based interventions and those aimed at children [24, 26, 29, 30], which generally attempted to involve parents, teachers and neighbourhoods.

Limitations

Unfortunately, there were very few cost analyses among the studies reviewed. In general, mention was made of ‘feasibility to the environment’, which indicates that collaborations and funding designs had been explored. To assist with future intervention

design, it would be desirable for this information to be included. As many of the studies were conducted in low income countries, it could be assumed that funding would be more accessible in an Australian context.

Conclusion

The studies discussed here contribute to the knowledge base of mental health professionals dealing with refugee populations. They can also inform a study design for the Melbourne-based refugee intervention, one of the objectives of this study. The literature shows that community-based interventions, whether in schools, homes, or group settings, are valuable for improving the mental health of refugees. Nonetheless, it is clear that additional interventions and evaluations are required and necessary to draw consistent and conclusive judgments on best practice in dealing with refugee mental health issues. This further research may need to take place in post-resettlement countries as there are more resources available--despite a potential delay in the treatment of refugee mental health issues.

Longitudinal studies are one of the first requirements in assessing current models. It is imperative to know *how long* refugee populations may suffer after experiencing conflict-related trauma, so as to ensure that support mechanisms remain accessible for as long as needed. For instance, how long after the conflict situation are people impacted by the trauma? What factors facilitate or impede their resettlement and adjustment to the host country and impact their mental health? And what mental health issues in the current refugee groups can we expect in the future?

Many of the studies shown here were conducted in the country of origin or in refugee camps, where there remained an element of support from the refugees' own

countrymen. In order to apply the learning to the context of other countries, there is a need to explore the best intervention practice for scattered communities. For example, refugees coming to Australia may try to live close to people who have travelled with them, but this is often not possible and people become separated. As such, there is an added level of complexity in bringing together a new community or re-establishing one that is now separated by geographical location.

In addition to this we must consider the issue of localising the definitions of mental health. Across the studies considered in this review, it was noted that understanding local symptoms and definitions for conditions was an important step in reaching and addressing the community. Simply applying existing definitions and checklists to a different population than those for whom they were originally designed restricts the capacity of the tools to match the needs to the treatment. As evidenced by the Ugandan studies [25, 27], the use of a freshly designed assessment tool measuring culture-specific conditions was a beneficial addition to the program specifications.

Further suggestions for best practice in reducing conflict-related trauma in refugee populations included building on existing support mechanisms; recognising the ‘other’ stressors related to migration; the use of paraprofessionals and native languages; and, a wide-ranging approach that can be flexible to treatment needs--such as individual therapy or family counselling. These factors are not only important to mental health professionals dealing with refugees but also to other medical and social programs working to improve the lives of refugee groups.

The purpose of this study was to collate and appraise the effectiveness of research in the specific area of refugee mental health treatment, with the broader aim of learning

from the mistakes and achievements in order to competently design and implement a morbidity-reducing intervention for refugees experiencing the mental health consequences of conflict in their home country. This paper is the first step toward this goal; the second component is to conduct research in collaboration with refugee populations in Melbourne to determine their mental health needs.

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Appendix 1: Summary of articles

ID	Authors	Year	Title	Study type	Country of origin	Country of settlement	Focus group/size	Intervention	Length	Results
1	Bolton, P, Bass J, Betancourt, T, Speelman, L, Onyango, G, Clougherty, K, Neugebauer, R, Murray, L & Verdeli, H	2007	Interventions for Depression Symptoms Among Adolescent Survivors of War and Displacement in Northern Uganda: A Randomized Controlled Trial	Intervention	Uganda	Uganda	300 Adolescents - boys and girls	Group interpersonal psychotherapy	1 pw x 16 weeks (1.5-2hrs per session) + 1-2 individual meetings preceding	Both interventions were locally feasible. Group interpersonal psychotherapy was effective for depression symptoms among adolescent girls affected by war and displacement. Other interventions should be investigated to assist adolescent boys in this population who have symptoms of depression.
2	Tol, W, Komproe, I, Susanty, D, Jordans,M, Macy, R & De Jong, J	2008	School-Based Mental Health Intervention for Children Affected by Political Violence in Indonesia	Intervention	Indonesia	Indonesia	403 Children	Fifteen sessions, over 5 weeks, of a manualized, school-based group intervention, including trauma-processing activities, cooperative play, and creative expressive elements, implemented by locally trained paraprofessionals.	15 x 5 weeks	School-based intervention reduced posttraumatic stress symptoms and helped maintain hope, but did not reduce traumatic-stress related symptoms, depressive symptoms, anxiety symptoms, or functional impairment.
6	Schulz, P,Huber, L & Resick, P	2006	Practical Adaptations of Cognitive Processing Therapy with Bosnian Refugees: Implications for Adapting Practice to a Multicultural Clientele	Intervention	Bosnia	USA	Case samples from 80 Adults (Women in particular)	Cognitive Behavioural Therapy. Emotion-tolerance and self-soothing needs were addressed first, followed by addressing environmental factors, analyzing and challenging schemas, and having the client directly face the trauma experiences through exposure work. The average length of treatment of Bosnian refugees was 17 sessions, which were each 1 to 2 hours in duration	Avg of 17 sessions (1-2 hrs each)	Project experience concurs with others that close supervision of trauma therapists improves effectiveness when using empirically supported, cognitive- behavioral treatments for PTSD

