Check for updates

Scoping Review: Digital Mental Health Interventions for Children and Adolescents Affected by War

Andrea Danese, MD, PhD, Dmytro Martsenkovskyi, MD, PhD, Barbara Remberk, MD, PhD,
Monika Youssef Khalil, MD, Emma Diggins, MB BChir, Eleanor Keiller, MA,
Saba Masood, MSc, Isang Awah, PhD, Corrado Barbui, MD, Renée Beer, MSc,
Rachel Calam, MClinPsychol, PhD, Marcio Gagliato, PhD, Tine K. Jensen, PhD,
Zlatina Kostova, PhD, James F. Leckman, MD, PhD, Stephanie J. Lewis, MBBS, PhD,
Boris Lorberg, MD, Olha Myshakivska, MD, PhD, Elisa Pfeiffer, PhD, Rita Rosner, PhD,
Jessica L. Schleider, PhD, Yulia Shenderovich, MPhil, PhD, Norbert Skokauskas, MD, PhD,
Patrick H. Tolan, PhD, Ernesto Caffo, MD, Marit Sijbrandij, PhD, Dennis Ougrin, PhD,
Bennett L. Leventhal, MD, John R. Weisz, PhD, the Global Resources fOr War-affected youth
(GROW) Network

Drs. Leventhal and Weisz are joint last authors of this work.

Objective: More than 200 million children and adolescents live in countries affected by violent conflict, are likely to have complex mental health needs, and struggle to access traditional mental health services. Digital mental health interventions have the potential to overcome some of the barriers in accessing mental health support. We performed a scoping review to map existing digital mental health interventions relevant for children and adolescents affected by war, to examine the strength of the evidence base, and to inform the development of future interventions.

Method: Based on a pre-registered strategy, we systematically searched MEDLINE, Embase, Global Health, APA PsychInfo, and Google Scholar from the creation of each database to September 30, 2022, identifying k = 6,843 studies. Our systematic search was complemented by extensive consultation with experts from the GROW Network.

Results: The systematic search identified 6 relevant studies: 1 study evaluating digital mental health interventions for children and adolescents affected by war, and 5 studies for those affected by disasters. Experts identified 35 interventions of possible relevance. The interventions spanned from universal prevention to specialist-guided treatment. Most interventions directly targeted young people and parents or carers/caregivers and were self-guided. A quarter of the interventions were tested through randomized controlled trials. Because most interventions were not culturally or linguistically adapted to relevant contexts, their implementation potential was unclear.

Conclusion: There is very limited evidence for the use of digital mental health interventions for children and adolescents affected by war at present. The review provides a framework to inform the development of new interventions.

Plain language summary: Digital mental health interventions have the potential to overcome some of the barriers in accessing mental health support for children and adolescents living in war affected regions. In this scoping review, the authors identified 1 study evaluating digital mental health interventions for children and adolescents affected by war and 5 for those affected by disasters. In addition, 35 interventions were identified through expert consultation as of possible relevance. The authors found very limited evidence for the use of digital mental health interventions for children and adolescents affected by war, and given this provide a framework to inform the development of new interventions.

Diversity & Inclusion Statement: We actively worked to promote sex and gender balance in our author group.

Study preregistration information: Digital mental health interventions for children and young people affected by war: a scoping review; https://osf.io/; hrny9.

Key words: war; mental health; children; adolescents; digital intervention

J Am Acad Child Adolesc Psychiatry 2025;64(2):226-248.

M ore than 200 million children and adolescents live in countries affected by violent conflict.[1] Most recently, the Russian invasion of Ukraine has brought war to European soil, leaving more than 5 million children and adolescents in need of humanitarian assistance.[2]

Children and adolescents affected by war have complex mental health needs.[3-6] Direct or indirect exposure to

multiple traumatic events can disrupt psychosocial development[7] and lead to a range of mental health problems, including not only post-traumatic stress disorder (PTSD) but also depressive disorder, anxiety disorders, conduct disorder, substance misuse, and others.[3,8] Such trauma-related psychopathology can interrupt education and result in self-harm and suicide attempts.[8,9] During and after war, these effects are compounded by ongoing threat, grief following the loss of loved ones, and parental psychopathology.[10] Furthermore, in response to the war, some young people may be able to remain in their home communities, whereas others may be internally displaced or may have to leave their countries as asylum seekers or refugees—with increasing levels of displacement, separation from their families, and disruption of their routines.

Six decades of research have produced effective interventions for youth mental health disorders and problems.[11,12] However, these beneficial interventions cannot be accessed by many young people in war-affected regions because of multiple barriers to providing mental health services and delivering psychosocial support.

Some barriers are psychological. Common trauma-related emotions (eg, shame, guilt), cognitions (eg, distrust, hopelessness), and behaviors (eg, avoidance, inactivity) may reduce engagement with mental health services, even when universal access to care is available.[13]

Some barriers are cultural. Limited mental health knowledge, stigma around mental illness, or concern about being stigmatized by others may prevent detection of mental health needs or make certain interventions unacceptable. These barriers are major impediments to mental health help-seeking in young people globally and are particularly prominent in some cultures.[14]

Other barriers are structural. War-related disruption of transportation systems (eg, by shelling) and of family and community networks (eg, because of displacement) can impede access to mental health services,[15] and refugees displaced to other countries may be hosted in asylum centers in remote areas with scarce local service provision. Countries in which refugees are resettled usually do not have enough mental health professionals speaking the language of refugees, and access to funding for trained translators is limited.[16] Furthermore, the limited specialist workforce trained in child and adolescent psychiatry or psychology can be easily overwhelmed by a rapid rise in demand for services.[15,17] Moreover, in this specialist workforce, training in assessment and treatment of trauma-related psychopathology is often inadequate to meet demand even in peacetime.[13]

Digital mental health interventions[18] have the potential to help overcome some key barriers to delivering mental health and psychosocial support to children affected by war.

For example, they can provide free, engaging psychoeducational materials to reduce stigma and increase help-seeking.[19] They can be promptly delivered with no or minimal contact with mental health professionals, directly reaching children and parents at times and places that are most convenient for them.[20] They can also widen the reach of the existing specialist and non-specialist workforce by supporting remote and/or asynchronous delivery of treatment and enabling training and supervision in assessment and treatment of trauma-related psychopathology.[21] Finally, they are supported by growing empirical evidence from randomized clinical trials showing that brief digital interventions, even those consisting of only a single session, can produce substantial mental health benefit.[22]

There are also important limitations of digital intervention that need to be considered in development and implementation phases. Although there has been a rapid growth in mobile communication and Internet access in low-and-middle-income (LMIC) countries that are more often affected by war,[23] access can be unequal (digital devide), so that more vulnerable and/or affected individuals may struggle more to use a mobile network, find charging facilities, and understand the functioning of devices or applications. Of course, the impact of war can also affect the availability or reliability of Internet access at the population level.

Based on this developing evidence, the World Psychiatry Association's (WPA) Commission on the Future of Psychiatry has named digital psychiatry as a key priority area for improving global mental health in the next decade.[24] This WPA Commission statement has been extended with a focus on child and adolescent mental health by the WPA Section on Child and Adolescent Psychiatry, the International Association for Child and Adolescent Psychiatry and Allied Professions (IACAPAP), the World Association for Infant Mental Health (WAIMH), the International Society for Adolescent Psychiatry and Psychology (ISAPP), the UN Special Rapporteur on the Right to Health, and representatives of the World Health Organization (WHO) Department of Mental Health and Substance Abuse.[25]

We have undertaken this scoping review to map and to describe the available digital mental health interventions that may be relevant for children and adolescents affected by war, and to provide evidence related to the global agenda of the WPA and other key stakeholders. We aimed to identify evaluations of digital mental health interventions in this area. We also aimed to identify promising resources that could be further tested in future studies or inform the development of new interventions. As such, we also reviewed digital mental health interventions developed in the context of natural disasters, which may be similar in scale and for the involvement of entire communities but

which also typically differ for the acute, non-interpersonal nature of the trauma and the greater availability of local support infrastructures.

METHOD

The scoping review was conducted in accordance with the Joanna Briggs Institute (JBI) Reviewer Manual[26] and the framework suggested by Arksey and O'Malley.[27] The protocol was registered on the Open Science Framework (https://osf.io/hrny9/). The scoping review is reported using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) (Table S1).[28]

We undertook an extensive consultation within the Global Resources fOr War-affected youth (GROW) Network, our large, multidisciplinary, international group of experts in the areas of emergency and disaster psychology, child and adolescent mental health, and digital mental health. This consultation assisted in planning the systematic database search and additionally enabled us to identify further studies and relevant resources (hereafter collectively referred to as interventions) not identified in our systematic search.

Interventions were included based on expert opinion if it included content that met the following criteria: (1) addressed presentations, concerns, and types of psychopathology relevant to war-affected young people; (2) were of good quality (ie, reflected safe and/or evidence-based principles); (3) were easy to understand (ideally co-produced with young people and families); (4) targeted different levels on needs in the population and delivery methods (ranging from self-guided psycho-education to delivery by specialist workers); and (5) were ideally available in multiple languages. Overall, the aim was to identify interventions that, albeit not developed or tested in the context of war, could be adapted and tested in further research.

Eligibility Criteria for the Systematic Search

Inclusion Criteria. Studies were included if they met the following criteria: (1) they considered digital mental health interventions, defined as the use of information and communications technology in support of mental health[29]; (2) they included evaluation of these interventions (eg, experimental designs, Non-controlled trials, randomized controlled trials); (3) the interventions aimed to improve promotion of well-being, or prevention or treatment of any mental illness (symptoms or disorders); (4) the interventions targeted children or adolescents (0-18 years of age); (5) the interventions might be relevant to children or adolescents affected by war (ie, living in war-affected countries, or internally or externally displaced); and (6) information on the interventions was published (eg, in scientific journals or on websites), without restrictions to language or geographic area.

