Climate Centre

IFRC Psychosocial Centre

The Netherlands Red Cross

2022 | Fact sheet

Climate change and mental health

This factsheet is co-authored by the Climate Centre, IFRC PS Centre and the Netherlands Red Cross and offers a starting point for National Societies to understand and address the adverse impacts of climate change on mental health. We are grateful for the financial support by the Swiss and Norwegian Red Cross.

Introduction

'Climate change is the single biggest health threat facing humanity', according to the World Health Organization (2021). There is a growing body of evidence showing that climate change has robust adverse impacts on mental health. Extreme climate events such as heatwaves, floods, storms, and drought can cause trauma for individuals and communities. Some mental health outcomes are directly related to climatic events and others occur over time in response to prolonged stressors, for instance, when livelihoods are diminished due to drought. Solastalgia, eco-anxiety, depression, feelings of being overwhelmed and powerless), increased aggression and insomnia, and suicide are a myriad of ways in which climate change has and continues to impact on people's mental health. As climate change becomes a mental health emergency, National Societies can increasingly collaborate with climate professionals, mental health and social care experts to develop various strategies to respond effectively. This factsheet aims to support National Societies to better understand the different linkages between climate change and mental health.

Climate change: a mental health emergency

Climate change exacerbates many social and environmental risk factors related to mental health. It leads to additional psychological distress within individuals, families and communities, the development of mental health conditions (such as depression, (eco)anxiety, and a worsening situation for people already living with mental health conditions. We continue to witness how current extreme events with record breaking intensity already require us to invest urgently in loss and damage, resilience, and adaptation. Mental health should become a more prominent topic within these strategies.

Climate change is leading to the development of new mental health conditions: ecoanxiety and solastalgia. Ecoanxiety is a new term to describe loss, helplessness, fear, and frustration in relation to climate change. Ecoanxiety is common especially in young people and marginalized populations due to the lack of interest, urgency, or action from governments and people in power. Estimates in high-income countries found 40-80% of children and young adults have anxiety or strong emotional responses to climate change (Lawrence *et al.*, 2021). Solastalgia is defined as "distress produced by environmental change" (Albrecht *et al.*, 2007). Solastalgia is closely tied to one's sense of place and reacting to the loss of a place or home that brings comfort.

Effect of extreme heat and heatwaves on mental health

Higher temperatures and heatwaves, an increase of temperature surpassing a specific threshold and lasting for multiple days, can pose serious challenges to individuals' physical and mental health (WHO, 2018). Mental health adverse outcomes during heatwaves include strained social relationships, mental health conditions (anxiety, suicidal behaviour and mood disorders associated with heat stress), helplessness, fear, loss, grief and an increase in alcohol or other substance use. People with mental health conditions and people that are socially isolated (especially elderly) are more likely to die during a heatwave.

Increases in air temperature that doesn't reach a heatwave threshold can also impact mental health. Sleep difficulties due to high temperatures can cause serious afflictions and difficulty in functioning due to sleep's fundamental role in brain function. As the globe experiences a significant increase in temperature, sleep-related disorders have become more frequent. High heat exposure during heatwaves increases wakefulness, decreases rapid eye movement sleep (REM) and slow wave sleep (SWS), and prevents a decrease in body temperature (Mizuno & Mizuno, 2012; Obradovich *et al.*, 2017). Elevated temperatures have also been associated with reduced learning in schools, reduced work productivity, and increased irritability. Lastly, elevated temperatures can lead to an increase in strained social relationships, aggressive behaviour, violence, and suicide. An increase in suicidal behaviour and ideation is observed during spring and summer when outdoor ambient temperature rises (Kim *et al.*, 2019). Similar findings have been found for homicides and rates of interpersonal violence (Xu *et al.*, 2020).

The temperatures experienced by people can vary based on their surrounding environment including indoor conditions, work conditions, and urban heat islands. It is important to understand which populations are at heightened risk for heat exposure and the socio-environmental determinants of mental health when considering interventions and support services.

Impact of extreme weather events on mental health

There are various mental health issues observed during and after extreme weather events including storms, floods, and droughts. The frequency, severity, and the aftermath of these extreme weather events are major determinants of solastalgia, anxiety, depression, and in extreme cases, post-traumatic stress disorder (PTSD) (Albrecht, 2007, Cruz *et al.*, 2020).