ID	Author	Year	Title	Study type	Country of origin	Country of settlement	Focus group/size	Intervention	Length	Results
7	Fazel, M, Doll, H & Stein, A	2009	A School-Based Mental Health Intervention for Refugee Children: An Exploratory Study	Intervention	Various	UK	141 Children (including control groups)	Teachers were identified as the main referrers into the service and the mental health team assigned a key worker to each school. The core activity of the service was a weekly consultation at each school with the mental health key worker and the link teacher	Weekly consultations with teacher over 1 year as they referred students to clinical services	In this study, refugee children had poorer adjustment at baseline than both ethnic minority and indigenous white children as assessed by total SDQ score, the peer problems scale and caseness criteria. The greatest effect of the intervention was evident for the combined group of refugee children (those directly seen and those consulted about) in the hyperactivity and emotional symptoms scales. However, only those children receiving a direct clinical intervention from our service benefited from an improvement in their peer problems score
	Birman,D, Beehler,S, Merrill Harris,E, Everson,ML, Batia,K, Liautaud,J, Frazier,S, Atkins,M, Blanton,S, Buwalda,J, Fogg,L & Cappella,E	2008	International Family, Adult, and Child Enhancement Services (FACES): A Community-Based Comprehensive Services Model for Refugee Children in Resettlement	Intervention	Various	USA	97 Children & youth	Community-based mental health program providing comprehensive services to children, adolescents, and their families, from a variety of countries.An outreach oriented services model evolved from staff efforts to create a culturally sensitive and creative program around overcoming obstacles to providing services for refugees from a variety of different cultural and linguistic backgrounds.	Avg 92.55 service hours per participant over 3 years	Findings did not provide evidence that the quantity of services these refugee youth received contributed to their improvement, a finding consistent with previous studies on the lack of a dose-response relationship in children's psychotherapy and the importance of general underlying factors, such as therapeutic alliance in psychotherapy. One characteristic of the FACES service model is that services are individualized and provided to each participant at the level of intensity deemed necessary, as is true of ACT, MST, and other comprehensive and wrap-around treatment programs. Rather than adhering to a particular protocol that determines the type and dosage of services for all participants, FACES clinicians were more likely to provide intensive services to those they perceived to be in greater need.

ID	Author	Year	Title	Study type	Country of origin	Country of settlement	Focus group/size	Intervention	Length	Results
9	Miller,K & Billings,D	1994	PLAYING TO GROW: A Primary Mental Health Intervention With Guatemalan Refugee Children	Intervention	Guatemala & Argentina	Mexico	Workshops with 15-20 Children	Utilizes a variety of expressive arts techniques to assist children in safely and creatively exploring salient issues related to the unique experience of growing up in exile. Individual as well as collective drawing and painting provide children with opportunities to express their thoughts, feelings, and fantasies regarding a variety of preselected as well as open themes. Sociodrama and role-playing permit children to discover and examine critical aspects of their culture and history in a creative	5 x week workshops	The community schoolteachers developed a new set of teaching perspectives and techniques, and the children gave wonderfully creative expressions of important psychosocial, cultural, and historical themes. The children in both camps came to anticipate each session eagerly. They readily engaged in the different activities and expressed, through their art, sociodrama, and storymaking, many salient issues with which they were struggling. While themes of violence and bloodshed pervaded many of the drawings dealing with Guatemala, other more positive images of their homeland were expressed as well. Several shy children of both sexes became active participants, sometimes nonverbally (e.g., in drawings), sometimes verbally, in a supportive social context. In addition, intersex interactions took on new forms.
10	Stepakoff,S, Hubbard,J, Katoh,M, Falk,E, Mikulu,J, Nkhoma,P & Omagwa, Y	2006	Trauma Healing in Refugee Camps in Guinea: A Psychosocial Program for Liberian and Sierra Leonean Survivors of Torture and War	Intervention	Liberia & Sierra Leone	Guinea	Groups of 9 or 10 Adult clients for weekly sessions. Large group activities accessed by 15,000 people	The CVT–Guinea program included the following components: (a) training of refugee paraprofessional counselors, (b) clinical services, (c) social activities, (d) training of community leaders and other service providers, and (e) community awareness campaigns. Although the clinical services were the core component, the other elements are briefly described to provide a thorough and accurate picture of the nature and scope of the project. Group counseling sessions if 9 -10 people facilitated by trained paraprofessionals.	1 pw x 10 weeks (2 hrs per session)	Results from follow-up assessments indicated significant reductions in trauma symptoms and increases in measures of daily functioning and social support during and after participation in groups