Exclusion Criteria. Studies were excluded if they targeted only adults, or if they focused on digital tools for diagnosis, screening, monitoring, communication, or data management.

Search Strategy

We systematically searched MEDLINE, Embase, Global Health, and APA PsychInfo from the creation of each database to September 30, 2022 through Ovid (https://ovidsp.dc1.ovid.com/ovid-b/ovidweb.cgi). To retrieve gray literature of studies not published through traditional models, we also conducted a Google Scholar search and screened the first 10 pages of relevancy-ranked results (200 results).

We undertook 3 searches, progressively expanding the search terms (see https://osf.io/hrny9/). We used results from the last and most comprehensive systematic search, which included the following search terms: (telemedicine OR telehealth OR mobile health OR mhealth OR m-health OR digital health OR tele* OR digital* OR remote* OR video* OR Ehealth OR e-health OR electronic health OR virtual* OR Internet OR mobile app* OR web-based OR website OR online) AND (PTSD OR post traumatic* OR posttraumatic* OR post-traumatic* OR trauma OR traumat* OR stress OR depress* OR anxiety OR anxious OR mental health OR mental disorder OR psychological OR psychosocial OR wellbeing OR well-being OR coping) AND (child* OR adolescen* OR young people OR teen* OR youth* OR parent* OR famil*) AND (prevention OR intervention* OR treatment OR therapy) AND (war OR armed conflict OR community violence OR political violence OR disaster* OR displace* OR refugee* OR terror* OR sexual abuse OR rape OR loss OR grief).

Study Selection

The studies identified through the systematic search were deduplicated and downloaded into Rayyan.[30] Title, abstract, and full-text screening was conducted by 2 independent reviewers (DM, BLL). Discrepancies were reviewed in consultation with a third reviewer (AD), when required. If any retrieved article was in a language unknown to the authors, the article was translated into English by a native network member or by using Google Translate.

Data Extraction

A standardized form was developed for documenting extracted relevant information, which was modified after piloting on a small sample of articles. Information extracted for each study included the following: intervention name, author, description of the intervention, target of the

intervention, intended audience, delivery method, settings for the intervention, country in which the intervention was developed, language, digital elements, platform required to access the intervention, fees to access the intervention, access restriction, evidence for efficacy, link to intervention, and link to evaluation study.

For studies identified in our systematic search, 2 reviewers (BR and MYK) independently extracted the relevant data. Discrepancies were resolved in consultation with a third reviewer (AD), when required.

For additional interventions identified by GROW Network expert opinion, 3 reviewers (ED, EK, SM) each extracted data from one-third of the identified articles and then checked a third of another reviewer's data extraction. Discrepancies were resolved in consultation with a fourth reviewer (JRW), when required.

Data Synthesis
As in previous reviews and editorials on (non-digital) interventions for children and adolescents affected by war,[10,31,32] we have organized the results of the scoping review according to the Inter-Agency Standing Committee (IASC) intervention pyramid, as explained below.[33]

Levels 1 and 2 include universal interventions that are self-guided or guided by non-specialists and thus are typically aimed at children (or their parents/carers) who do not have current psychiatric symptoms, are at risk for developing symptoms, or have mild or transient symptoms.

Level 3 includes targeted interventions that are self-guided or guided by non-specialists and thus are typically aimed at children (or their parents/carers) who already have high level of symptoms.

Level 4 includes targeted interventions that are guided by specialists and thus are typically aimed at children (or their parents/carers) who either have persistently high level of symptoms or meet criteria for a disorder.

RESULTS
Search Results
The systematic search process is displayed in Figure 1. The systematic search identified 6 studies evaluating digital mental health interventions relevant for children and adolescents affected by war,[34-39] which are summarized in Table 1. Experts from the GROW Network identified 35 additional interventions,[40-74] which are summarized in Table 2. We therefore considered a total of 41 interventions.

Target Outcome
The interventions were aimed at 4 main targets. A total of 19 interventions focused on addressing specific psychological symptoms or disorders (9 on anxiety and on depression, 5 on PTSD, 2 on behavioral difficulties, and 1 on alcohol use, anger, or insomnia; in addition, 2 covered many of these symptoms and a broad range of other specific difficulties). A total of 15 interventions focused on coping with traumatic or stressful experiences (7 on war/displacement-related experiences, 6 on generic traumatic or stressful experiences, and 2 on rape). Six interventions focused on normalization and/or psycho-education. One intervention focused on managing emotional and behavioral difficulties in individuals with special needs, such as learning disabilities.

Level of Intervention
The majority of interventions (27) were for level 1 or 2 of the IASC intervention pyramid—universal interventions that are self-guided or guided by non-specialists, and thus are typically aimed at children (or their parents/carers) who do not have current psychiatric symptoms, are at risk for developing symptoms, or have mild or transient symptoms.

Fifteen interventions were for level 3 of the IASC intervention pyramid—targeted interventions that are self-guided or guided by non-specialists and thus are typically aimed at children (or their parents or carers/caregivers) who already have high levels of symptoms.

Ten interventions were for level 4 of the IASC intervention pyramid—targeted interventions that are guided by specialists and thus are typically aimed at children (or their parents/carers) who either have persistently high level of symptoms or meet criteria for a disorder.

Audience
The interventions were mainly for adolescents (24) or parents/carers (22), and a few (12) focused on children (we classified children and adolescents as participants younger than 12 years of age or between 12 and 18 years, respectively, or as described by the interventions when age range was not clearly provided). Of these, 8 interventions were for both adolescents and parents/carers and 5 were for children and parents. Three interventions were for non-specialist workers, and 3 were for specialist workers.

Settings
Most interventions (30) were developed in the general population, 8 in the context of war and/or displacement, and 3 in the context of natural disasters.

Country
A total of 15 interventions were developed (and, where relevant, examined) in the United States, 9 in the United Kingdom, 5 in the Netherlands, 3 in Norway, 2 in New

FIGURE 1 PRISMA Flow Diagram for the Systematic Search
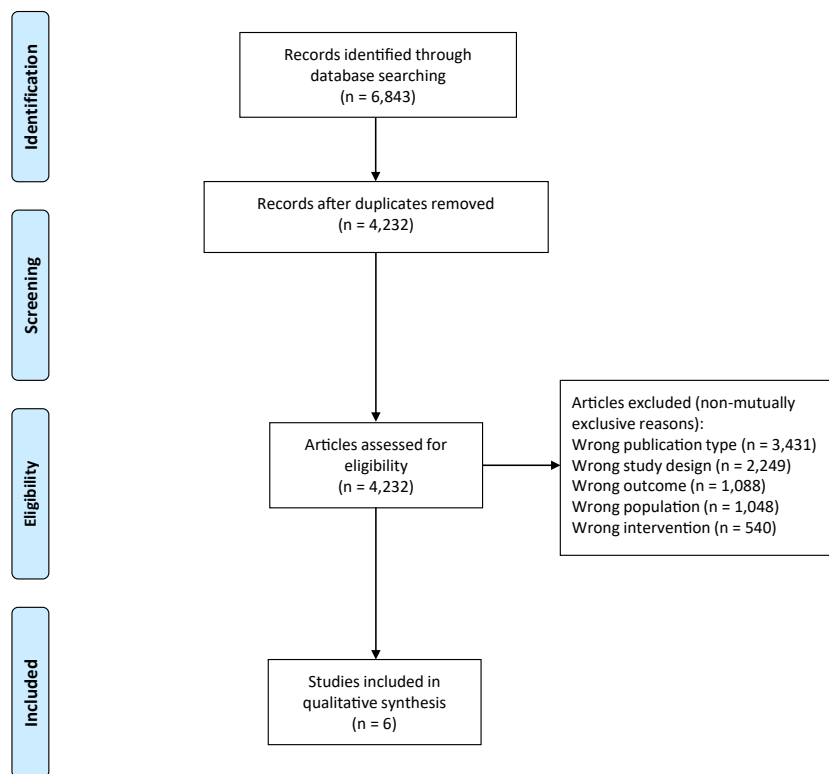
Zealand, and 1 intervention each in Australia, Canada, Denmark, Kenya, Poland, Sweden, Switzerland, or Ukraine.

Language

The majority of interventions (35) were available in English. Nine interventions were in Ukrainian, 4 in Arabic, Dutch or Russian, 3 in French or Norwegian, 2 in Farsi, German, Pashto, Spanish, or Vietnamese, and 1 in Chinese, Danish, Dari, Estonian, Finnish, Georgian, Greek, Hungarian, Italian, Korean, Japanese, Lithuanian, Malay, Myanmar, Romanian, Serbian, Slovak, Somali, Tigrinya, Tongan, Turkish, and Urdu.

Delivery

Most interventions (36) were delivered, or could be delivered, as self-guided interventions. Seven interventions were guided by a specialist worker, whereas 1 intervention was guided by a non-specialist worker.

Digital Elements

Most interventions relied on online text (33) and/or videos (25) to deliver their content, and some included online sound clips (4). Some used more interactive elements, such as games/exercises (17), messaging/chatbot (4), or phone calls (1).

Platforms

The majority of interventions (28) were hosted on websites that required only Internet and Web-browsing access, whereas some (13) required specific apps.

Fees

Most interventions (28) were freely available, whereas 5 had paid access and 8 had unclear costing.

Access

Most interventions (24) were open access, whereas 17 were restricted by either costs or geographic limitations (ie, they were openly available only in the country in which they had been developed).