The sudden loss of jobs, agriculture, homes, assets, community buildings (halls, churches, schools), displacement, and death can cause intense emotional reactions and distress (Albrecht, 2007; Berry, 2010). Although extreme weather events are predictable, evacuation, temporary rehousing, and serious injuries or death can increase psychological distress, anxiety, depression, and PTSD (Cruz *et al.*, 2020). For example, flood survivors report experiencing anxiety during heavy rain, panic attacks, nightmares, and difficulty concentrating on everyday tasks years after an extreme flooding event has occurred. (Cruz *et al.*, 2020). Fear, uncertainty, feeling overwhelmed and powerless to control upcoming extreme weather events contributes to anxiety symptoms (Barlow *et al.*, 2016). After the extreme events, large parts of the population can continue to experience fear and despair due to significant loss and injuries, if they do not receive the appropriate practical, social and psychological support to rebuild their lives and recover.

Who is most prone to mental health impacts caused by climate related events?

Certain populations are at greater risk of adverse mental health outcomes. Groups that have increased vulnerability to adverse climate impacts include children, older adults, people living with existing health conditions and disabilities, pregnant women, and people of low socio-economic status. People with existing mental health conditions are likely to experience greater adverse outcomes from climate change compared to those without a mental health condition. Communities that rely on the land for their livelihoods including farmers, fisherman, and Indigenous communities experience greater loss due to their intimate spiritual connection and identity derived from the land/ environment, dependence on the environment for their livelihood and culture, and their limited capacity to cope to climatic events. Additionally, geographies that will experience more exposure to extreme climate risks, such as low-lying islands or conflict prone regions, can be at increased risk. Children in particular, are more likely to experience stress, anxiety, strong feelings of powerlessness, moral injury, injustice and depression due to concerns about inaction on climate change (Cianconi *et al.*, 2020).

The growing burden of mental health, of which climate change contributes to, comes at a great economic cost. Depression is the leading cause of disability and mental health is predicted to contribute to a global economic loss of 16 trillion USD between 2010-2030 (Patel *et al.*, 2018). Prevention and treatment is needed to address the mental health impacts of climate change. This includes urgent government action on mitigation and adaptation, increased access to treatment, and community support and cohesion.

How can national societies support mental health and wellbeing in relation to climate change?

National societies with experience in disaster response will be well equipped to engage in services and programmes that support positive mental health outcomes and wellbeing. Providing mental health resources and access points to community members can help combat anxiety, depression and feelings of being overwhelmed, and increase access to care. National Societies can prepare a risk communication strategy to disseminate essential information on climate risks to mental health and wellbeing, including information on building inner resilience and positive coping strategies. A practical guide of the IFRC Psychosocial Centre was launched in 2022: The Well-Being Guide, which includes tips for National Societies on how to do this (including how to manage climate anxiety). In the face of climate change, National Societies should scale up capacity for mental health and psychosocial support services and develop specific programmes including community cohesion and engagement, communication and psycho-education awareness-raising workshops, and (peer) spaces for adolescents and youth to express their ecoanxiety and plan actions to help them to cope, manage their emotions and overcome their fears. It is key to provide psychological first aid for survivors of disasters and others in distress to calm them down, actively and respectfully listen, help them to problem solve, address practical concerns and offer emotional support.

For staff and volunteers

Working for or with a national society in disaster settings can be emotionally burdensome. It is vital that national societies also implement well-being checks into their programming, provide mental health resources, and self-care courses to their staff and volunteers. Training for staff and volunteers on coping skills, de-escalation techniques, and working with people in distress will benefit both staff members and the communities they serve. Volunteer Team Leaders and Branch Managers are recommended to create peer-support systems among staff (also known as 'buddy systems') where volunteers can share their worries with a fellow volunteer and receive basic psychosocial support in return. Wellbeing 'check ins' can also be discussed at volunteer team meetings, coupled with psycho-education sessions giving volunteers and staff members the practical skills and knowledge on how to take care of themselves and others, manage boundaries, circles of control, reduce stress and boost inner resilience. The IFRC PS Centre Volunteer wellbeing toolkit is packed with practical tips on how to do this for individuals, volunteer team leaders, managers, and National Societies. Please also note the two-page guide assisting volunteer team leaders in their work to create a sense of belonging in the team and make the volunteers feel safe and appreciated.

For climate-specific impacts

Long term resilience or adaptation programmes that reduce the impacts of disasters like disaster risk reduction, early warning systems, individual emergency evacuation plans and heat response plans can potentially also reduce adverse mental health outcomes associated with disasters. Increased mental health and social care services can help reduce the long-term stresses associated with climate change especially through dedicated services focusing on building agency, addressing protection risks, and helping families to adapt and cope. Lastly, increasing community involvement, especially the inclusion of adolescents and youth, in climate adaptation projects can help overcome feelings of helplessness, build solidarity and foster social support, which boosts resilience and supports coping.

