OPINION

Mental health, a neglected aftershock of climate disasters

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Introduction

Climate disasters, which are becoming more frequent and damaging, cause trauma, grief, and disruption and have profound and sustained mental health impacts. To limit the impact of climate disasters, it is important to acknowledge and address the mental health issues that arise. This opinion article will highlight the significant and accelerating impact of climate disasters on mental health and describe how the issue has been neglected in current policy and relief support. It will subsequently offer recommendations for how policymakers can improve mental health outcomes during climate disasters.

The scale of the problem

Mental health issues arising from climate disasters cause significant health, financial and social costs. Although the mental health impact is not well quantified, the Johns Hopkins Center for Public Health Preparedness estimates that after disasters, the number of people with psychological trauma exceeds the number of people with physical injury by as much as 40 to 1 [1]. Specifically, data has shown that there is a clear relationship between experiencing the effects of climate disasters and worsening mental health. This includes low mood and depression, extreme distress, post-traumatic stress disorder [2] and suicidality [3]. In conjunction, those with existing mental illnesses also experience exacerbations in their conditions, especially those with affective and psychotic conditions [4].

The reasons for this are multifaceted. As well as the visible and devastating effects on communities and people, the displacement from home and support structures, heightened economic and social vulnerability, and the fear of exposure to future events are somewhat unique aspects of climate disasters [5]. Further, damage to infrastructure and decreased access to mental health services diminishes the availability of mental health support.

Current responses are not enough

Despite the significant scale of mental health needs after climate disasters, the provision of mental health services is under-prioritised and neglected. Although a number of international bodies and NGOs [6] have highlighted the importance of mental health preparedness before and after climate disasters and created guidelines [7], governmental policy work and funding is lagging behind. Local responses have prioritised other areas, such as risk modelling and early detection systems, financial and infrastructure support, the provision of trauma-focused





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health services, and limiting the spread of vector-borne diseases at the expense of the less visible and more long-term mental health effects.

Within the scientific literature, researchers from Imperial College London found that less than 1% of the 54000 research papers that mentioned climate change from 2010–2020 also mentioned mental health [8]. Further, policy work specific on mental health needs during climate-related disasters is lacking, especially in low and middle income countries (LMICs), with a scoping review on the topic finding few government documents and policy briefs on the topic [9], and another study finding that policy reform in mental health systems to prepare for disasters would likely make substantial and sustainable improvements [10]. Finally, in foreign aid relief packages for climate disaster risk financing, mental health is often not included. For instance, although the United Kingdom and Germany recently pledged £120 million in climate disaster financing at the recent G7 summit, no explicit mention or funding for mental health services was included [11].

Although the importance of mental health needs may be 'forgotten' during climate disasters in lieu of other aspects, it is important that they are not neglected across scientific discourse, domestic and international policy.

Improving mental health support in climate disasters

To improve psychological outcomes during and after climate disasters, local and national disaster response policies and international funding must integrate mental health needs as an integral component. The IASC, a body of the WHO, has developed guidelines on this issue in 2007 in response to the 2004 tsunami in Southern Asia. In addition to existing guidelines, there is strong evidence that mental health support interventions (including cognitive behavioural therapy, psychological first aid and community-based interventions) are effective in reducing negative mental health outcomes and have significant benefit in disasters, including climate disasters [12]. Despite this, policies and disaster relief support packages have not sufficiently included mental health support. Therefore, regions and countries must work towards developing robust and resilient policy frameworks. Such policies should include several key considerations:

- 1. Mental health services serve vulnerable populations (such as adolescents, the elderly and women) and are locally available, as access is often limited in the aftermath of climate disasters. For example, the WHO, in both Syria and Bangladesh, expanded mental health services beyond tertiary centres to primary and secondary healthcare facilities, as well as schools and community centres [13].
- 2. Climate disasters will likely require an increase in the number of staff trained in mental health services, and policies must therefore account for greater workforce needs.
- 3. In addition to scaling up existing acute mental health services and capacity, it is important to recognise that routine models of care may not be feasible during climate disasters. Therefore, investment in digital mental health initiatives specific to climate disasters will likely be important. For instance, remote and scalable internet-facilitated mental health interventions may be harnessed in addressing acute mental health problems when in-person support is not possible. For example, during the Northern Californian wildfires, Sonoma County Wildfire Collaborative developed and deployed a mental health app called SonomaRises, to reduce symptoms of post-traumatic stress in adolescents affected by the disaster [14].
- 4. Mental health assistance should be provided both immediately after a disaster, and ideally for 12–24 months afterwards, as much of the mental health burden of climate disasters is after the initial damage.