Evidence

Most of the interventions (25) were not formally evaluated for their efficacy, whereas 11 were investigated with randomized controlled trials (RCTs) and 5 with non-controlled trials. Of the RCTs, 5 tested interventions at level 1 or 2, 6 tested interventions at level 3 (5 of them were self-guided, and 1 was guided by non-specialist workers), and 1 RCT tested an intervention at level 4 (the intervention was guided by a specialist worker but focused on a low-severity

TABLE 1 Studies on Digital Mental Interventions Relevant for Children and Adolescents Affected by War Identified by the Systematic Search

Name (author, year), reference)	Description	Key targets	Level of IASC intervention pyramid	Audience	Delivery	Settings	Country of development (language) Race/ethnicity in sample (%)	Digital elements	Platform	Fees	Access	Evidence	Intervention link	Study link
Bounce Back Now (Ruggiero, 2015)[34]	Modular CBT-based intervention in which adolescents and parents self-selected content from 4 multi-session modules for PTSD symptoms, depressive symptoms, alcohol use, and cigarette use	Specific symptoms (PTSD, depression, alcohol use)	1	Adolescents, parents/ carers	Self-guided	Natural disaster	US (English) 62.5 White, 22.6 Black, 3.8 other, 2.7 Hispanic; 11.1 declined to report	Online text, sound clips, and videos, interactive games/ exercises	Specific app	Free	Open	RCT with 987 young people affected by tornadoes and recruited irrespective of baseline mental health status. Intent-to-treat analyses found small improvements in PTSD symptoms[1] (Cohen d = 0.19) and depressive symptoms[2] (d = 0.14) and in alcohol use (d = 0.12) in adolescents at 12-mo follow-up	https://apps.apple.com/gb/app/bounce-back-now/id1584368927	https://www.jaacap.org/article/S0890-8567(15)00433-5/fulltext
Unnamed (Resnick, 2007)[35]	Video delivered immediately before to a forensic medical examination in the aftermath of sexual assault including description of key aspects of the examination, psycho-education about possible reactions to rape, and coping skills	Coping with trauma or stressful experiences (rape)	1	Adolescents	Self-guided	General population	US (English) 50.7 White, 44.3 African American, 2.1 Asian, 1.4 Hispanic, 1.4 Native American	Online videos	-	Free	Restricted (videos not publicly available)	RCT with 140 female victims of sexual assault 15 y or older (mean age = 26 y). Intervention led to reduction in PTSD[3] (d = −0.14), anxiety[4] (d = −0.19), and depression symptoms[5] (d = −0.30) at 6 wk after baseline in those with previous rape history, but worsening in anxiety[4] (d = 0.16), depression[5] (d = 0.08), and PTSD[3] (d = 0.02) symptoms in those without previous rape history. No group differences at 6 mo follow-up	—	https://www.sciencedirect.com/science/article/pii/S0005796707001076?via%3Dihub

TABLE 1 Continued

Name (author, year), reference)	Description	Key targets	Level of IASC intervention pyramid	Audience	Delivery	Settings	Country of development (language) Race/ethnicity in sample (%)	Digital elements	Platform	Fees	Access	Evidence	Intervention link	Study link
Happy Helping Hand (Schuler, 2022)[36]	Toolkit with simulations (with a psychologist or avatar) building coping skills in a series of life-like scenarios	Coping with trauma or stressful experiences (war, displacement)	3 or 4	Adolescents	Guided by specialist (or self-guided)	War, displacement	Norway (English, French, Norwegian, Ukrainian, Arabic) Race/ethnicity not reported	Online text and videos, games/ interactive exercises	Specific app	Free	Open	Non-controlled trial with 125 Syrian adolescent refugee in Lebanon. Intervention associated with significant improvement in anxiety and depression symtpoms[6] and in wellbeing[7] between pre- and post-treatment conditions	https://apps. apple.com/ gb/app/ happy-helping-hand/ id1584828621	https://www. emerald.com/ insight/ content/doi/1 0.1108/ IJMHSC-07-2 021-0060/ full/html
Sonoma Rises (Heinz, 2022)[37]	CBT-based toolkit on coping with traumatic experiences based on the US National Center for PTSD / National Child Traumatic Stress Network Skills for psychological recovery and the PTSD Coach app	Coping with trauma or stressful experiences (generic)	3	Adolescents	Self-guided	Natural disaster	US (English, Spanish) 71.4 White, 13.2 Hispanic/ Latino, 15.5 other	Online sound clips, interactive games/ exercises	Specific app	Free	Restricted (App not available to download after 2020)	Multiple-baseline single-case experimental design with 7 adolescents with PTSD symptoms. Due to small sample size, efficacy not formally evaluated	https://www. mysono mastrong. com/ index.php	https://psycnet. apa.org/ doiLanding? doi=10.1037% 2Fser0000576
Brave Online (Stasiak, 2016)[38]	CBT-based toolkit focused on anxiety symptoms	Specific symptoms (anxiety)	4	Children, adolescents, parents/ carers	Guided by specialist	Natural disaster	New Zealand (English) Race/ ethnicity not reported	Online text, sound clips and videos, interactive games/ exercises	Internet	Free	Restricted (Australia)	Non-controlled trial with 42 young people 18 mo after earthquakes. Intervention associated with reduction in anxiety disorder diagnoses,[8] anxiety symptoms, mood symptoms, and improvements in quality of life at 6 mo after baseline	https://exp.psy. uq.edu.au/ brave/	https://www. jaacap.org/ article/S08 90-8567(16) 30911-X/ pdf#related Articles

TABLE 1 Continued

Name (author, year), reference)	Description	Key targets	Level of IASC intervention pyramid	Audience	Delivery	Settings	Country of development (language) Race/ethnicity in sample (%)	Digital elements	Platform	Fees	Access	Evidence	Intervention link	Study link
Interapy (De Haas, 2009)[39]	CBT-based intervention providing coping advice after trauma and stressful experiences through online sessions and messaging	Coping with trauma or stressful experiences (rape)	4	Adolescents	Guided by specialist	General population	Netherlands (Dutch) Race/ethnicity not reported	Messaging/chatbox	Internet	Paid	Restricted (contact provider: www.interapy.nl)	Non-controlled trial with 8 adolescent victims of sexual assault 18 y or younger. Intervention associated with nominal reduction in PTSD,[9] anxiety,[10] and depressive[10] symptoms between pre- and post-treatment conditions	www.interapy.nl	https://www.interapy.nl/docs/wetenschap/de-haas-2009—interapy-behandeling-via-het-Internet-voor-jeugdige-slachtoffers-van-seksueel-geweld.pdf?sfvrsn=5e0fe2ac_2

Note: CBT = cognitive–behavioral therapy; IASC = Inter-Agency Standing Committee; PTSD = post-traumatic stress disorder; RCT = randomized controlled trial.

target, namely, depression onset). Of the non-controlled trials, none tested interventions at level 1 or 2, whereas 2 tested interventions at level 3, and 3 tested interventions at level 4.

Two of the 11 RCTs were identified by the systematic search. First, in an RCT of the Bounce Back Now modular CBT-based intervention with 987 adolescents affected by tornadoes and recruited irrespective of baseline mental health status, intention-to-treat analyses found small improvements in PTSD symptoms (Cohen d = 0.19) and depressive symptoms (d = 0.14) in adolescents at 12-month follow-up. Second, in an RCT of a psycho-educational intervention immediately preceding post–sexual assault examination with 140 female victims of sexual assault aged 15 years or older (mean age = 26 years), the intervention led to reduction in depression symptoms (d = −0.30), anxiety (d = −0.19), and PTSD (d = −0.14) at 6 weeks after baseline in those with a previous rape history but worsening in anxiety (d = 0.16), depression (d = 0.08), and PTSD (d = 0.02) symptoms in those without previous rape history; no group differences were found at 6-month follow-up. The remaining 9 RCTs were identified by experts from the GROW network to provide examples of interventions on a wide range of psychopathology (PTSD, depression, anxiety, sleep problems, disruptive behaviors) that might be adapted in the context of war.

DISCUSSION

This scoping review comprehensively mapped digital mental health interventions aimed at preventing or treating psychopathology among children and adolescents affected by war. Our focused systematic search identified a limited set of 6 relevant interventions, of which only 1 intervention focused directly on young people who experienced war, whereas others included young people who experienced disasters. The systematic search was complemented by input from topic experts, who identified several other interventions of potential relevance. This exercise has highlighted helpful resources and future challenges in the area.

Overall, the interventions identified span the different levels of the IASC intervention pyramid, from universal prevention to targeted and specialist-guided treatment. The interventions focused on normalization and/or psychoeducation about psychological responses to stress, information on coping with traumatic or stressful experiences, and treatment for the different types of psychopathology that are typically seen in children and adolescents exposed to trauma and in those who are refugees and asylum seekers.[3] However, the interventions do not specifically cover some issues that are common in the context of war, such as

TABLE 2 Digital Mental Health Interventions of Possible Relevance for Children and Adolescents Affected by War Identified by Expert Opinion

Name (author), reference	Description	Key targets	Level of IASC intervention pyramid	Audience	Delivery	Settings	Country of development (language)	Digital elements	Platform	Fees	Access	Evidence	Intervention link	Study link
BBC Bitesize: How to Boost Positivity for Your Family at Home (Danese)[40]	Blog with CBT-based advice for families on how to boost positivity at home	Specific symptoms (depression)	1	Parents/carers	Self-guided	General population	UK (English)	Online text	Internet	Free	Open	None listed	https://www.bbc.co.uk/bitesize/articles/zykkvwx	—
Families Under Pressure (Danese)[41]	Video animations delivering accessible CBT-based advice to support parents helping children and young people who are struggling with anxiety or depression	Specific symptoms (anxiety, depression, behavior difficulties)	1	Parents/carers	Self-guided	General population	UK (English, German)	Online text and videos	Internet	Free	Open	None listed	https://maudsleycharity.org/familiesunderpressure-emotions/; www.familienunterdruck.de	—
Keep Cool (Danese)[42]	Videos co-produced with young people to provide CBT-based advice on coping with strong emotions (anger, anxiety, sadness)	Specific symptoms (anger, anxiety, depression)	1	Adolescents	Self-guided	General population	UK (English)	Online text and videos	Internet	Free	Open	None listed	https://www.kcl.ac.uk/research/keepcool	—
Dare to Share (Child Mind Institute)[43]	Videos of celebrities and young people describing their own challenges and how they asked for help in order to normalize help seeking	Normalization, psycho-education	1	Children, adolescents, parents/carers	Self-guided	General population	US (English)	Online text and videos	Internet	Free	Open	None listed	https://childmind.org/daretoshare/?utm_medium=email&utm_source=email&utm_campaign=dts_wk4_2022-06&utm_content=dare_to_share	—

