REVIEW ARTICLE

MAPPING AND IDENTIFYING BARRIERS AND FACILITATORS TO MENTAL HEALTH AND PSYCHOSOCIAL SUPPORT INTERVENTIONS FOR WAR-AFFECTED CHILDREN

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ABSTRACT

Aim: to map MHPSS interventions for war-affected children, and to identify the barriers and facilitators for interventions targeting different layers of the MHPSS pyramid; to assess differences in methodology and study design to give a general outlook for potential future evaluation of interventions.

Materials and methods: A scoping review was conducted by utilising PubMed, Scopus, PsychINFO scientific databases (765 articles were found). In addition to IASC MHPSS intervention pyramid as our framework, we used a combination of inductive and deductive coding to find common themes in facilitators and barriers to the effectiveness of interventions within each layer. To geographically illustrate the locations of war-affected areas and their correlating intervention types, we developed a visual map

Conclusions: The phenomenon of unequal distribution of interventions (concentrated in West Asia, North and sub-Saharan Africa, with no interventions (found in literature) in South American or South-East Asia). III-rd level of IASC MHPSS Pyramid "focused, non-specialized supports", received great deal of efforts in MHPSS interventions conducted for children in war-affected areas.

Main barriers: increasing trauma-related symptoms; lack of parental or caregiver support impaired successful intervention outcomes for war-affected children; lack of political will and financial resources, difficulties in priority-setting, or an insufficient health workforce ongoing conflicts. Main facilitators: culturally appropriate design and collaboration with local stakeholders; caregiver involvement in interventions for war-affected children

KEY WORDS: mental health, intervention, mental health psycho-social supports, children, war affected areas

INTRODUCTION

Over 150 violent conflicts and 40 wars have affected millions of people in 2021, most of them taking place in Sub-Saharan Africa, South-Asia, and both American continents [1]. Referring to the Heidelberg Institute for International Conflicts it can generally be distinguished between wars, limited wars and violent crises, depending on the consequences and means of the respective conflict [1]. Conflicts affect millions of people directly, and the number of non-displaced children that keep living in close proximity to armed conflicts was estimated to be 368 million in 2017 [2, 3].

Children and adolescents have limited coping mechanisms and are therefore especially vulnerable to the adverse effects of armed conflicts [4]. There is a substantial amount of scientific literature highlighting the negative effect of armed conflicts and related traumatic experiences on minors (i.e. children and adolescents that have not yet reached fully legal status) [5;6;7]. These traumatic experiences as a consequence of exposure to death, violence, injury and destruction can lead to severe mental health problems like post-traumatic stress disorder (PTSD), depression, anxiety, sleep disturbance, grief or suicidal ideation [5; 8; 9]. The exact proportion of war-affected minors that develop mental health issues seems to be context-dependent [10]. However, a review by Vossoughi et al. [10] found that the prevalence of PTSD among children in some refugee camps was up to 87%. Another study by McMullen et al. [11] conducted among non-displaced children and adolescents in post-war Uganda found that 57% of the

screened school-children showed clinically significant levels of PTSD. Even though the mediators between traumatic experiences and adverse mental health outcomes are not fully known yet, there is evidence pointing to the mediating role of parental mental health problems, poor parenting, and low-quality peer relations [12]. Furthermore, the mental health status of children is challenged by other associated risk factors, such as impoverishment or lack of access to basic services like healthcare, education, or housing [13].

Responding to the mental health needs of war or disaster-affected populations, the United Nations instituted the Inter-Agency Standing Committee (IASC) in 2007 [14]. The IASC published guidelines on collaboration between agencies to set a standard for best practices to address mental health problems in emergency settings. These guidelines defined the term 'Mental Health and Psychosocial Support' (MHPSS) as "any type of local or outside support that aims promote psychosocial well-being and/or prevent or treat mental disorder" [15, p. 1]. In them, to protect or as well as in other literature, it is argued for the creation of evidence-based interventions and evaluation methods to prevent the establishing of non-effective or harmful practices [15; 16; 17]. Moreover, the IASC defined a set of core principles for MHPSS interventions, according to which they should promote human rights and equity, maximize the participation of affected people, do no harm, build on available resources and structures, integrate different services and programs, and deliver multi-layered support [15]. Delivering layered and complementary support

to address the needs of a population from multiple perspectives is central for improvements in overall mental health in war-affected areas [15]. Consequently, the IASC developed the "intervention pyramid for MHPSS in emergency settings" (Figure 1), which outlines four layers that interventions might target in order to improve mental health outcomes and that must be integrated [15]. The pyramid has been previously employed as a framework to analyze MHPSS interventions for war-affected children in low-middle-income countries (LMIC) in a systematic review by Jordans et al. [18], and will be used within this review. Despite the efforts of the IASC, humanitarian organizations and researchers, mental health issues as a consequence of conflicts receive limited attention from media, policymakers, and donors [19]. We identified a research gap in mapping and assessing different types of interventions and identifying their respective barriers and facilitators. Previous reviews on MHPSS interventions for war-affected populations often focused on LMIC only [18], used wider definitions [3], or focused on evaluation of the interventions [17].