ID	Author	Year	Title	Study type	Country of origin	Country of settlement	Focus group/size	Intervention	Length	Results
11	Harris,K & Maxwell,C	2000	A needs assessment in a refugee mental health project in North-East London: Extending the counseling model to community support	Discussion	Various	London	71 Adults	The intervention model developed included awareness raising and community mobilization, in addition to one-to-one clinical sessions. The empowerment, training and support of refugee community groups became a central part of the work, which helped to establish and then consolidate links between mainstream services and individual refugees.	Clinical sessions - time limited as per needs of clients	Groups will have become aware of the range of different services that can be accessed to respond to both health and nonhealth difficulties. It is also to be hoped that mental health professionals will become more confident and better informed in their contact with refugee patients, making use of both their own interventions and of the supportive networks formed by the refugee communities.
13	Eisenbruch,M, de Jong,J & van de Put, W	2004	Bringing Order Out of Chaos: A Culturally Competent Approach to Managing the Problems of Refugees and Victims of Organized Violence	Discussion	Various	NA	500,000 Ugandan Adults & 675 Cambodian Adults	9-step model that TPO has developed as a blueprint for each new intervention. Beneficiaries participate in determining priorities and there is an orientation toward culturally competent training, capacity-building, and sustainability.	NA	The TPO program attempts to address the problems of target groups of refugees, and beyond that it seeks to be useful for structuring a systematic and integrated public mental health response to large-scale human suffering. The objective of the program is realized through a design in which experiences from diverse fields and disciplines including public health, social science, mental health care, and rural development strategies are combined. A model has been developed integrating qualitative and quantitative research methods resulting in an intervention program applicable in diverse cultural settings.

ID	Author	Year	Title	Study type	Country of origin	Country of settlement	Focus group/size	Intervention	Length	Results
15	Ramaliu,A & Thurston,W	2003	Identifying Best Practices of Community Participation in Providing Services to Refugee Survivors of Torture: A Case Description	Discussion	Various	Canada	Adults	Service to survivors of torture is provided in a collaborative service model—a multiparty collaboration wherein working relationships have been built and refined among various professionals and organizations. a network of trained psychologists, medical doctors and other health professionals, social workers, and legal experts from private, government, and nonprofit sectors was formed. Considerate of principals of community development, the program began with input from the community, evolved through a community planning process, and generated a synergy effect in the community.	NA	A multidisciplinary collaborative service model that brings together different service sectors has been successfully achieved and sustained for several years. A common framework of understandings and agreements was used to create, and continues to maintain, this model.
19	Summerfield, D	1999	A critique of seven assumptions behind psychological trauma programs in war-affected areas	Discussion	Rwanda, Bosnia	Various	Adults	Various	NA	To guide both research and practice we need definitions of `health' and `mental health' which are indigenous and socialised, not merely `technical-medical', acknowledging the link which people make between well-being and their stake in equitable and culturally competent environments. Perhaps the primary task of interventions is to identify patterns of social strength and weakness, and reinforce local capacities.

