

Opportunities for the Use of Brief Scalable Psychological Interventions to Support Mental Health and Wellbeing in the Context of the Climate Crisis

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Abstract

Climate change is negatively impacting mental health through multiple pathways. Research to date has largely focused on characterising the link between climate change and mental health and no mental health and psychosocial support intervention has been explicitly designed to address the mental health consequences of climate change. In this commentary, we argue that brief, scalable psychological interventions represent an opportunity to fill this gap. Brief psychological interventions have been shown to be effective in the context of disasters, armed conflict and displacement, which have all been predicted to increase because of climate change. Brief psychological interventions are also likely to be relevant in the context of chronic climate stressors including temperature and sea-level rise or droughts. Additionally, they hold the potential to be used within a prevention and promotion framework, which is likely to be relevant in the context of increasing cumulative and overlapping climate-related adversities. Finally, brief psychological interventions could address several implementation challenges resulting from global climate change and could also be integrated with other programmes, including those that support climate change adaptation and mitigation. Research is urgently needed to provide evidence for the implementation and effectiveness of brief psychological interventions in the context of climate change.

Keywords: brief scalable psychological interventions, climate change, mental health and psychosocial support

Introduction

Climate change exposures such as droughts, heatwaves and floods have been linked to several poor mental health outcomes from higher psychological distress to increased psychiatric hospitalisations and mortality among people with mental illness (Lawrance et al., 2021), as well as disruptions to mental health services (Elshazly et al., 2019). To date, however, very little intervention research has been conducted in this area (Charlson et al., 2021). Assessing the appropriateness, feasibility, effectiveness and scalability of mental health and psychosocial interventions (clinical and nonclinical) has been identified as a global research priority in the context of climate change (Charlson et al., 2022). However, while preliminary anecdotal evidence exists on mental health and psychosocial support (MHPSS) interventions in the context of climate change (CBM, 2021), no evidence-based interventions have been specifically developed with a view to addressing climate change impacts on mental health

and supporting people as they adjust to a world affected by climate change.

We propose brief psychological interventions as a case example of one set of potentially useful evidence-based supports for mental health and wellbeing in the context of climate change. Many brief psychological interventions have been developed for settings affected by adversity (World Health Organization (WHO), 2017), making them potentially useful in the context of climate change. According to the United Nations High Commissioner

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for Refugees (UNHCR), brief scalable psychological interventions are “interventions (5–8 sessions) that can be delivered by nonspecialised staff after a brief training and with supportive clinical supervision” aimed at effectively addressing “mild and moderate mental health conditions” (UNHCR, 2021, p. 46). Most brief psychological interventions fall within the focused, nonspecialised support level of the Inter-Agency Standing Committee (IASC) MHPSS pyramid (IASC, 2007). Examples of brief psychological interventions are provided in Table 1.

The effectiveness and implementation advantages of many brief psychological interventions have been demonstrated in multiple settings affected by adversity (Ryan et al., 2021) and these settings are characterised by similar stressors to those caused and exacerbated by climate change (Augustinavicius et al., 2021). When appropriate, we will draw on examples from specific brief psychological interventions developed by the WHO (2017), although a variety of other brief psychological interventions exist (Haroz et al., 2020; Purgato et al., 2018; Ryan et al., 2021; UNHCR, 2021).

The Role of Brief Psychological Interventions in Addressing Needs Associated with Acute and Chronic Climate Change-Related Stressors

One important pathway through which climate change is affecting mental health is through an increase in frequency and intensity of extreme weather events such as hurricanes and floods (Intergovernmental Panel on Climate Change, IPCC), 2021). These events can occur in the context of other humanitarian crises, resulting in complex emergency situations and compounding risks to mental health and wellbeing (Elshazly et al., 2019). Extensive literature exists detailing the mental health consequences of various types of disasters (Goldmann & Galea, 2014) and brief psychological interventions have been shown to be effective in reducing symptoms of depression, posttraumatic stress disorder (PTSD), anxiety and functional impairment following disasters caused by natural hazards (James et al., 2020; Zang et al., 2014). For example, the WHO intervention, Problem Management Plus (PM+), a brief, transdiagnostic intervention delivered by nonspecialists, was shown to be effective in decreasing psychological distress and depressive symptoms among people living in communities at repeated risk of landslides and flooding in Nepal (Jordans et al., 2021).

Preliminary evidence also highlights the linkages between climate change and armed conflict or organised violence (von Uexkull & Buhaug, 2021). Among other triggering factors, climate change can contribute to armed conflict indirectly by exacerbating existing social, economic and environmental tensions (Mach et al., 2019). Additionally, populations living in contexts of armed conflict tend to be more vulnerable to the impacts of climate change due to the limited adaptive capacity of people, systems and institutions already coping with conflict (ICRC, 2020). Considerable evidence indicates

Table 1: Examples of Brief Scalable Psychological Interventions (Adapted from UNHCR, 2021, p. 46).