AIM

This review aimed to map MHPSS interventions for war-affected minors, and to identify the barriers and facilitators for interventions targeting different layers of the MHPSS pyramid. Moreover, we aimed to assess differences in methodology and study design to give a general outlook for potential future evaluation of interventions.

MATERIALS AND METHODS

We conducted a scoping review to search for MHPSS interventions that have been implemented for minors in war-affected areas. The purpose of a scoping review is to determine the nature, size, and extent of existing literature on a specified topic [20]. Scoping reviews do not exclude studies based on quality criteria or synthesize the literature, but instead use a research question to broadly search, summarize, and chart the data [21]. Using this method, our review will identify and report the volume, types, evaluation methods, perceived effectiveness, and spatial distribution of available interventions for the target population.

SEARCH STRATEGY

The key concepts we used in our search were 'Mental Health Psycho-Social Supports' or 'MHPSS', 'intervention', 'children', and 'war affected areas'. We included synonyms and more commonly used terminology as keywords in each of the selected databases. The search for relevant literature was conducted in the following three electronic databases: PubMed, Scopus, and APA PsychINFO. We used Rayyan [22] to conduct a collaborative title and abstract screening process, and Endnote to track and manage references.

SELECTION CRITERIA

Study selections were made according to predefined inclusion and exclusion criteria. We assessed eligibility for each study based on the following selection criteria.

Studies that described or evaluated specific MHPSS interventions were included. A second inclusion criteria was the target population being children, or children along with their caregivers. Additionally, we selected studies of interventions which took place within areas affected by war, limited war, or armed conflict. Primary studies with the aforementioned criteria were included. Specific exclusion criteria also guided our review. First, we excluded articles examining interventions for externally displaced refugees. Due to the differing needs of child and adult populations, we excluded interventions which targeted adults. Similarly, because of the specific trauma experience of child soldiers, we excluded intervention studies designed specifically for this population, such as when the majority of participants were former child soldiers. To limit
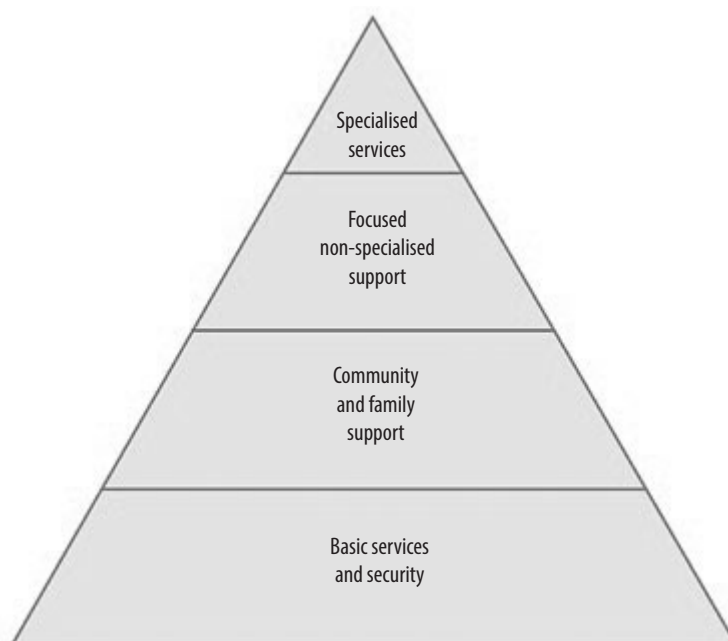

Fig. 1. Interventions pyramid for MHPSS in emergency settings. Figure from IASC (15, p. 11).

the scope and prioritize recent interventions aligned with current best practices, publications dated before 2012 were not selected. Studies were excluded if they were not published in English. If the articles were secondary sources or gray literature, we excluded them from our review.