(continued)

TABLE 2 Continued

Name (author), reference	Description	Key targets	Level of IASC intervention pyramid	Audience	Delivery	Settings	Country of development (language)	Digital elements	Platform	Fees	Access	Evidence	Intervention link	Study link
Mental Health Is Health (MTV)[44]	Toolkit to normalize conversation on mental health and provide coping resources	Normalization, psycho-education	1	Adolescents, parents/carers	Self-guided	General population	US (English)	Online text and videos, interactive games/ exercises	Internet	Free	Open	None listed	https://www.mentalhealthishealth.us	—
Sleepio (Big Health Inc)[45]	CBT-based programme to treat insomnia	Specific symptoms (insomnia)	1	Adolescents, parents/carers	Self-guided	General population	UK (English)	Online text and videos, interactive games/ exercises	Specific app	Free	Restricted (UK)	Multiple RCTs	https://onboarding.sleepio.com/sleepio/nhs-sleepio/171#1/1	https://www.bighealth.co.uk/research/
Children and War Guide for Refugee Parents: Parent Guide (Children and War Foundation, Danish Red Cross)[46]	Phone app delivering parenting advice to support children through traumatic life events in a refugee situation	Coping with trauma or stressful experiences (war, displacement)	1	Parents/carers	Self-guided	War, displacement	Denmark / Norway (English, Danish, Norwegian, Pashto, Tigrinya, Serbian, Russian, Somali, Persian, Arabic, and Ukrainian)	Online text	Internet, specific app	Free	Open	None listed	https://apps.apple.com/us/app/parent-guide/id1247444812	—
Ukraine Parenting Response[47]	Online text with practical tips for parents to help themselves and their children cope during the current crisis in Ukraine	Coping with trauma or stressful experiences (war, displacement)	1	Parents/carers	Self-guided	War, displacement	UK (English, Russian, Ukrainian)	Online text and videos	Internet	Free	Open	None listed	https://ukraineparenting.web.ox.ac.uk/eng	—
Handhold (Massachusetts Department of Mental Health)[48]	Online text with practical tips for parents to help children and young people who are struggling with mental health difficulties	Normalization, psycho-education	1	Parents/carers	Self-guided	General population	US (English)	Online text and videos	Internet	Free	Open	None listed	https://handholdma.org	—

(continued)

TABLE 2 Continued

Name (author), reference	Description	Key targets	Level of IASC intervention pyramid	Audience	Delivery	Settings	Country of development (language)	Digital elements	Platform	Fees	Access	Evidence	Intervention link	Study link
Beebo App (UNICEF Ukraine)[49]	Phone app delivering parenting advice on how to provide mental health support and practical support (feeding/ nappies) children, and how to monitor child health (eg, vaccinations and milestones)	Normalization, psycho-education	1	Parents/carers	Self-guided	War, displacement	Ukraine (Ukrainian)	Online text and videos	Specific app	Free	Open	None listed	https://www.unicef.org/ukraine/en/press-releases/unicef-launches-bebbo-mobile-app-help-parents-care-children-during-war	—
Sesame Street[50]	Videos with coping skills for pre-school children in the context of war and crisis situations	Normalization, psycho-education	1	Children, parents/ carers	Self-guided	General population	US (English, multiple translations for some episodes)	Online videos	Internet	Free	Open	None listed	https://sesamestreetincommunities.org/subtopics/resources-in-ukrainian/	—
Inside Out (Disney Pixar)[51]	Feature film providing accessible information on emotions and coping skills for children	Normalization, psycho-education	1	Children, adolescents, parents/ carers	Self-guided	General population	US (English, multiple translations)	Online videos	Internet	Paid	Restricted	None listed	https://www.pixar.com/feature-films/inside-out	—
Heroes (Safarzyńska-Płatos)[52]	Short therapy books for children discussing difficult emotions related to war and fleeing to another country	Coping with trauma or stressful experiences (war, displacement)	1	Children	Self-guided	War, displacement	Poland (Ukrainian)	Online text	Internet	Free	Open	None listed	https://potrzebafantazji.com/bohaterowie/?fbclid=IwAR1ji2TddjBJFf1Q15xZeeGHDMqiPvokWRbtmXwaCyvxCyAzjSOQrHcG6o0	—

TABLE 2 Continued

Name (author), reference	Description	Key targets	Level of IASC intervention pyramid	Audience	Delivery	Settings	Country of development (language)	Digital elements	Platform	Fees	Access	Evidence	Intervention link	Study link
MindEd, Trauma and Coping Page (Danese)[53]	Online text/video providing psycho-education on responses to trauma and coping strategies	Coping with trauma or stressful experiences (generic)	1	Parents/carers	Self-guided	General population	UK (English)	Online text and videos	Internet	Free	Open	None listed	https://mindedfor families.org. uk/Content/ trauma_and_ coping/#/id/5 e3150ac12321 b4bca7242d7	—
Safe Place App (Barnen; Save the Children)[54]	Toolkit of coping skills to support young people who had difficult experiences, stress, difficulty sleeping and worries	Coping with trauma or stressful experiences (generic)	1	Children, adolescents	Self-guided	General population	Sweden (English, Swedish, Ukrainian)	Online text and videos, interactive games/ exercises	Specific app	Free	Open	None listed	https://apps. apple.com/de/ app/safe- place/ id1445174667	—
Do to Learn[55]	Toolkit for young people with special needs including social skills and behavioral regulation activities and guidance	Managing emotional and behavioral difficulties and improving skills relevant to those with special needs	1	Parents/carers, non-specialist workers	Self-guided	General population	US (English)	Online text and videos, interactive games/ exercises	Internet	Free	Open	None listed	https://do2 learn.com/	—
Lifeline for Kids (UMASS)[56]	Videos providing parenting advice to support children after challenging experiences	Coping with trauma or stressful experiences (generic)	1	Parents/carers	Self-guided	General population	US (English)	Online videos	Internet	Free	Open	None listed	https://www. umassmed. edu/cttc/pair- a-docs-video- series/	—

(continued)

TABLE 2 Continued

Name (author), reference	Description	Key targets	Level of IASC intervention pyramid	Audience	Delivery	Settings	Country of development (language)	Digital elements	Platform	Fees	Access	Evidence	Intervention link	Study link
Doing What Matters in Times of Stress (WHO)[57]	Online text/cartoons providing information on helpful coping skills to use at times of stress	Coping with trauma or stressful experiences (generic)	1	Children, adolescents, parents/carers	Self-guided	General population	Switzerland (Arabic, Chinese, Dari, English, Estonian, Farsi, French, German, Georgian, Greek, Hungarian, Italian, Korean, Japanese, Lithuanian, Romanian, Russian, Spanish, Slovak, Tongan, Turkish, Ukrainian, Urdu, Vietnamese)	Online text and sound clips	Internet	Free	Open	None listed	https://www.who.int/publications/i/item/9789240003927	—
Cool Little Kids (Rapee)[58]	Online text/videos delivering parenting advice to support shy or anxious children	Specific symptoms (social anxiety)	1	Parents/carers	Self-guided	General population	Australia (English)	Online text and videos	Internet	None listed	Restricted (contact authors)	RCT with 433 parents of children 3-6 y of age with inhibited temperament. Intervention led to improvement in child anxiety symptoms at 24 wk after baseline	https://coollittlekids.org.au/login	https://www.sciencedirect.com/science/article/pii/S0890856717301065
E-Health Programs[59]	Toolkit for children and adolescents with a range of mental health problems	Specific symptoms (very broad range)	1-3	Children, adolescents	Self-guided	General population	Netherlands (Dutch)	Online text and videos, games/interactive exercises, messaging/chatbox	Internet	Paid	Restricted	None listed	https://therapieland-nl.translate.goog/programmas/?_x_tr_sl=nl&_x_tr_tl=en&_x_tr_hl=en&_x_tr_pto=wapp	—

(continued)

TABLE 2 Continued

Name (author), reference	Description	Key targets	Level of IASC intervention pyramid	Audience	Delivery	Settings	Country of development (language)	Digital elements	Platform	Fees	Access	Evidence	Intervention link	Study link
First Aid to Terror[60]	Telegram-based chatbot for Ukrainians affected by war based on psychological first aid from WHO	Coping with trauma or stressful experiences (war, displacement)	1-3	Non-specialist workers	Self-guided	War, displacement	Netherlands (English, Ukrainian)	Online text, messaging/chatbox	Specific app	Free	Open	None listed	http://firstaidtoterror.com/	—
MindReSolve (Watkins)[61]	CBT-based toolkit targeting rumination to prevent depression in at-risk adolescents/young adults	Specific symptoms (worry, rumination)	1 or 4	Adolescents	Self-guided (or guided by specialist)	General population	UK (English)	Online text and videos	Internet	None listed	Restricted (contact authors)	RCT with 235 high-risk university students. Guided and non-guided intervention led to reduction in risk of depression onset	https://www.minddistrict.com/catalogue/reducing-worry-rumination-and-stress-mindresolve	https://www.jmir.org/2019/5/e11349/
Family Skills Programmes (United Nations)[62]	Set of programs providing parenting skills training across a range of scenarios and needs	Coping with trauma or stressful experiences (war, displacement, natural disaster)	1-4	Parents/carers	Self-guided	War, displacement, natural disaster	UK (English, Malay, Myanmar, Pashto, Russian, Ukrainian, Vietnamese)	Online text	Internet	Free	Open	None listed	https://www.unodc.org/unodc/en/prevention/family-skills.html	-
Dossier Oekraïne (EMDR Europe)[63]	Set of guidelines for EMDR healthcare professionals and hosts/carers to support young people from Ukraine	Coping with trauma or stressful experiences (war, displacement)	1-4	Parents/carers, non-specialist workers	Self-guided	War, displacement	Netherlands (English, Dutch)	Online text	Internet	Free	Open	None listed	https://www.emdr.nl/dossier-oekraine/#richtlijnen-emdr-europe	—
Project Empower (Schleider)[64]	Single session intervention for anxious parents to reduce parental accommodation	Specific symptoms (anxiety)	3	Parents/carers	Self-guided	General population	US (English)	Online text, interactive games/exercises	Internet	Free	Open	RCT with 301 parents who reported elevated anxiety symptoms and had children aged 4-10 y. Intervention led to reduction in parental	www.schleiderlab.org/empower	https://mental.jmir.org/2021/7/e29538/