ID	Author	Year	Title	Study type	Country of origin	Country of settlement	Focus group/size	Intervention	Length	Results
21	Ager, A	1997	Tensions in the psychosocial discourse: implications for the planning of interventions with war-affected populations	Discussion	NA	NA	Adults	Genuine empowerment of indigenous professionals in shaping program goals, strategy, and methods is clearly warranted if the aim is sustainable, culture-sensitive intervention	NA	It is proposed that the planning of psychosocial programs be governed by consideration of four phases of potential response. 1. The first phase involves ensuring that humanitarian-assistance efforts in any given setting are planned in a manner which involves minimal disruption of intact protective influences. 2. The second phase of response in circumstances where protection of surviving protective influences is considered insufficient to ameliorate experienced trauma is the re-establishment of protective influences. 3. Provision of compensatory support may, as a third phase of response, be warranted in such circumstances. 4. a fourth phase of response: targeted therapeutic intervention.
22	Silove, D	2004	The Challenges Facing Mental Health Programs for Post-Conflict and Refugee Communities	Discussion	East Timor & Various	Australia	Adults	Focused on two broad levels of intervention. The first was to contribute to the overall recovery program by offering consultancy, training, awareness-raising, and assistance in health policy formulation. Aware that we could not offer direct services to all those with the PTSD and related disorders, our small clinical program based on two expatriate workers, visiting psychiatrists, and 15 East Timorese trainees, focused specifically on those persons whose psychological problems were of such a nature as to compromise their capacity to survive in a chaotic environment.	NA	These practical experiences highlight the need for a more pragmatic epidemiology for mental health research in post-conflict settings. Instead of enumerating common, stress-related disorders, future research needs to focus more on the social consequences of mental disturbance in order to identify the subgroup at greatest risk of adverse outcomes if they are denied emergency treatment.

ID	Author	Year	Title	Study type	Country of origin	Country of settlement	Focus group/size	Intervention	Length	Results
24	Bolton,P, Bass,J, Neugebauer,R, Verdeli,H, Clougherty,K, Wickramaratne,P, Speelman,L, Ndogoni,L & Weissman,M	2003	Group Interpersonal Psychotherapy for Depression in Rural Uganda: A Randomized Controlled Trial	Intervention	Uganda	Uganda	Blocks of 15 villages for male participants and 15 villages for female participants. 631 Adult participants in total	Eight of the 15 male villages and 7 of the 15 female villages were randomly assigned to the intervention arm and the remainder to the control arm. The intervention villages received group interpersonal psychotherapy for depression as weekly 90-minute sessions for 16 weeks.	1pw x 16 weeks (90 mins per session)	Group interpersonal psychotherapy was highly efficacious in reducing depression and dysfunction. A clinical trial proved feasible in the local setting. Both findings should encourage similar trials in similar settings in Africa and beyond.