SELECTION PROCESS

Using Rayyan, we integrated our search results from PubMed, Scopus, and APA PsychINFO, and deleted all duplicates. First, both authors conducted blindfolded title and abstract screening for at least 40% of the selected studies to reduce bias and ensure consistency in the selection of articles. Both authors discussed any conflicts to reach consensus. Then, both authors independently conducted title and abstract screening for the remainder of the studies. During the final step, both authors used a collaborative database to conduct full-text screening of the selected studies. Each author conducted full-text screening on half of the articles to finalize the list of included intervention studies based on whether the search and inclusion criteria were met.

DATA EXTRACTION

To gather data from the selected articles, we extracted information using an adapted pre-existing data extraction tool to meet our needs. Prior to data extraction, we piloted the tool using five selected articles. We extracted data in the following key areas.

We extracted data specific to the intervention design, including location and target population. To collect data on the interventions location, we tracked the district or city where it was implemented, and the correlating country. For the target population, we recorded whether the intervention was designed for all children, or specific ages or age groups, such as young children or teenagers, or for children alongside their caregivers. We also extracted information on the intervention type, objective, and description of services. In this category, we assessed whether the intervention was designed to reduce trauma symptoms or to build resilience.

In addition to descriptive information, we collected data on how the intervention was evaluated, including the study design, data collection methods, and measures for assessment. We recorded conclusions made by the study authors, including whether the intervention was perceived to be effective, and recommendations for future interventions. To further provide information about intervention effectiveness, we extracted data on explicit and implicit facilitators and barriers for each intervention.

DATA ANALYSIS

Our aim for this review was to assess the scope of available literature on existing interventions for children in war affected areas, our efforts focused on identifying themes for barriers and facilitators by summarizing and presenting the main data findings as they were found in the studies. We used the Intervention pyramid for mental health and psychosocial support in emergencies as our framework for data analysis [15]. This framework establishes four 'layers' in which emergency MHPSS responses established are generally categorized. This framework recognizes that as people have different needs following emergencies, the ideal system response is multi-layered and addresses each level on the pyramid [15]. The pyramid describes different types of support for basic needs of whole populations (e.g. through securing nutrition) and for the strengthening of protective family or community factors

(e.g. through educational activities or supportive parenting programs). Additionally it refers to non-specialized activities that consolidate mental health resources (e.g. group programs for survivors of violence), and more specialized support for a smaller percentage of the population with significant psychological impairments.

In addition to categorizing intervention studies according to the framework, we used a combination of inductive and deductive coding to find common themes in facilitators and barriers to the effectiveness of interventions within each layer. To geographically illustrate the locations of war affected areas and their correlating intervention types, we developed a visual map.

REVIEW

A total of 765 records have been identified in the three databases used for this review. Thirty-one of these met the inclusion criteria and have been analyzed in full text.

When analyzing the articles, it emerged that there are studies, and thus interventions, taking place in 13 different countries, with most of them being concentrated in certain geographic areas. It is important to notice that six of the analyzed studies [23-28] refer to the same intervention. Hence, the number of studies analyzed does not equal the number of interventions identified. As the Figure shows, there are two main geographic clusters of study locations that can be identified: one in Africa (i.e. Uganda, Rwanda, South Sudan, Democratic Republic of Congo (DRC), and Burundi) and one in the Middle Eastern region (i.e. Israel, Palestine, Iraq, Syria). However, there are also published studies that refer to interventions outside these clusters, but no articles identified refer to both of the American continents, or East Asia. All studies aimed at populations within a range of ages, as opposed to individuals of only one age. Most of them refer to a population until age 20; a relatively small number of interventions includes minors younger than ten years, and only one intervention (i.e. Cohen et al. [29]) reports targeting an age group completely below ten years. Furthermore, we identified how many interventions could be associated with each layer of the MHPSS pyramid, the results are illustrated in table I. Two of the interventions were assigned to two types of support simultaneously as they had multiple components which met criteria for both layers [30, 31].