TABLE 2 Continued

Name (author), reference	Description	Key targets	Level of IASC intervention pyramid	Audience	Delivery	Settings	Country of development (language)	Digital elements	Platform	Fees	Access	Evidence	Intervention link	Study link
												accommodation of child anxiety and overall distress tolerance from baseline to 2-wk follow-up in parents		
Project YES (Schleider)[65]	Single-session intervention on growth mindset and behavioral activation for adolescents with emotional symptoms	Specific symptoms (anxiety, depression)	3	Adolescents	Self-guided	General population	US (English)	Online text	Internet	Free	Open	RCT in 2,452 adolescents aged 13-16 y. Intervention led to reduction in depressive symptoms at 3 mo	www.schleiderlab.org/yes	https://www.nature.com/articles/s41562-021-01235-0
Project Shamiri (Osborn)[66]	Single session intervention on growth mindset, gratitude, and value affirmation for adolescents with emotional symptoms	Specific symptoms (anxiety, depression)	3	Adolescents	Self-guided	General population	Kenya (English, French, Arabic)	Online text	Internet	Free	Open	RCT in 103 adolescents. Intervention led to reduction in depressive symptoms at 2-wk follow-up. No significant effects on anxiety symptoms, well-being, or happiness	https://thrive-online.shamiri.institute	https://psycnet.apa.org/doiLanding?doi=10.1037%2Fccp0000505
SPARX (Merry)[67]	CBT-based intervention to reduce depressive symptoms in help seeking adolescents	Specific symptoms (depression)	3	Adolescents	Self-guided	General population	New Zealand (English)	Interactive games/exercises	Specific app	None listed	Restricted (contact authors)	RCT of 187 help-seeking adolescents in primary care. Intervention was not inferior to TAU with face-to-face contact after treatment and at 3-mo follow-up	https://www.sparx.org.nz/home	https://www.bmj.com/content/344/bmj.e2598

TABLE 2 Continued

Name (author), reference	Description	Key targets	Level of IASC intervention pyramid	Audience	Delivery	Settings	Country of development (language)	Digital elements	Platform	Fees	Access	Evidence	Intervention link	Study link
Coping Coach (Kassam-Adams)[68]	CBT-based game on coping with traumatic experiences for young people physically recovering following injury or sudden illness	Coping with trauma or stressful experiences (generic)	3	Children, adolescents	Self-guided	General population	US (English)	Interactive games/ exercises	Internet	None listed	Restricted (contact authors)	RCT with 72 children over 6 wk. Most children used the intervention; half completed it. Intervention led to reduction in PTSD symptoms at 6 wk and 12 wk	https://injury. research.chop. edu/blog/ posts/coping-coach-web-based-game-help-children-recover	https://www. science direct. com/ science/ article/pii/ S00057967 07001076? via% 3Dihub
Strongest Families Intervention (Sourander)[69]	Parent training program for parents of children with disruptive behavioral problems	Specific symptoms (behavioral difficulties)	3	Parents/carers	Guided by non-specialist	General population	Canada (English, Finnish)	Online text and videos, phone call	Phone, Internet	None listed	Restricted (to referred families)	RCT with 464 parents of children 4 y of age with high level of disruptive behavioral problems identified through whole-population screening. Intervention led to improvement in externalizing and internalizing symptoms in children at 12 mo after baseline	https://strongest families.com	https://jama network. com/ journals/ jama psy chiatry/full article/24 94708

(continued)

TABLE 2 Continued

Name (author), reference	Description	Key targets	Level of IASC intervention pyramid	Audience	Delivery	Settings	Country of development (language)	Digital elements	Platform	Fees	Access	Evidence	Intervention link	Study link
TF-CBT Triangle of Life[70]	App to assist therapists in delivering trauma-focused cognitive—behavioral therapy to children and adolescents	Specific symptoms (PTSD)	4	Children, adolescents, specialist workers	Guided by specialist	General population	US (English)	Online text, interactive games/exercises	Specific app	None listed	Restricted (US)	None listed	https://apps.apple.com/us/app/tf-cbt-triangle-of-life/id978441894	—
Min hverdag (My Everyday Life; Birkeland)[71]	App to assist therapists in delivering trauma-focused cognitive—behavioral therapy to children and adolescents	Specific symptoms (PTSD)	4	Children, adolescents, specialist workers	Guided by specialist	General population	Norway (Norwegian)	Online text, interactive games/exercises	Specific app	None listed	Restricted (contact authors)	None listed	https://www.nkvts.no/english/project/my-everyday-life/	https://osf.io/2hdp4
VEVO (Processing and Strengthening Online; Omgeving)[72]	App to assist therapists in delivering trauma-focused cognitive—behavioral therapy to children and adolescents	Specific symptoms (PTSD)	4	Children, adolescents, specialist workers	Self-guided	General population	Netherlands (Dutch)	Online text and videos, interactive games/exercises	Specific app	None listed	Restricted (contact authors)	None listed	https://www-jouwomgeving-nl.translate.goog/nieuws/2017/7/18/nieuwe-module-versterken-en-verwerken-online/?_x_tr_sl=nl&_x_tr_tl=en&_x_tr_hl=en&_x_tr_pto=wapp	—
Minddistrict[73]	Toolkit for adolescents and parents/carers with various mental health problems	Specific symptoms (very broad range)	1-4	Adolescents, parents/carers	Self-guided (or guided by specialist)	General population	UK (English)	Online text and videos, interactive games/exercises, messaging/chatbox	Internet, specific app	Paid	Restricted	None listed	https://www.minddistrict.com/catalogue/interventions?filter=Youth	—

(*continued*)

TABLE 2 Continued

Name (author), reference	Description	Key targets	Level of IASC intervention pyramid	Audience	Delivery	Settings	Country of development (language)	Digital elements	Platform	Fees	Access	Evidence	Intervention link	Study link
LIFT (Jaycox)[74]	CBT-based school-based program for adolescents with symptoms of anxiety, depression, or PTSD	Specific symptoms (anxiety, depression, PTSD)	3	Adolescents	Self-guided	General population	US (English)	Online text and videos, interactive games/exercises	Internet	Paid	Restricted	Non-controlled trial with 51 adolescents with anxiety, depression, or PTSD symptoms. Intervention associated with improvements in PTSD symptoms but not in depressive or anxiety symptoms	https://www.lift-program.org	https://www.sciencedirect.com/science/article/pii/S0005796707001076?via%3Dihub

Note: CBT = cognitive–behavioral therapy; EMDR = eye movement desensitization and reprocessing; IASC = Inter-Agency Standing Committee; PTSD = posttraumatic stress disorder; RCT = randomized controlled trial; TAU = treatment as usual; WHO = World Health Organization.

TABLE 3 Recommendations for the Development of New Digital Mental Health Interventions

- To develop and/or adapt interventions so that they are culturally and developmentally appropriate—ie, engaging communities affected by war and particularly young people, in locally spoken languages.
- To test interventions adequately (eg, with RCTs in war-related settings), particularly those targeting higher levels of the IASC intervention pyramid and, thus, greater severity of the conditions and greater associated risks.
- To include content on war-related issues, eg, separation from one or both parents, worry about a parent who is on a battlefield, and ongoing loss and grief.
- To consider upfront common barriers to implementation, such as cost, data protection, culpability, and digital poverty/divide.
- To consider the integration with the broader range of scalable psychosocial interventions used in humanitarian contexts.

Note: IASC = Inter-Agency Standing Committee; RCTs = randomized controlled trials.

separation from 1 or both parents, worry about a parent who is on a battlefield, or ongoing loss and grief. Of note, most interventions directly targeted young people and parents/carers and were self-guided, thereby potentially improving access to psychological support without increasing demand on typically limited and strained clinical services. As such, the interventions have the potential to enhance mental health care capacity in a cost-effective fashion.[24] To fulfill this premise, future studies will need to ensure efficacy and support implementation. A summary of our reccomendations is displayed in Table 3.

Only a quarter of the interventions identified were formally tested for their efficacy through randomized controlled trials. Universal, low-intensity interventions (levels 1 and 2), which provide normalization messages and essential psycho-educational materials, are typically conceptualized as useful and safe, and therefore are often implemented even without a strong evidence base.[19] However, only 6 of the 15 interventions at level 3 (40%) and 1 of the 10 interventions at level 4 (10%) were tested in RCTs. Because of the greater severity of the conditions targeted at higher levels of the IASC intervention pyramid and greater associated risks, it is crucial to further test digital mental health interventions before large-scale implementation.

With regard to targeted interventions that are either self-guided or guided by non-specialist workers (level 3), there is initial evidence in adults that self-guided interventions may be effective in reducing PTSD symptoms and comorbid depressive and anxiety symptoms.[75] However, it is unknown whether the findings generalize to children and adolescents, and specifically those affected by war. In addition, there is evidence in adults to suggest that self-guided interventions for depression may lead to smaller improvement when compared to guided interventions.[76] Therefore, it is important also to develop new digital mental health interventions involving non-specialist workers already working with children and adolescents (eg, teachers,

nurses, etc). Building on the task-shifting paradigms frequently used in LMIC countries,[24,77,78] these interventions could boost the delivery of targeted and guided interventions even when the local specialist clinical capacity is limited.