What resources exist on climate change and mental health?

The body of work on climate change and mental health specifically is still growing and there are gaps in the knowledge base. However, many resources exist on mental health and psychosocial support in humanitarian settings and can be applied to climate scenarios. The IFRC Psychosocial Centre has numerous resources on mental health and psychosocial support in humanitarian settings. Some suggested resources include:

1. International Red Cross and Red Crescent Movement, Policy on Addressing Mental Health and Psychosocial Needs (2019)
2. WHO and IASC, Guidelines on Mental Health and Psychosocial Support in Emergency Settings (2007)
3. The Sphere Handbook (2018)
4. IFRC The Wellbeing Guide (2022)
5. IFRC Psychological First Aid (multiple modules) (2019)
6. IFRC Youth-Youth Peer PFA (2021)
7. IFRC Caring for Volunteers toolkit (2012)
8. IFRC How to support volunteer teams (2022)
9. Psychosocial Support After Flooding toolkit and key actions (2017)
10. WHO Mental Health and Climate Change Policy Brief (2022)
11. Walking into the eye of the storm: How the climate crisis is driving child migration and displacement (2021)
12. Technical Note, Linking Disaster Risk Reduction and MHPSS: Practical Tools, Approaches and Case Studies (2021)

References

Albrecht, G., Sartore, G., Connor, L., Higginbotham, N., Freeman, S., Kelly, B., Stain, H., Tonna, A., and Pollard., (2007) Solastalgia: the distress caused by environmental change. *The Royal Australian and New Zealand College of Psychiatrists* 15(S95-98)

Barlow, D.H., Durand, V., Hofmann, S.G., (2018) Abnormal Psychology: An Integrated Approach Cengage Learning (8th ed.)

Berry, H., Bowen, K.J., Kjellstrom, T., (2010) Climate change and mental health: A causal pathways framework. *International Journal of Public Health* 55 (123–132)

Cianconi, P., Betrò, S., & Janiri, L. (2020). The Impact of Climate Change on Mental Health: A Systematic Descriptive *Review. Frontiers in Psychiatry*, 11. https://www.frontiersin.org/article/10.3389/fpsyt.2020.00074

Cruz, J., Piran C. L., Bell, A.B., Peter A. (2020) Coventry effect of extreme weather events on mental health: A narrative synthesis and meta-analysis for the UK. *International Journal of Environmental Research and Public Health*. 17(22)8581

ICRC. (2020). *Seven things you need to know about climate change and conflict* [Report]. https://www.icrc.org/en/document/climate-change-and-conflict

International Red Cross and Red Crescent Movement. (2019). Policy on Addressing Mental Health and Psychosocial Needs.

Kim, Y. H-K., Gasparrini, A., Armstrong, B., Honda, Y., Chung, Y., Sheng Ng, C.F., Tobias, A., Íñiguez, C., Lavigne, E., Sera, F., Vicedo-Cabrera, A.M., Ragettli, S. R., Scovronick, N., Acquaotta, F., Chen,B-Y., Guo, L, Seposo, X., (2019) Suicide and Ambient Temperature: A Multi-Country Multi-City Study. 11(127)

Lawrence, E., Thompson, R., & Fontana, G. (2021). *The impact of climate change on mental health and emotional wellbeing: Current evidence and implications for policy and practice*. 36. https://doi.org/10.25561/88568

Mizuno, K., Mizuno, K. (2012) Effects of thermal environment on sleep and circadian rhythm. *Journal Physiol Anthropology*. 31(14)

Obradovich, N., Migliorini, R., Mednick, S. C., & Fowler, J. H. (2017). Nighttime temperature and human sleep loss in a changing climate. *Science Advances*, 3(5), e1601555. https://doi.org/10.1126/sciadv.1601555

Patel, V., Saxena, S., Lund, C.,… UnÜtzer, Jü. (2018). The Lancet Commission on global mental health and sustainable development. *The Lancet,* 392(10157), 1553–1598. https://doi.org/10.1016/S0140-6736(18)31612-X

WHO. (2018). *Heat and Health Fact Sheet*. World Health Organization. https://www.who.int/news-room/fact-sheets/detail/climate-change-heat-and-health

Xu, R., Xiong, X., Abramson, M. J., Li, S., & Guo, Y. (2020). Ambient temperature and intentional homicide: A multi-city case-crossover study in the US. *Environment International,* 143, 105992. https://doi.org/10.1016/j.envint.2020.105992