COMMUNITY AND FAMILY SUPPORTS
Facilitators

The utilization of a resilience-based approach was reported as one effective method for providing support for war-affected children who do not typically access mental health services. Specifically, the Key to Resilience program in Israel trained youth group leaders to become peer mediators, and to build resilience for themselves and their younger charges [32]. Positive changes were reported indicating strengthened resilience, specifically, improvements in flexibility, social support, and knowledge (ibid.). Further, the use of existing community leadership was identified as a facilitator, as demonstrated through the Key to Resilience model, as well as the intervention implemented by the community-based NGO, Uyisenga N'Manzi. This intervention used a multi-layered approach including counseling, categorized as 'Specialized services', as well as adult mentorship and a solidarity camp, both cat-
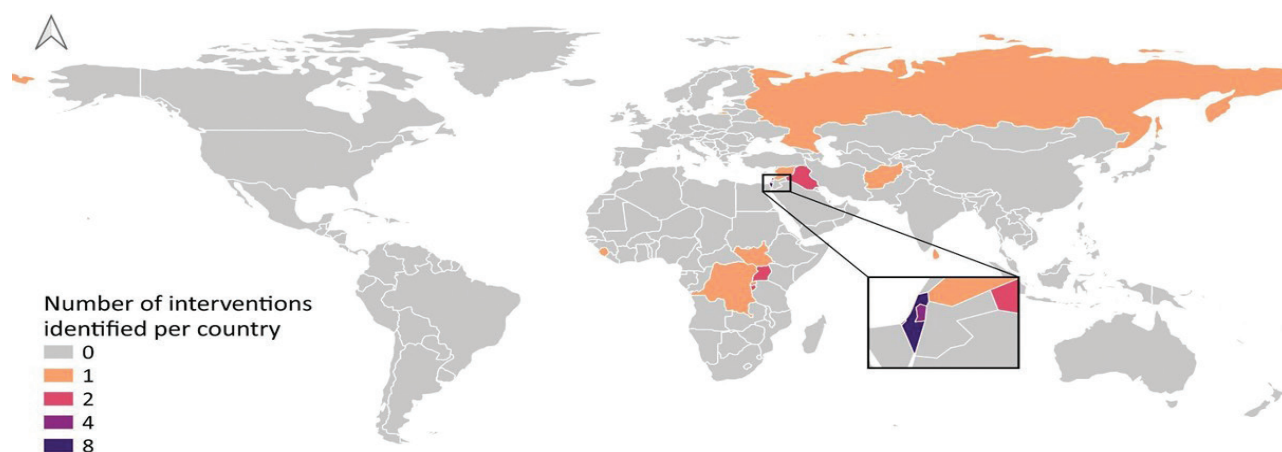
Fig. 2. Distribution of interventions identified within the analyzed studies around the globe.

Table 1. Number of interventions meeting the criteria of each MHPSS pyramid layer.

MHPSS Pyramid Layer	Number of interventions
I) basic services and security	0
II) Community and family support	6
III) Focused, non-specialized support	21
IV) specialized services	2

egorized as 'Community and family supports'. The study's authors contributed the high retention and participation rates, and overall effectiveness, to the community-driven program design [31]. Furthermore, this engagement of local stakeholders to design culturally appropriate interventions was identified as a key facilitator in the Strong Families (SF) Program in Afghanistan, which aimed at improving mental health of children by targeting caregivers and improving parenting practices [33]. Post-intervention questionnaire results demonstrated significant decreases in difficulties experienced by children affected by armed conflict (ibid.). The SF Program, along with an intervention based in Burundi, were two programs reported as effective in improving children's mental health by strengthening parenting skills [30; 33]. The effectiveness of the programs was partially attributed to delivery of the parenting sessions by trained lay workers as a means of feasibly implementing them in areas with limited resources [30; 33]. Also specific to feasibility, both interventions were described as "brief" or short-term, with the parenting sessions lasting approximately five hours over the course of several weeks (ibid).

Another theme we identified across interventions in this layer was specific to practical considerations. The

provision of a meal or refreshments during sessions, ensuring a pleasant and welcome atmosphere, and providing travel arrangements and quality childcare were noted as facilitators in interventions considered effective [29; 33]. The intervention named NAMAL consisted of a 10-session playfulness-based group parenting intervention for mothers and their children [29]. The group format and sense of support were facilitators for this intervention, which was found to be effective at improving the parent-child bond and changing behaviors. [29]. Furthermore, the involvement of locally established structures, such as community centers, as well as the integration of interventions into existing schedules, for instance class schedules, were reported as facilitators [30; 32; 34].