With regard to targeted interventions that are guided by specialist workers (level 4), preliminary evidence in adults suggests that such interventions might be beneficial for general[79] and trauma-related psychopathology.[80] However, it is again unknown whether the findings generalize to children and adolescents affected by war. Ongoing trials of specialist-guided digital mental health interventions for trauma-related psychopathology in children and adolescents (eg, Smith *et al.*[81])will make an important contribution to the field.

Overall, there remain many open questions about the efficacy of digital mental health interventions for children and adolescents affected by war, including effects in controlled trials, non-inferiority to face-to-face interventions, digital placebo effects, optimal levels of guidance, cost-effectiveness, adverse events, mechanisms of change, and predictors of efficacy and dropout. Future research will require closer collaboration among clinicians, app developers, statisticians, young people, and their families.

Beyond the focus on efficacy, it is important to consider potential barriers to implementation of digital mental health interventions[82] to maximize their dissemination in relevant settings.[83] Common barriers to the dissemination of digital mental health interventions, such as cost, data protection, and culpability, are also relevant here.[84]

There are also several compounded challenges regarding the appropriateness or acceptability of, and engagement with, existing digital interventions. It is unclear whether existing interventions are appropriate to the mental health needs of children and adolescents affected by war. First, the majority of interventions identified (80%) were not developed in the context of war and/or displacement, and those

that have been developed in relevant settings are low-intensity interventions (lower levels of the IASC intervention pyramid) and untested. Three additional interventions (at higher levels) were developed in the context of natural disasters, but their generalizability to the context of war and/or displacement is unclear because of the differences in traumatic experiences (non-interpersonal and acute vs interpersonal and chronic, respectively) and related clinical presentations[8,85] and in the presence of local support infrastructures.[19] Second, most interventions were not culturally or linguistically adapted to the relevant contexts. Less than 10% of the interventions were developed in LMIC countries in which war and/or displacement typically occur. Furthermore, most interventions are not available in languages other than English, which is not fluently spoken in many areas affected by war and/or displacement. Future work will need to focus on strategies for efficiently translating—both linguistically and culturally—well-tested interventions, with attention to retaining the effective functions of the interventions,[86] if the interventions are to cross national and regional boundaries to address the needs of young people in diverse parts of the world.

Future work will also need to more directly target uptake and continued engagement, which are typically low for digital mental health interventions[18,87,88] and are recognized as a specific challenge in trauma-exposed individuals.[89] Only a small minority of interventions were specifically co-designed and co-produced with children and adolescents. However, the creation of psycho-educational messages and interventions for children and adolescents has to be responsive to the particular developmental needs of these age groups, the language that they use, their ways of conceptualizing mental health problems, and their preferences for interventions.[90] To maximize engagement, co-design and co-production should be recognized as a necessary component of new digital mental health interventions.[91] Furthermore, most interventions identified relied on online text or videos to deliver their content, simply digitizing content that was previously available in leaflets or books. This is useful because of the wealth of information available in these formats. It may even be necessary in contexts in which digital poverty makes access to more complex digital resources impossible. However, there may be further opportunities to engage the audience and to increase adoption of the interventions through interactive features, such games/exercises or messaging/chatbot.[92]

The development and implementation of digital mental health interventions for war-affected children and adolescents must be integrated within the broader range of scalable psychosocial interventions used in humanitarian contexts. Current preventative psychological and social interventions do not show evidence of efficacy in children and adolescents affected by humanitarian crises.[93] In contrast, treatment interventions in the same contexts show some evidence of efficacy for PTSD but not for depression or anxiety.[94-96] In particular, there is initial evidence for the efficacy of group interventions for children and adolescents with PTSD.[97-102] At the same time, trauma-focused evidence-based treatments, such as trauma-focused cognitive–behavioral therapy (TF-CBT) or eye movement desensitization and reprocessing (EMDR), have been demonstrated to be effective in children who have experienced war trauma.[103] Although they are normally delivered in person, they can be adapted for online and remote delivery to children and their families (TF-CBT: https://tfcbt.org/telehealth-resources/; EMDR: https://globalchildemdralliance.com). Digital technologies have the potential to significantly expand the delivery of such interventions[83] through both self-guided and non–specialist-guided interventions that can reach children, adolescents, and their families at convenient times and places. However, it is necessary to thoroughly evaluate the new digital technologies to ensure that they do not inappropriately divert resources from alternative, non-digital approaches.[29]

Major public health emergencies, such as those triggered by war, can provide both the impetus and the opportunity to innovate and to advance existing health care systems. Our review of the literature did not find digital mental health interventions that have a sufficient evidence base to be readily implemented in current conflict areas, including Ukraine. To realize the potential of digital mental health interventions for children and adolescents affected by war, future work will need to address the development and implementation challenges highlighted by our review.

Prof. Danese and Dr. Lewis are with the Institute of Psychiatry, Psychology and Neuroscience, King's College London, London, United Kingdom, and South London and Maudsley NHS Foundation Trust, London, United Kingdom. Dr. Martsenkovskyi is with Bogomolets National Medical University, Kyiv, Ukraine; SI Institute of Psychiatry, Forensic Psychiatric Examination and Drug Monitoring of Ministry of Health of Ukraine, Kyiv, Ukraine; and National Children's Specialized Hospital OHMATDYT, Kyiv, Ukraine. Prof. Remberk and Dr. Khalil are with Institute of Psychiatry and Neurology, Warsaw, Poland. Dr. Diggins is with the University of Leeds, Leeds, United Kingdom; and Leeds Community Healthcare NHS Trust, Leeds, United Kingdom. Mss. Keiller and Masood, and Prof. Ougrin are with Queen Mary University of London, London, UK; East London NHS Foundation Trust, London, United Kingdom. Dr. Aawah is with the University of Oxford, Oxford, United Kingdom. Prof. Barbui is with the University of Verona, Verona, Italy. Ms. Beer is with EMDR Europe Association, Lausanne, Switzerland. Prof. Calam is with the University of Manchester, Manchester, United Kingdom. Prof. Gagliato is with The Mental Health and Psychosocial Support Network — MHPSS.net; Fordham University, New York City, New York. Dr. Jensen is with the University of Oslo, Oslo, Norway; and

REFERENCES

1. Save the Children. Stop the War on Children: A crisis of recruitment. Save the Children's Resource Centre; Published 2021. Accessed March 31, 2023. https://resourcecentre.savethechildren.net/document/stop-the-war-on-children-a-crisis-of-recruitment/

2. UNICEF. One hundred days of war in Ukraine have left 5.2 million children in need of humanitarian assistance. Accessed March 31, 2023. https://www.unicef.org/press-releases/one-hundred-days-war-ukraine-have-left-52-million-children-need-humanitarian

3. Blackmore R, Gray KM, Boyle JA, et al. Systematic review and meta-analysis: the prevalence of mental illness in child and adolescent refugees and asylum seekers. J Am Acad Child Adolesc Psychiatry. 2020;59(6):705-714. https://doi.org/10.1016/j.jaac.2019.11.011

4. Charlson F, Ommeren M van, Flaxman A, Cornett J, Whiteford H, Saxena S. New WHO prevalence estimates of mental disorders in conflict settings: a systematic review and meta-analysis. Lancet. 2019;394(10194):240-248. https://doi.org/10.1016/S0140-6736(19)30934-1

5. Osokina O, Silwal S, Bohdanova T, Hodes M, Sourander A, Skokauskas N. Impact of the Russian invasion on mental health of adolescents in Ukraine. J Am Acad Child Adolesc Psychiatry. 2023;62(3):335-343. https://doi.org/10.1016/j.jaac.2022.07.845

6. Lustig SL, Kia-Keating M, Knight WG, et al. Review of child and adolescent refugee mental health. J Am Acad Child Adolesc Psychiatry. 2004;43(1):24-36. https://doi.org/10.1097/00004583-200401000-00012

7. Nelson CA, Bhutta ZA, Harris NB, Danese A, Samara M. Adversity in childhood is linked to mental and physical health throughout life. BMJ. 2020;371:m3048. https://doi.org/10.1136/bmj.m3048

8. Lewis SJ, Arseneault L, Caspi A, et al. The epidemiology of trauma and post-traumatic stress disorder in a representative cohort of young people in England and Wales. Lancet Psychiatry. 2019;6(3):247-256. https://doi.org/10.1016/S2215-0366(19)30031-8

9. Stene LE, Schultz JH, Dyb G. Returning to school after a terror attack: a longitudinal study of school functioning and health in terror-exposed youth. Eur Child Adolesc Psychiatry. 2019;28(3):319-328. https://doi.org/10.1007/s00787-018-1196-y

10. Bürgin D, Anagnostopoulos D, Anagnostopoulos D, et al. Impact of war and forced displacement on children's mental health—multilevel, needs-oriented, and trauma-informed approaches. Eur Child Adolesc Psychiatry. 2022;31(6):845-853. https://doi.org/10.1007/s00787-022-01974-z

11. Weisz JR, Kuppens S, Ng MY, et al. What five decades of research tells us about the effects of youth psychological therapy: a multilevel meta-analysis and implications for science and practice. Am Psychol. 2017;72(2):79-117. https://doi.org/10.1037/a0040360

12. Weisz JR, Kuppens S, Ng MY, et al. Are psychotherapies for young people growing stronger? Tracking trends over time for youth anxiety, depression, attention-deficit/hyperactivity disorder, and conduct problems. Persp Psychol Sci J Assoc Psychol Sci. 2019;14(2):216-237. https://doi.org/10.1177/1745691618805436

13. Danese A, McLaughlin KA, Samara M, Stover CS. Psychopathology in children exposed to trauma: detection and intervention needed to reduce downstream burden. BMJ. 2020;371:m3073. https://doi.org/10.1136/bmj.m3073

14. Gulliver A, Griffiths KM, Christensen H. Perceived barriers and facilitators to mental health help-seeking in young people: a systematic review. BMC Psychiatry. 2010;10(1):113. https://doi.org/10.1186/1471-244X-10-113