5. Policies should be designed, implemented and evaluated in collaboration with local public health units and diverse perspectives from local communities to ensure that they are respectful and constructive [15].

Conclusion

Climate change and rising greenhouse gas emissions mean that climate-related disasters have and will continue to become more frequent and more damaging. The mental health costs of climate disasters are significant and neglected, but there are substantial opportunities for policy development and implementation. Therefore, it is important to consider and include mental health support in preparing for and responding to climate disasters.

References

- Links J. Predicting Community Resilience and Recovery After a Disaster CDC2017. Available from: https://blogs.cdc.gov/publichealthmatters/2017/08/predicting-community-resilience-and-recovery-after-a-disaster/.
- Jenkins R, Meltzer H. The mental health impacts of disasters, report produced for the Government office of science. Foresight project "Reducing risks of future disasters: priorities for decision makers. 2012.
- Cianconi P, Betrò S, Janiri L. The Impact of Climate Change on Mental Health: A Systematic Descriptive Review. Frontiers in Psychiatry. 2020;11. https://doi.org/10.3389/fpsyt.2020.00011 PMID: 32116834
- Hansen A, Bi P, Nitschke M, Ryan P, Pisaniello D, Tucker G. The effect of heat waves on mental health in a temperate Australian city. Environ Health Perspect. 2008; 116(10):1369–75. Epub 2008/06/30. https://doi.org/10.1289/ehp.11339 PMID: 18941580.
- Makwana N. Disaster and its impact on mental health: A narrative review. J Family Med Prim Care. 2019; 8(10):3090–5. https://doi.org/10.4103/jfmpc.jfmpc_893_19 PMID: 31742125.
- 6. The Mental Health & Psychosocial Support Network 2022. Available from: https://www.mhpss.net/.
- Committee I-AS. IASC Guidelines on Mental Health and Psychosocial Support in Emergency Setting: Checklist for Field Use. IASC Guidelines on Mental Health and Psychosocial Support in Emergency Setting: Checklist for field use2008. p. 39.
- 8. Lawrance D, Thompson R, Fontana G, Jennings D. The impact of climate change on mental health and emotional wellbeing: current evidence and implications for policy and practice. Available at: https://www.imperialacuk/grantham/publications/all-publications/the-impact-of-climate-change-on-mentalhealth-and-emotional-wellbeing-current-evidence-and-implications-for-policy-and-practicephp. 2021.
- Sharpe I, Davison CM. Climate change, climate-related disasters and mental disorder in low- and middle-income countries: a scoping review. BMJ Open. 2021; 11(10):e051908–e. https://doi.org/10.1136/ bmjopen-2021-051908 PMID: 34649848.
- Epping-Jordan JE, van Ommeren M, Ashour HN, Maramis A, Marini A, Mohanraj A, et al. Beyond the crisis: building back better mental health care in 10 emergency-affected areas using a longer-term perspective. Int J Ment Health Syst. 2015; 9:15. Epub 2015/04/24. https://doi.org/10.1186/s13033-015-0007-9 PMID: 25904981; PubMed Central PMCID: PMC4406120.
- 11. Presidency U. Statement by the UK Presidency of the G7: The Road to COP 2021. Available from: https://www.g7uk.org/wp-content/uploads/2021/07/The-Road-to-COP_-Statement-by-the-UK-Presidency-of-the-G7-PDF-418KB-8-pages-1.pdf.
- Math SB, Nirmala MC, Moirangthem S, Kumar NC. Disaster Management: Mental Health Perspective. Indian J Psychol Med. 2015; 37(3):261–71. Epub 2015/12/15. https://doi.org/10.4103/0253-7176. 162915 PMID: 26664073; PubMed Central PMCID: PMC4649821.
- **13.** WHO. Mental health in emergencies 2019. Available from: https://www.who.int/news-room/fact-sheets/detail/mental-health-in-emergencies.
- Heinz AJ, Wiltsey-Stirman S, Jaworski BK, Sharin T, Rhodes L, Steinmetz S, 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. 2021. Epub 2021/11/16. https://doi.org/10.1037/ ser0000576 PMID: 34780209.
- Newnham EA, Dzidic PL, Mergelsberg ELP, Guragain B, Chan EYY, Kim Y, et al. The Asia Pacific Disaster Mental Health Network: Setting a Mental Health Agenda for the Region. Int J Environ Res Public Health. 2020; 17(17). Epub 2020/08/28. https://doi.org/10.3390/ijerph17176144 PMID: 32847057; PubMed Central PMCID: PMC7504085.