Barriers

The authors of one study in the 'Community and family supports' layer identified ongoing conflict during the intervention's implementation as a significant barrier for improved mental health outcomes. School Mediation Intervention (SMI) was described as a school-based program which trained older students in the Gaza Strip to act as peer mediators, and teachers as supervising facilitators, to alleviate mental health problems by improving conflict resolution and reducing disruptive school behaviors [34]. The intervention was not considered to be effective in its aims of reducing PTSD, depressive symptoms, and psychological distress, or in improving prosocial behavior, friendship quality, and non-aggressive behavior [34]. The conditions during the time of this intervention were described as "traumatizing," as the Palestinian children were exposed to severe military violence throughout the academic year [34]. The intervention only saw improvements of friendship quality among girls, and the maintenance of prosocial behaviors among children in the intervention group, when compared with deterioration of these factors in the control group (ibid). In contrast, ongoing armed conflict was not identified as a barrier in Key to Resilience and NAMAL, the other two 'Community and

family supports' interventions which were both considered effective in improving behavior and mental health outcomes for children affected by the Palestine-Israeli conflict [29; 32]. Further, while our findings identified ongoing conflict as an implicit contextual challenge in the SF Program, implemented in multiple regions across Afghanistan including the capital city of Kabul, it was not explicitly stated as a barrier and the intervention was considered effective.

One barrier identified by the authors evaluating the SF program was that fathers did not participate in the intervention [33]. The intervention targeted only mothers due to cultural norms of not allowing unrelated men and women to mix in groups [33]. While this barrier was found to limit the intervention, it was also necessary to preserve cultural appropriateness as was found to be a facilitator in the previous section.

FOCUSED, NON-SPECIALISED SUPPORTS
Facilitators

MHPSS interventions delivering focused, non-specialized services were found to be supported by facilitators similar to those improving community and family support. Impairing resilience-based knowledge, as opposed to targeting symptoms directly, has been found to be effective in multiple studies. Slone et al. [35] for example found that the effect of the Feeling Safe intervention, delivered in public schools in Israel, was facilitated through enhancing support, self-esteem, and self-efficacy, three resilience factors.

Additionally, O'Callaghan et al. [36] found that an intervention delivering cognitive-based behavioral therapy (CBT) in DRC benefitted from participation of a local ethics board in its planning. This facilitated designing a culturally appropriate intervention that utilizes local support systems and existing structures, and was a recurring theme in many analyzed studies. The I DEAL intervention in Uganda for example achieved this through inclusion of local facilitators in role play or drawing workshops [37], and a Teaching Recovery Techniques (TRT) intervention in Baghdad, Iraq integrated local mental health professionals in its delivery [38]. Furthermore, the utilization of manuals for staff members of the CBT intervention in DRC was identified as a facilitator that increased reliance and replicability between different people.

The creation of a safe, warming safe atmosphere was described to be an effective component of some interventions. The authors of a study evaluating a CBT-based intervention in Sierra Leone described that this was achieved through sessions fully closed for non-participants [39]. One of the studies evaluating a TRT intervention in Israel on the other hand achieved this through spending one of sixteen intervention sessions solely on creating that atmosphere, and starting every session with warm-ups [24]. Another study by Diab et al. [23], evaluating the same TRT intervention, found that improved relations to siblings was a facilitator of

this intervention. Improving relations to close social contacts was a recurring facilitator in many interventions. For example, Berger et al. [40] described the inclusion of caregivers during two sessions, as well as them giving feedback and providing support for the participants in doing intervention-associated homework as being beneficial. Moreover, improved peer relations seem to have had a positive effect on the outcomes of the I DEAL intervention in South Sudan through being in the very center of its delivery [41].

Barriers

A factor already mentioned as impairing interventions aiming to provide community and family support, ongoing armed conflicts, was also a major barrier identified among interventions targeting the third MHPSS pyramid layer. The ERASE program for example was previously shown to positively influence mental health outcomes among war-affected youth in other regions, but the resilience-based program delivered in Bethlehem, Israel was not able to improve anxiety or PTSD symptoms [42]. Barron et al. [43] similarly concluded that ongoing armed conflict in Palestine was a barrier to the CBT intervention analyzed in their study. Ongoing conflicts were related to another barrier: high drop-out and absence rates. This was an issue in the aforementioned I DEAL intervention in South Sudan, with other reasons besides ongoing armed conflicts being illnesses, national holidays, and housekeeping tasks [41]. Eiling et al. [41] also stated that missing parental support for the intervention was a barrier to its success, as parents perceived this intervention as "playtime" (ibid.). Furthermore, missing parental support was an issue in the intervention described by Numan et al. [38], where the parents did not see a link between the intervention and their children's educational needs.