15. Martsenkovskyi D, Martsenkovsky I, Martsenkovska I, Lorberg B. The Ukrainian paediatric mental health system: challenges and opportunities from the Russo-Ukrainian war. Lancet Psychiatry. 2022;9(7):533-535. https://doi.org/10.1016/S2215-0366(22)00148-1

16. Hodes M, Vasquez MM, Anagnostopoulos D, et al. Refugees in Europe: national overviews from key countries with a special focus on child and adolescent mental health. Eur Child Adolesc Psychiatry. 2018;27(4):389-399. https://doi.org/10.1007/s00787-017-1094-8

17. Danese A, Martsenkovskyi D. Editorial: measuring and buffering the mental health impact of the war in Ukraine in young people. J Am Acad Child Adolesc Psychiatry. 2023;62(3):294-296. https://doi.org/10.1016/j.jaac.2022.11.001

18. Torous J, Bucci S, Bell IH, et al. The growing field of digital psychiatry: current evidence and the future of apps, social media, chatbots, and virtual reality. World Psychiatry. 2021;20(3):318-335. https://doi.org/10.1002/wps.20883

19. Danese A, Smith P, Chitsabesan P, Dubicka B. Child and adolescent mental health amidst emergencies and disasters. Br J Psychiatry. 2020;216(3):159-162. https://doi.org/10.1192/bjp.2019.244

20. Ruzek JI, Kuhn E, Jaworski BK, Owen JE, Ramsey KM. Mobile mental health interventions following war and disaster. mHealth. 2016;2:37. https://doi.org/10.21037/mhealth.2016.08.06

21. Augusterfer EF, O'Neal CR, Martin SW, Sheikh TL, Mollica RF. The role of telemental health, tele-consultation, and tele-supervision in post-disaster and low-resource settings. Curr Psychiatry Rep. 2020;22(12):85. https://doi.org/10.1007/s11920-020-01209-5

22. Osborn TL, Rodriguez M, Wasil AR, et al. Single-session digital intervention for adolescent depression, anxiety, and well-being: outcomes of a randomized controlled trial with Kenyan adolescents. J Consult Clin Psychol. 2020;88:657-668. https://doi.org/10.1037/ccp0000505

23. Naslund JA, Aschbrenner KA, Araya R, et al. Digital technology for treating and preventing mental disorders in low-income and middle-income countries: a narrative review of the literature. Lancet Psychiatry. 2017;4(6):486-500. https://doi.org/10.1016/S2215-0366(17)30096-2

24. Bhugra D, Tasman A, Pathare S, et al. The WPA-Lancet Psychiatry Commission on the Future of Psychiatry. Lancet Psychiatry. 2017;4(10):775-818. https://doi.org/10.1016/S2215-0366(17)30333-4

25. Skokauskas N, Fung D, Flaherty LT, et al. Shaping the future of child and adolescent psychiatry. Child Adolesc Psychiatry Ment Health. 2019;13(1):19. https://doi.org/10.1186/s13034-019-0279-y

26. Peters MDJ, Godfrey CM, Khalil H, McInerney P, Parker D, Soares CB. Guidance for conducting systematic scoping reviews. JBI Evid Implement. 2015;13(3):141. https://doi.org/10.1097/XEB.0000000000000050

27. Arksey H, O'Malley L. Scoping studies: towards a methodological framework. Int J Soc Res Methodol. 2005;8(1):19-32. https://doi.org/10.1080/1364557032000119616

28. Tricco AC, Lillie E, Zarin W, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): checklist and explanation. Ann Intern Med. 2018;169(7):467-473. https://doi.org/10.7326/M18-0850

29. World Health Organization. Recommendations on digital interventions for health system strengthening. Published 2019. Accessed March 31, 2023. https://www.who.int/publications-detail-redirect/9789241550505

30. Ouzzani M, Hammady H, Fedorowicz Z, Elmagarmid A. Rayyan—a web and mobile app for systematic reviews. Syst Rev. 2016;5(1):210. https://doi.org/10.1186/s13643-016-0384-4

31. Jordans MJD, Pigott H, Tol WA. Interventions for children affected by armed conflict: a systematic review of mental health and psychosocial support in low- and middle-income countries. Curr Psychiatry Rep. 2016;18(1):9. https://doi.org/10.1007/s11920-015-0648-z

32. Tol WA, Barbui C, Galappatti A, et al. Mental health and psychosocial support in humanitarian settings: linking practice and research. Lancet. 2011;378(9802):1581-1591. https://doi.org/10.1016/S0140-6736(11)61094-5

33. Inter-Agency Standing Committee. IASC common monitoring and evaluation framework for mental health and psychosocial support programmes in emergency settings. Published 2017. Accessed March 31, 2023. https://interagencystandingcommittee.org/node/20058

34. Ruggiero KJ, Price M, Adams Z, et al. Web intervention for adolescents affected by disaster: population-based randomized controlled trial. J Am Acad Child Adolesc Psychiatry. 2015;54(9):709-717. https://doi.org/10.1016/j.jaac.2015.07.001

35. Resnick H, Acierno R, Waldrop AE, et al. Randomized controlled evaluation of an early intervention to prevent post-rape psychopathology. Behav Res Ther. 2007;45(10):2432-2447. https://doi.org/10.1016/j.brat.2007.05.002

36. Schuler BR, Raknes S. Does group size and blending matter? Impact of a digital mental health game implemented with refugees in various settings. Int J Migr Health Soc Care. 2022;18(1):83-94. https://doi.org/10.1108/IJMHSC-07-2021-0060

37. Heinz AJ, Wiltsey-Stirman S, Jaworski BK, et al. Feasibility and preliminary efficacy of a public mobile app to reduce symptoms of postdisaster distress in adolescent wildfire survivors: Sonoma rises. Psychol Serv. 2022;19:67-79. https://doi.org/10.1037/ser0000576

38. Stasiak K, Moor S. 21.6 Brave-Online: introducing online therapy for children and adolescents affected by a natural disaster. J Am Acad Child Adolesc Psychiatry. 2016;55(10):S33. https://doi.org/10.1016/j.jaac.2016.07.562

39. de Haas S, Höing M, Schrieken B, et al. Behandeling via het Internet voor jeugdige slachtoffers van seksueel geweld: een pilotstudie. MGV Maandbl Geestelijke Volksgezond. 2009;64. Accessed April 7, 2023. https://www.interapy.nl/docs/wetenschap/de-haas-2009—interapy-behandeling-via-het-Internet-voor-jeugdige-slachtoffers-van-seksueel-geweld.pdf?sfvrsn=5e0fe2ac_2

40. Danese A. How to boost positivity for your family at home. BBC Bitesize. Accessed May 2, 2024. https://www.bbc.co.uk/bitesize/articles/zykkvwx

41. Sonuga-Barke E, Danese A. Parenting Tips & Tricks—Families Under Pressure. Maudsley Charity. Accessed May 2, 2024. https://maudsleycharity.org/families underpressure/

42. Danese A. KeepCool. King's College London. Accessed May 2, 2024. https://www.kcl.ac.uk/research/keepcool

43. Child Mind Institute. Dare to Share. Accessed May 2, 2024. https://childmind.org/daretoshare/

44. MTV. Mental Health Is Health. Accessed May 2, 2024. https://www.mentalhealthishealth.us/

45. Big Health UK | Helping millions back to good mental health. Sleepio. Sleepio research findings. Accessed April 7, 2023. https://www.bighealth.co.uk/research/

46. Dyregrov A, Raundalen M. Danish Red Cross Guide for Refugee Parents; https://apps.apple.com/gb/app/parent-guide/id1247444812

47. Oxford University. Ukraine parenting response. Accessed May 2, 2024. https://ukraineparenting.web.ox.ac.uk/eng

48. Massachusetts Department of Mental Health. Handhold. Accessed May 2, 2024. https://handholdma.org/

49. UNICEF. Beebo mobile app to help parents care for children during the war. Accessed May 2, 2024. https://www.unicef.org/ukraine/en/press-releases/unicef-launches-bebbo-mobile-app-help-parents-care-children-during-war

50. Sesame Street. Sesame Workshop: resources in Ukrainian. Accessed May 2, 2024. https://sesameworkshop.org/topics/displacement-resettlement/resources-in-ukrainian/

51. Disney Pixar. Inside out. Pixar Animation Studios. Accessed May 2, 2024. https://www.pixar.com/feature-films/inside-out

52. Safarzyńska-Płatos. Heroes. Accessed May 2, 2024. https://potrzebafantazji.com/bohaterowie/?fbclid=IwAR1ji2TddjBJFf1Q15xZeeGHDMqiPvokWRbtmXwaCyvxCyAzjSOQrHcG6o0

53. Danese A. MindEd: trauma and coping. Accessed May 2, 2024. https://mindedforfamilies.org.uk/Content/trauma_and_coping/#/id/5e3150ac12321b4bca7242d7

54. Save the Children, Safe Place app. Accessed May 2, 2024. https://apps.apple.com/gb/app/safe-place/id1445174667

55. Do2Learn. Do2Learn: educational resources for special needs. Accessed May 2, 2024. https://do2learn.com/

56. University of Massachussets. Lifeline for kids. UMass Chan Medical School. Published 2022. Accessed May 2, 2024. https://www.umassmed.edu/cttc/pair-a-docs-video-series/

57. World Health Organization. Doing what matters in times of stress. Accessed May 2, 2024. https://www.who.int/publications-detail-redirect/9789240003927

58. Macquarie University. Cool Little Kids. Accessed May 2, 2024. https://coollittlekids.org.au/login

59. Therapieland NL. e-Health programs. e-Health van Therapieland. Accessed May 2, 2024. https://therapieland.nl/programmas/