Name of intervention	Characteristics of intervention
Problem Management Plus (PM+)*	Five sessions based on cognitive behavioural therapy (CBT) principles (i.e. stress management, problem solving, behavioural activation, strengthening social support and relapse prevention) for adults with depression, anxiety and stress.
Interpersonal Therapy for Depression (IPT)*	Eight sessions (group version) aiming at reducing depression through improvement of interpersonal skills addressing: (i) loss, (ii) role transitions, (iii) interpersonal conflicts and (iv) social isolation for adults with mild, moderate or severe depression.
Self Help Plus (SH+)*	Five sessions guided multimedia psychosocial self-help package that can be delivered to large groups (up to 30 people) for managing stress and coping with adversity.
Early Adolescent Skills for Emotions (EASE)	Seven sessions for adolescents and three sessions for caregivers for 10–14 years old with internalising problems (e.g. symptoms of depression, anxiety and distress).
Integrated Adapt Therapy (IAT)*	Six sessions (either individual or group) using CBT principles (i.e. psychoeducation, trauma narrative/modified exposure, problem solving, stress management, emotion regulation) adapted for refugees with particular attention to how the refugee experience relates to symptoms of common mental health symptoms.
Step-by-Step (SbS)	Five session online intervention using behavioural activation and stress management techniques designed to address symptoms of depression. May or may not be coupled with guidance from health worker or other helpers.
Community-Based Sociotherapy (CBST)*	Fifteen group sessions with 8–12 adults from same community aimed at strengthening social connectedness, interpersonal support, and mutual trust. Delivered by two trained facilitators from same community.
Common Elements Treatment Approach (CETA)*	Eight to twelve individual sessions based on principles of CBT and with modular approach to treating depression, anxiety, substance use and trauma and stress-related disorders for adults and adolescents. Short and group-based versions available.
Thinking Healthy Programme (THP)*	Fifteen group sessions for women with perinatal depression. Sessions combine CBT-based therapy with activities to improve maternal wellbeing, mother–infant interaction and maternal social support.
Friendship Bench*	Three or more individual sessions for adults with mild/moderate mental disorders based on principles from problem solving, activity scheduling. Followed by peer-led group support. Delivered by trained community health workers.
Skills for Life Adjustment and Resilience (SOLAR)	Five sessions of psychosocial, skill-based programme that aims to promote recovery after disaster and prevent long-term psychological conditions from developing. Deliverable by both mental health specialists and nonspecialists.

Contd...

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Name of intervention	Characteristics of intervention
Skills for Psychological Recovery (SPR)	Modular brief intervention that aims to help survivors gain skills to manage distress and cope with postdisaster stress and adversity. Designed for children, adolescents, adults and families. Delivered by mental health and other health workers.

*Note. Some longer interventions have been included given their inclusion by UNHCR in the “brief psychological therapies” category. The interventions originally included by UNHCR are followed by *.*

that populations affected by armed conflict experience higher rates of mental disorders compared to the general population (Charlson et al., 2019). As with disasters, various brief psychological interventions have proven effective in addressing mental health in the context of ongoing armed conflict (Weiss et al., 2015). For example, two pilot RCTs in conflict-affected areas of Pakistan have shown PM+ to be effective in addressing various mental health complaints (Khan et al., 2019; Rahman et al., 2016) and PM+ has been widely implemented in conflict-affected contexts (Dozio et al., 2021; Goloktionova & Mukerjee, 2021; Nemiro et al., 2021).

Both disasters and armed conflict resulting from climate change, as well as more slow-onset climate change stressors such as prolonged droughts, can result in significant displacement within and between countries (Kaczan & Orgill-Meyer, 2020). Projections from the World Bank estimate 143 million internal climate migrants by 2050 in the absence of climate action (World Bank, 2018). Internally displaced people and refugees can often experience several stressors in the pre-, peri- and postmigration phases which can increase their chances of experiencing mental health problems (Blackmore et al., 2020). As with the case of disaster and armed conflict, various brief psychological interventions have proven effective with displaced populations (Bogdanov et al., 2021; de Graaff et al., 2020; Murray et al., 2018; Tay et al., 2020). For example, Self-Help Plus (SH+), a multimedia-guided intervention delivered by lay facilitators and developed by WHO, led to reductions in psychological distress among South Sudanese refugees in northern Uganda (Tol et al., 2020).