Another barrier often described within the analyzed studies was a design not suitable for the respective context, due to being either too short or too simple. The Youth Readiness Initiative intervention was described as being too short, although it was generally effective [39]. Further, two studies evaluating a TRT intervention in Israel concluded it was too short (it consisted of 16 hours total intervention delivery time over four weeks) to efficiently address the complex needs of the war-affected children [27; 28]. However, the intervention still described an improvement in the general mental health status of the participants. Moreover, this intervention was described to be inefficiently tailored to the needs of the target population [26].

Lastly, as already mentioned among facilitators for interventions aiming to deliver focused, non-specialized support, consideration of the cultural context can also be a barrier, if done insufficiently. This was for example described by Shaheen et al. [42] for the ERASE program, as there were apparently dissimilarities between the intervention and the Israel-Palestinian context.

SPECIALIZED SERVICES

Facilitators

One study examined two interventions In Northern Uganda for war-affected youth alongside a control group. The first intervention was an evidence-based program named Interpersonal Psychotherapy for Groups (IPT-G), and the second was an activity-based intervention, Creative Play (CP). The evidence-based IPT-G intervention was found to be more effective overall in the treatment of depression when compared to CP, especially for female war-affected youth with no history of child soldier-related abduction. According to the study authors, one reason this intervention was chosen for the target population was its fit with Acholi culture due to its focus on interpersonal triggers and group relationships [44]. We found this demonstration of cultural sensitivity to be a key facilitator.

Barriers

The IPT-G intervention in Northern Uganda was less effective for male war-affected youth, and for children with a history of child soldier-related abduction. The study authors concluded that gender and a history of abduction should be taken into account in the design of future interventions, such as through a gender-specific design [44]. Separately, a barrier for current and future program implementation mentioned by the authors of the study describing the work of Uyisenga N'Manzi was that due to the limited resource setting, the current level of funds and training opportunities is inadequate to expand mental health services and fully optimize the potential of the intervention [31].

EVALUATION

We found no major differences or commonalities in the study design of interventions according to their pyramid layer categorization. Most intervention studies were conducted through quantitative or mixed methods study designs. Out of the 31 reviewed studies, a nearly equal number utilized individual or clustered random control trials (n=13) as those that used a non-randomized or non-controlled form of pre-and-post testing (n=14). The remaining four studies used either qualitative methods, including one case study, or did not include a formal evaluation method in the published study. All but four of the Randomized Control Trials (RCT) were used to evaluate interventions addressing the Israeli-Palestine conflict, with the others conducted in Sri Lanka, Sierra Leone, Uganda, and the Democratic Republic of the Congo. Further, over a third of the RCTs (n=5) evaluated different aspects of the Teaching Recovery Techniques (TRT) program implemented for the Palestine-Israeli conflict. For pre-and-post questionnaires, the length of time between the completion of the intervention and the final post-test evaluation ranged from one day to one year following the intervention, with several approaches also integrating mid-intervention data points. A common challenge reported across studies was the lack of long-term follow-up assessments to determine whether program impacts were maintained. The only exception was the Youth Readiness Initiative (YRI) which provided education subsidies to participants to attend school for a year, followed by the second treatment group the following year, thus allowing for continued long-term assessment opportunities (39). Effectiveness was most often measured through improvement in trauma symptoms including PTSD, depression, anxiety, functional impairment. A small minority of five interventions used a resilience-based, preventative approach by assessing improvements in protective or resilience factors, such as social support, self esteem, emotional regulation, social behavior, and stress coping ability.

DISCUSSION

RESULT SUMMARY

The geographic distribution of the analysed articles was concentrated in two main geographic clusters in Africa and West-Asia. For all the identified interventions, regardless of the MHPSS pyramid layer to which they were assigned, the most prominent facilitator mentioned was a culturally appropriate design. Additionally, a resilience-based approach, utilisation of local support mechanisms, structures, and stakeholders, creation of a warm and pleasant atmosphere, and strengthening parenting skills were found to facilitate interventions for war-affected minors. An ongoing armed conflict in the area of the intervention was frequently mentioned as a barrier as it increased stress, reduced the effectiveness of the intervention, and increased absence or dropout rates. Additionally, it was commonly mentioned that a lack of parental or caregiver involvement or support impaired successful intervention outcomes.