Figure I: Search Strategy and Results

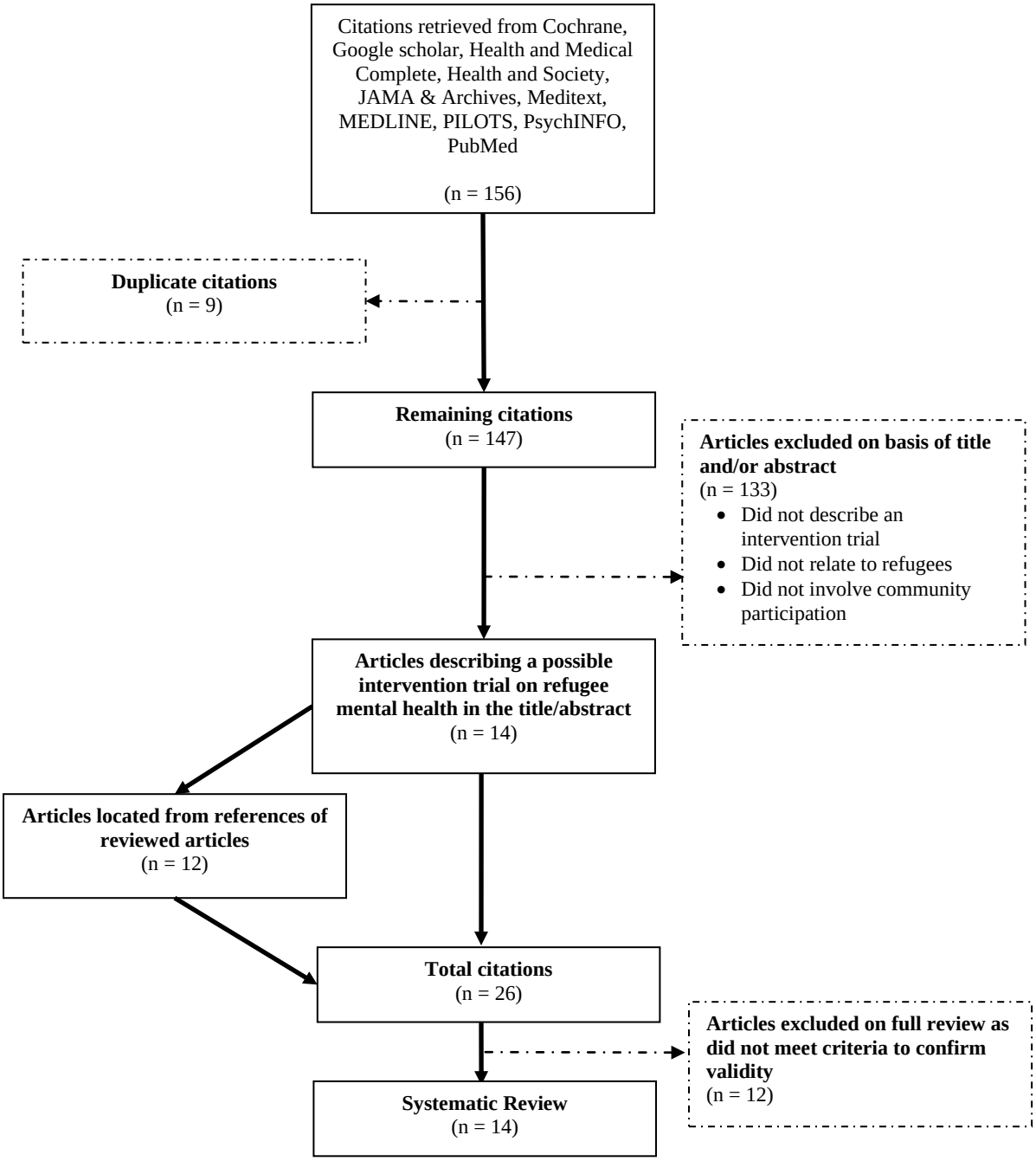

Table I: Grading of articles

Authors	Year	Title	Grade*
Bolton, P, Bass J, Betancourt, T, Speelman, L, Onyango, G, Clougherty, K, Neugebauer, R, Murray, L & Verdeli, H	2007	Interventions for Depression Symptoms Among Adolescent Survivors of War and Displacement in Northern Uganda: A Randomized Controlled Trial	**1**
Tol, W, Komproe, I, Susanty, D, Jordans,M, Macy, R & De Jong, J	2008	School-Based Mental Health Intervention for Children Affected by Political Violence in Indonesia	**1**
Schulz, P,Huber, L & Resick, P	2006	Practical Adaptations of Cognitive Processing Therapy with Bosnian Refugees: Implications for Adapting Practice to a Multicultural Clientele	**2**
Fazel, M, Doll, H & Stein, A	2009	A School-Based Mental Health Intervention for Refugee Children: An Exploratory Study	**2**
Birman,D, Beehler,S, Merrill Harris,E, Everson,ML, Batia,K, Liautaud,J, Frazier,S, Atkins,M, Blanton,S, Buwalda,J, Fogg,L & Cappella,E	2008	International Family, Adult, and Child Enhancement Services (FACES): A Community-Based Comprehensive Services Model for Refugee Children in Resettlement	**2**
Miller,K & Billings,D	1994	PLAYING TO GROW: A Primary Mental Health Intervention With Guatemalan Refugee Children	**2**
Stepakoff,S, Hubbard,J, Katoh,M, Falk,E, Mikulu,J, Nkhoma,P & Omagwa, Y	2006	Trauma Healing in Refugee Camps in Guinea: A Psychosocial Program for Liberian and Sierra Leonean Survivors of Torture and War	**2**
Harris,K & Maxwell,C	2000	A needs assessment in a refugee mental health project in North-East London: Extending the counselling model to community support	**2**
Eisenbruch,M, de Jong,J & van de Put, W	2004	Bringing Order Out of Chaos: A Culturally Competent Approach to Managing the Problems of Refugees and Victims of Organized Violence	**2**
Ramaliu,A & Thurston,W	2003	Identifying Best Practices of Community Participation in Providing Services to Refugee Survivors of Torture: A Case Description	**2**
Summerfield, D	1999	A critique of seven assumptions behind psychological trauma programmes in war-affected areas	**3**
Ager, A	1997	Tensions in the psychosocial discourse: implications for the planning of interventions with war-affected populations	**3**
Silove, D	2004	The Challenges Facing Mental Health Programs for Post-Conflict and Refugee Communities	**2**
Bolton,P, Bass,J, Neugebauer,R, Verdeli,H, Clougherty,K, Wickramaratne,P, Speelman,L, Ndogoni,L & Weissman,M	2003	Group Interpersonal Psychotherapy for Depression in Rural Uganda: A Randomized Controlled Trial	**1**

*1= Randomised control trial that met criteria for validity1

2=Cohort or case study intervention that met criteria for validity/Discussion/review of evidence based on cohort or case study groups

3=Discussion/review of evidence based on opinion, clinical or practical experience