60. ECNP Traumatic Stress Network. First aid to terror. Accessed May 2, 2024. http://firstaidtoterror.com/

61. Minddistrict. MindReSolve: reducing worry, rumination and stress. Accessed May 2, 2024. https://www.minddistrict.com/catalogue/reducing-worry-rumination-and-stress-mindresolve

62. United Nations. Office on Drugs and Crime. Family skills. Accessed May 2, 2024. www.unodc.org/unodc/en/prevention/family-skills.html

63. EMDR Europe. Dossier Oekraïne – EMDR. Accessed May 2, 2024. https://www.emdr.nl/dossier-oekraine/

64. Schleider JL. Project EMPOWER. Lab for scalable mental health. Accessed May 2, 2024. https://www.schleiderlab.org/empower.html

65. Schleider JL. Project YES. Lab for scalable mental health. Accessed May 2, 2024. https://www.schleiderlab.org/yes.html

66. Shamiri Institute. Thrive! Online Accessed May 2, 2024. https://thrive-online.shamiri.institute/

67. Merry S. SPARX. Accessed May 2, 2024. https://www.sparx.org.nz/

68. Kassam-Adams N. Center for Injury Research and Prevention. Coping Coach: a Web-based game to help children recover. Published May 2, 2024. Accessed May 2, 2024. https://injury.research.chop.edu/blog/posts/coping-coach-web-based-game-help-children-recover

69. Sourander A; Strongest Families Institute. Strongest Families Intervention. Accessed May 2, 2024. https://strongestfamilies.com/

70. Triangle of Life. Triangle of Life app for trauma-focused CBT; https://apps.apple.com/us/app/tf-cbt-triangle-of-life/id978441894

71. Norwegian Centre for Violence and Traumatic Stress Studies. My everyday life. NKVTS English. Accessed May 2, 2024. https://www.nkvts.no/english/project/my-everyday-life/

72. Omgeving. VEVO. Accessed May 2, 2024. https://www.jouwomgeving.nl/nieuws/2017/7/18/nieuwe-module-versterken-en-verwerken-online/

73. Minddistrict. Interventions. Accessed May 2, 2024. https://www.minddistrict.com/catalogue/interventions

74. Jaycox LH. LIFT Program. Accessed May 2, 2024. https://www.lift-program.org/

75. Siddaway AP, Meiser-Stedman R, Chester V, et al. Trauma-focused guided self-help interventions for posttraumatic stress disorder: a meta-analysis of randomized

controlled trials. Depress Anxiety. 2022;39(10-11):675-685. https://doi.org/10.1002/da.23272

76. Karyotaki E, Efthimiou O, Miguel C, *et al*. Internet-based cognitive behavioral therapy for depression: a systematic review and individual patient data network meta-analysis. JAMA Psychiatry. 2021;78(4):361-371. https://doi.org/10.1001/jamapsychiatry.2020.4364

77. van Ginneken N, Tharyan P, Lewin S, *et al*. Non-specialist health worker interventions for the care of mental, neurological and substance-abuse disorders in low- and middle-income countries. Cochrane Database Syst Rev. 2013;11:CD009149. https://doi.org/10.1002/14651858.CD009149.pub2

78. Venturo-Conerly KE, Eisenman D, Wasil AR, Singla DR, Weisz JR. Meta-analysis: the effectiveness of youth psychotherapy interventions in low- and middle-income countries. J Am Acad Child Adolesc Psychiatry. 2022;0(0). https://doi.org/10.1016/j.jaac.2022.12.005

79. Andersson G, Cuijpers P, Carlbring P, Riper H, Hedman E. Guided Internet-based vs face-to-face cognitive behavior therapy for psychiatric and somatic disorders: a systematic review and meta-analysis. World Psychiatry. 2014;13(3):288-295. https://doi.org/10.1002/wps.20151

80. Simon N, Robertson L, Lewis C, *et al*. Internet-based cognitive and behavioral therapies for post-traumatic stress disorder (PTSD) in adults. Cochrane Database Syst Rev. 2021;5(5):CD011710. https://doi.org/10.1002/14651858.CD011710.pub3

81. Smith P, Ehlers A, Carr E, *et al*. Therapist-supported online cognitive therapy for post-traumatic stress disorder (PTSD) in young people: protocol for an early-stage, parallel-group, randomised controlled study (OPTYC trial). BMJ Open. 2022;12(3):e054852. https://doi.org/10.1136/bmjopen-2021-054852

82. Bear HA, Nunes LA, DeJesus J, *et al*. Determination of markers of successful implementation of mental health apps for young people: systematic review. J Med Internet Res. 2022;24(11):e40347. https://doi.org/10.2196/40347

83. Fairburn CG, Patel V. The impact of digital technology on psychological treatments and their dissemination. Behav Res Ther. 2017;88:19-25. https://doi.org/10.1016/j.brat.2016.08.012

84. Anthes E. Mental health: there's an app for that. Nature. 2016;532(7597):20-23. https://doi.org/10.1038/532020a

85. Alisic E, Zalta AK, van Wesel F, *et al*. Rates of post-traumatic stress disorder in trauma-exposed children and adolescents: meta-analysis. Br J Psychiatry J Ment Sci. 2014;204:335-340. https://doi.org/10.1192/bjp.bp.113.131227

86. Moore G, Campbell M, Copeland L, *et al*. Adapting interventions to new contexts—the ADAPT guidance. BMJ. 2021;374:n1679. https://doi.org/10.1136/bmj.n1679

87. Baumel A, Muench F, Edan S, Kane JM. objective user engagement with mental health apps: systematic search and panel-based usage analysis. J Med Internet Res. 2019;21(9):e14567. https://doi.org/10.2196/14567

88. Fleming T, Bavin L, Lucassen M, Stasiak K, Hopkins S, Merry S. Beyond the trial: systematic review of real-world uptake and engagement with digital self-help interventions for depression, low mood, or anxiety. J Med Internet Res. 2018;20(6):e199. https://doi.org/10.2196/jmir.9275

89. Yeager CM, Benight CC. If we build it, will they come? Issues of engagement with digital health interventions for trauma recovery. mHealth. 2018;4:37. https://doi.org/10.21037/mhealth.2018.08.04

90. Bevan Jones R, Stallard P, Agha SS, *et al*. Practitioner review: co-design of digital mental health technologies with children and young people. J Child Psychol Psychiatry. 2020;61(8):928-940. https://doi.org/10.1111/jcpp.13258

91. Bergin AD, Vallejos EP, Davies EB, *et al*. Preventive digital mental health interventions for children and young people: a review of the design and reporting of research. NPJ Digit Med. 2020;3(1):1-9. https://doi.org/10.1038/s41746-020-00339-7

92. Fleming T, Poppelaars M, Thabrew H. The role of gamification in digital mental health. World Psychiatry. 2023;22(1):46-47. https://doi.org/10.1002/wps.21041

93. Papola D, Purgato M, Gastaldon C, *et al*. Psychological and social interventions for the prevention of mental disorders in people living in low- and middle-income countries affected by humanitarian crises. Cochrane Database Syst Rev. 2020;9(9):CD012417. https://doi.org/10.1002/14651858.CD012417.pub2

94. Barbui C, Purgato M, Abdulmalik J, *et al*. Efficacy of psychosocial interventions for mental health outcomes in low-income and middle-income countries: an umbrella review. Lancet Psychiatry. 2020;7(2):162-172. https://doi.org/10.1016/S2215-0366(19)30511-5

95. Purgato M, Gastaldon C, Papola D, van Ommeren M, Barbui C, Tol WA. Psychological therapies for the treatment of mental disorders in low- and middle-income countries affected by humanitarian crises. Cochrane Database Syst Rev. 2018;7(7):CD011849. https://doi.org/10.1002/14651858.CD011849.pub2

96. Purgato M, Gross AL, Betancourt T, *et al*. Focused psychosocial interventions for children in low-resource humanitarian settings: a systematic review and individual participant data meta-analysis. Lancet Glob Health. 2018;6(4):e390-e400. https://doi.org/10.1016/S2214-109X(18)30046-9

97. Alzaghoul AF, McKinlay AR, Archer M. Post-traumatic stress disorder interventions for children and adolescents affected by war in low- and middle-income countries in the Middle East: systematic review. Br J Psych Open. 2022;8(5):e153. https://doi.org/10.1192/bjo.2022.552

98. Davis RS, Meiser-Stedman R, Afzal N, *et al*. Meta-analytic review: group-based interventions for treating posttraumatic stress symptoms in children and adolescents. J Am Acad Child Adolesc Psychiatry. 2023;62(11):1217-1232. https://doi.org/10.1016/j.jaac.2023.02.013

99. Pfeiffer E, Sachser C, Rohlmann F, Goldbeck L. Effectiveness of a trauma-focused group intervention for young refugees: a randomized controlled trial. J Child Psychol Psychiatry. 2018;59(11):1171-1179. https://doi.org/10.1111/jcpp.12908

100. Rafieifar M, Macgowan MJ. A meta-analysis of group interventions for trauma and depression among immigrant and refugee children. Res Soc Work Pract. 2022;32(1):13-31. https://doi.org/10.1177/10497315211022812

101. Lewis SJ, Danese A. Editorial: are group-based interventions effective for treating trauma-related psychopathology in children and young people? J Am Acad Child Adolesc Psychiatry. 2023;62(11):1188-1190. https://doi.org/10.1016/j.jaac.2023.06.001

102. Kaptan SK, Dursun BO, Knowles M, Husain N, Varese F. Group eye movement desensitization and reprocessing interventions in adults and children: a systematic review of randomized and nonrandomized trials. Clin Psychol Psychother. 2021;28(4):784-806. https://doi.org/10.1002/cpp.2549

103. O'Callaghan P, McMullen J, Shannon C, Rafferty H, Black A. A randomized controlled trial of trauma-focused cognitive behavioral therapy for sexually exploited, war-affected Congolese girls. J Am Acad Child Adolesc Psychiatry. 2013;52(4):359-369. https://doi.org/10.1016/j.jaac.2013.01.013