GEOGRAPHIC DISTRIBUTION

The identified MHPSS interventions were concentrated in certain geographic regions, with no interventions found in South American or South-East Asia. This contradicts how wars, limited wars, or armed conflicts are distributed globally. West Asia, North and sub-Saharan Africa, South America, and South-East Asia are the regions most affected by violent crises, according to the Heidelberg Institute for International Conflicts [1]. Hence, there seems to be a gap in either MHPSS interventions, or in published literature about them, especially in South-East Asia and South America. The phenomenon of unequal distribution of interventions can also be observed for programs targeting non-communicable diseases or mental health [55; 56]. Potential reasons mentioned in scientific literature are a lack of political will and financial resources, difficulties in priority-setting, or an insufficient health workforce [55; 56]. This provides a potential explanation for the distribution of interventions identified here not matching the distribution of violent crises in the world. However, these reasons do not explain why geographic areas such as South America and South-East Asia seem to be understudied in this regard.

IASC FRAMEWORK

Overwhelmingly, the majority of the identified published studies evaluated 'focused, non-specialized supports.' This finding is in line with a previous systematic review's discussion that although most interventions in humanitarian settings focus on strengthening support within communities and families, the majority of published studies evaluate 'focused' interventions, especially CBT models [18]. The socioeconomic model demonstrates that a child's development is largely influenced by their community, family, and society [57; 58]. Thus, if leveraged, the family can act as a supportive factor to provide emotional and social support, and create a protected environment [58; 59]. The need for more research on interventions in this area is demonstrated by the promising results shown by interventions within this layer [29-33]. Inadequacy in the number of rigorous evaluations and the diversity of intervention types were both identified as gaps in systematic reviews of MHPSS interventions published in 2009, and its replicated study in 2016 [18; 16].

FACILITATORS AND BARRIERS

The consideration of the cultural environment emerged as one of the most recurrent themes after analysing the facilitators and barriers of interventions in all layers of the MHPSS intervention pyramid. Cultural sensitivity facilitates the success of interventions, whereas missing considerations of the context have been described as a major barrier. This finding is in line with the core principles for MHPSS interventions defined by the IASC in 2007 [15]. One identified way of achieving this was through the involvement of community leaders in both the design and implementation process for interventions. Reported methods to involve community leaders included the use of a local expert agency to provide guidance [36], partnership with local stakeholders on the intervention design [33], engagement of youth group leaders to serve as peer mediators [32], and full ownership and oversight of the program by a local NGO [31]. Furthermore, cultural appropriateness of interventions was also identified as a facilitator in other contexts, such as interventions to prevent and manage chronic disease in Australia [59] or reducing overweight in a Mexican population living in the United States of America [60]. Hence, this finding can potentially be generalised for many interventions and a culturally appropriate design and can be achieved for example through collaboration with local stakeholders. Although this is nothing new, future intervention designers and researchers must take this into account and emphasize it more.

Another major barrier to successful interventions identified in this review was ongoing conflict, which negatively impacted mental health outcomes, attendance and dropout rates, and accessibility. Teaching Recovery Techniques (TRT), which aimed to aid in the processing of traumatic experiences, was not effective in reducing PTSD, depression, and psychological symptoms, or in improving emotional regulation (KS-CITE). This finding is consistent with prior research suggesting that the effectiveness of interventions aimed at reducing PTSD and other trauma-related symptoms will be limited while the conflict is active, or the trauma is still occurring [61]. The authors of the TRT study found a possible second barrier to symptom reduction to be a lack of adequate time to address the complex traumas faced by participants [24; 34; 43]. In contrast, short-term, "light-touch" interventions that also took place in areas experiencing ongoing conflict were found to be effective, with the short duration of the programs acting as facilitators [30; 33]. These interventions were not aimed at reducing PTSD and trauma symptoms, but were designed to improve parenting skills to strengthen family support [33], and provide psychoeducation to parents to improve their children's mental health [30]. This finding demonstrates that although certain treatment modalities are effective for trauma in specific circumstances, it is critical to consider feasibility and appropriateness of the model prior to implementing interventions in ongoing conflict contexts. As indicated in both systematic reviews by Jordans and colleagues, the shift to integrate more resilience-based interventions is growing in relation to efforts to support war-affected children [18; 16].

Further, as the need for interventions prevails in both post-war and ongoing war contexts, it seems necessary to identify factors to mitigate the negative effect of ongoing violence on these programs. Strategies to overcome connected barriers preclude ordinary solutions, as there is a weak evidence base on this and the needs of minors are impacted by a complex interplay of different factors [62; 63]. However, an intervention specifically tailored to a defined target population and considering cultural context was described as a promising strategy by Bennouna et al. [62]. Additionally, the involvement of parents or caregivers appears to be crucial as their presence was identified as a facilitator, and their absence as a barrier. Fishel and Ramirez [64] concluded in their review that there is a strong evidence-base supporting parental involvement in interventions for school children, and another study by Erbasi et al. [65] found their role to be crucial in interventions for children with hearing loss. These results verify the observations presented here and support the argument for considering caregiver involvement in interventions for war-affected minors. Despite this, there can be a dichotomy between a culturally appropriate intervention and the involvement of parents. A study included in this review by Haar et al. [33] identified missing involvement as a barrier to its success, although it was in line with the cultural norms in the regions in Afghanistan that mothers are responsible for childcare.