In comparison with acute climate change-related extreme weather events, less is known about the mental health impacts and appropriate responses to more chronic and slow-onset climate stressors such as droughts, increasing temperatures and sea-level rise (Berry et al., 2010; Charlson et al., 2021). Emerging evidence points to the detrimental impacts that chronic climate stressors can have on mental health (Charlson et al., 2021). Although no brief psychological intervention has been tested specifically in the context of these more chronic climate stressors, brief psychological interventions have proven effective in reducing symptoms of depression, anxiety, PTSD and functional impairment within resource-constrained

settings affected by other types of chronic stressors such as poverty and systemic violence (Bonilla-Escobar et al., 2018; Chibanda et al., 2015; Murray et al., 2020). For example, the WHO intervention, Thinking Healthy, was shown to be effective in reducing perinatal depression in a socioeconomically deprived rural area of Pakistan with high levels of poverty (Sikander et al., 2019). Future work might investigate the appropriateness, acceptability and feasibility of implementing existing brief psychological interventions in contexts affected by more chronic and slow-creeping climate stressors and explore the need for any adaptations.

The Role of Brief Psychological Interventions in Preventing Mental Health Problems and Promoting Mental Health and Wellbeing amid Increasing Climate Change-Related Adversity

Some interventions are delivered to reduce distress, symptoms of mental disorders and functional impairment, that is, a treatment focus, whereas others focus on preventing the development of mental disorders and promoting positive mental health and wellbeing, that is, a prevention or promotion focus (Eaton & Fallin, 2019). Most of the academic evidence on the effectiveness of mental health interventions in humanitarian settings, including brief psychological interventions, comes from randomised controlled trials focused on treatment and there is a paucity of studies investigating the preventive and promotive effects of these interventions (Papola et al., 2020; Tol, 2015). There is, however, some preliminary evidence for the preventive effects of brief psychological interventions like SH+, which was recently tested among refugees in Europe (Purgato et al., 2021) and, anecdotally, many community-based psychosocial interventions are often implemented in humanitarian settings within a prevention and promotion framework.

The lack of mental health prevention- and promotion-focused research is also apparent in mental health intervention studies conducted in contexts with acute climate change-related stressors, and in the general absence of intervention research in the context of chronic climate change-related stressors. While few studies have focused on them, intervention strategies that prevent the onset of adverse mental health outcomes and promote positive mental health and wellbeing are paramount in the context of climate change. As climate change further stretches social and health systems already operating past their capacity, brief psychological interventions with a prevention or promotion focus could serve as a buffer, complementing and enhancing treatment focused interventions. Positive mental health and wellbeing may also be integral to social engagement on climate change (White, 2020), including in adaptation and mitigation activities. Brief psychological interventions that promote mental health and wellbeing could be used to support people in coping and adjusting to life in a climate changed world, including as they grapple with difficult thoughts and feelings about climate

change, such as those related to climate change anxiety and ecological grief (Clayton, 2020; Cunsolo et al., 2020). While further research is needed to understand these emerging constructs, these reactions to climate change are likely largely normative thus not necessarily requiring a treatment-oriented response (Ojala et al., 2021).

The Role of Brief Psychological Interventions in Addressing MHPSS Implementation Challenges in the Context of Climate Change

Climate change is a global phenomenon and will impact everyone in differential ways. However, its impacts will be most acutely experienced in communities more at risk of experiencing climate stressors and with less resource to cope with them. According to the Global Climate Risk Index 2021, the 10 countries most affected by climate-related extreme weather events in 2019 were Mozambique, Zimbabwe, the Bahamas, Japan, Malawi, Afghanistan, India, South Sudan, Niger and Bolivia, predominantly low- and middle-income countries (LMICs) (Eckstein et al., 2021). According to the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), 8 out of 10 countries¹ considered most vulnerable to the effects of climate change also had ongoing interagency humanitarian appeals in 2020 (OCHA, 2021). Therefore, various implementation challenges are likely to exist when providing MHPSS interventions in settings most affected by climate change.

For example, in several countries most vulnerable to the impacts of climate change there is a lack of mental health professionals meaning that a large proportion of people in need does not receive appropriate care (Patel et al., 2018). One advantage of brief psychological interventions is that they are often based on a task-shifting model whereby care is provided by lay experts without specialised mental health training such as community health workers, teachers or peers (Cohen & Yaeger, 2021). Lack of mental health professionals has also been addressed by developing interventions requiring lower levels of human resources such as self-help interventions like SH+ (Tol et al., 2020), digital interventions such as the WHO Step-by-Step intervention (Heim et al., 2021), group-based interventions (Tol et al., 2020) or peer support interventions (de Graaff et al., 2020).

Due to the far-reaching impacts of climate change, one additional implementation challenge will be that of scaling up effective treatments to large numbers of individuals and communities. While this remains a general challenge within the MHPSS field broadly (Roberts & Fuhr, 2019; Troup et al., 2021), different brief psychological interventions are currently being scaled up at country level, such as PM+ in Kenya (Koyiet et al., 2019) and SH+ in Uganda (Leku et al., under review) and possible pathways to scale up have been identified for various other countries (Fuhr et al., 2020). Additionally, different models for scale up of MHPSS interventions have been proposed (Jordans & Kohrt, 2020; Woodward et al., 2021). Some brief

psychological interventions have characteristics that make them easier to scale. For example, SH+ is delivered in groups of 20–30 people at a time, thereby drastically increasing reach relative to interventions delivered to individuals or small groups at a time (Epping-Jordan et al., 2016).