Our review included two articles which evaluated the application of the same school-based secondary prevention intervention in Burundi [30] and Sri Lanka [53]. Studies in Nepal [66] and Indonesia [67] also evaluated this intervention's effectiveness, but were excluded in our review due to their publishing dates. Mixed results were found across the different countries and contexts,

including worse outcomes in the intervention group for resiliency factors when compared to the control group in the final study in Burundi [30]. After this fourth study, the authors concluded that they do not recommend the use of this universally applied intervention for conflict-affected children due to the risk that it may interfere with a child's natural recovery process [30]. The implications of these findings were further discussed in an article by Ertl & Nuener (68), including two possible considerations for the future. The first is for the CBI intervention to focus solely on prevention and resiliency-building, as this may be considered a "safer,", and the second is to "screen and treat" children versus universally admitting all children into the same intervention [30; 68]. The thought to tailor interventions instead of universally applied interventions is supported by recommendations by multiple study authors, with recognition that this approach is not always feasible [26; 30; 34; 69].

STRENGTHS AND LIMITATIONS

A few limitations of the chosen review methodology should be noticed. This review included peer-reviewed articles from three databases, thus excluding any grey literature. Furthermore, articles were searched for in three databases. Thus, it cannot be ensured that all relevant publications were identified, even though the databases were chosen carefully. Lastly, there were six articles referring to the same intervention within the entirety of the analysed studies, which may have biased the results to a certain extent. However, this was considered when analysing the studies for this review.

There are also strengths of the chosen methodology that should be mentioned. First, high inter-researcher reliability was ensured in initial article screening as at least 40% of the studies were screened by both authors. Additionally, the use of the established MHPSS intervention pyramid as a framework to guide the analysis led to well-structured and logical investigation of the research aim.

CONCLUSIONS

The purpose of this review was to map MHPSS interventions for war-affected minors on a global scale, and to identify barriers and facilitators for interventions targeting different layers of the IASC framework. One main finding of this review was an unequal spatial distribution of interventions. The published interventions identified were concentrated in West-Asia, North- and sub-Saharan Africa, with no interventions found in literature in South-America or South-East-Asia. The third level of the IASC pyramidal framework level "focused, non-specialised supports", received a great deal of study publications on MHPSS interventions conducted for minors in war-affected areas. However, the overrepresentation of interventions within this layer points to a clear research gap in available rigorous evaluations of "community and family supports" programs (the second layer of the IASC framework) which may be more feasible and more community-oriented given the context. Main barriers for intervention effectiveness were often related to a lack of parental or caregiver involvement, demonstrating the need to engage those with the most agency to establish protective environments and foster long-term healing and resilience of children. Another main barrier identified are ongoing violence or conflicts that have a negative impact on mental health outcomes, attendance, drop-out rates, and accessibility. On the other hand, the main facilitator that was identified among the interventions analysed in this review is a culturally appropriate intervention design and the involvement of local stakeholders, which in turn facilitated culturally appropriate design processes. Further, the involvement of parents or caregivers in the interventions showed a positive influence on intervention outcomes.

Concluding from this, we recommend the implementation of the following suggestions for MHPSS intervention for war-affected children: (a) a community-responsive and culturally appropriate design process, such as through the involvement of community leaders into both the design and implementation processes for interventions, (c) a resilience-based approach that utilises local support mechanisms, structures, and stakeholders, (d) the creation of a warm and pleasant atmosphere and (e) the involvement of parents or caregivers as well as methods to strengthen parenting skills.

Researchers should consider increasing their effort to assess and publish literature on interventions in understudied regions. Further, there is the need to assess long-term effects of interventions to strengthen the evidence base regarding different layers of support delivered to war-affected children. Additional gaps remain in available knowledge on the most effective treatment modalities for children during prolonged armed conflict.

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* Contribution: A – Work concept and design, B – Data collection and analysis, C – Responsibility for statistical analysis, D – Writing the article, E – Critical review, F – Final approval.