One other important implementation advantage of existing brief psychological interventions is their transdiagnostic and modular nature. For example, the WHO Early Adolescents Skills for Emotions aims at mitigating symptoms of internalising disorders such as depression and anxiety and psychological distress in youth (Dawson et al., 2019), making it potentially relevant to large subgroups of the general population. The transdiagnostic nature of some brief psychological interventions also means that there is a reasonable expectation that they could be easily adapted to cover other mental health issues (e.g. see work on adapting PM+ to cover alcohol misuse; Fuhr et al., 2021).

Climate change requires interventions that are not only effective in reducing mental health symptoms but that can also be implemented effectively across settings. The scalable and adaptable nature of brief psychological interventions means they represent key candidates in this endeavour. Importantly, while many of these implementation challenges are likely to be particularly acute in LMICs, climate change will exacerbate them also in high-income countries. As a result, brief psychological interventions are likely to be relevant for high-income settings as well, as demonstrated in the context of other emergencies such as COVID-19 (McBride et al., 2021).

The Potential for Brief Psychological Interventions to be Integrated into Other Programmes

Climate change is also impacting mental health through multiple indirect pathways, by worsening social determinants of mental health. Climate change has already been linked to increased economic inequality globally (Diffenbaugh & Burke, 2019), heightened risk of gender-based violence (GBV AoR, 2021), and food insecurity (IPCC, 2019). Therefore, multisectoral interventions whereby MHPSS is integrated within other humanitarian programmes will be particularly relevant as the impacts of climate change become more intense. Integrated interventions are recommended in consensus-based guidelines on MHPSS in emergencies (IASC, 2007) and some brief psychological interventions (e.g. SH+) have been specifically identified as suitable for integration in other programmes (WHO, 2021).

Various integrated brief psychological interventions have been developed recently. For example, the Nguvu intervention aims at reducing intimate partner violence whilst improving psychosocial health and has been evaluated in Tanzania (Greene et al., 2021). Similarly, the Follow Up of Severely Malnourished Children (FUSAM) intervention combines components aimed at addressing acute malnutrition together with child and maternal mental health and has been evaluated in Nepal (Le Roch et al., 2018). In general, the brief and modular

nature of brief psychological interventions means that they could easily be integrated within other programmes addressing stressors emerging from climate change.

One possible area of innovation specific to climate change would be the integration of brief psychological interventions with programmes that promote positive adaptation and mitigation strategies such as sustainable transportation, land management and nutrition programmes. While arguments have been made concerning the importance of integrating mental health within adaptation and mitigation strategies in general (Charlson et al., 2022), no evidence yet exists on the integration of mental health interventions. Similarly, there is scope for integrating mitigation and adaptation concerns into brief psychological interventions (Gray et al., 2021). One example of this is an integrated disaster preparedness and mental health intervention whereby, in parallel with sessions on coping skills targeting disaster-related distress, participants receive hands-on training in disaster preparedness and response techniques. This intervention was shown to be effective in improving mental health and disaster preparedness in Nepal and Haiti (James et al., 2020; Welton-Mitchell et al., 2018). Similar interventions are likely to be highly relevant in the context of extreme weather events due to climate change.

Conclusion

Climate change is negatively impacting mental health through a variety of pathways. Specific interventions have yet to be tested or adapted to support mental health and wellbeing in the context of climate change. Brief psychological interventions represent an opportunity to fill this gap due to their demonstrated effectiveness following extreme weather events and other emergencies, their likely effectiveness in the context of more chronic climate stressors, their possible role in promotion and prevention, and their potential to address many of the implementation challenges that global climate change will trigger as well as to being integrated within other programmes, including mitigation and adaptation strategies. Effectiveness and implementation research is urgently needed to test these assumptions. While climate change will represent one of the key mental health challenges of the twenty-first century, brief psychological interventions are likely to represent one part of the range of solution that will be needed.

Authors' Contributions

ICMJE criteria for authorship were used to define authorship. AM and JA conceptualised the work. AM drafted a first version of the manuscript and all authors contributed to it by revising it critically for important intellectual content. All authors approved the final version.

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Conflicts of interest

AM is currently involved in evaluating an adaptation of PM+. JA is currently involved in the implementation and evaluation of SH+ and has worked on evaluations of CETA in the past.

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¹Afghanistan, Central African Republic, Chad, Democratic Republic of the Congo, Haiti, Niger, Somalia and Sudan.