



Health Implications of Global Warming: Be Mindful of Mental Health

Global warming is acknowledged by scientists around the world to be a reality and to be caused primarily by human activity, especially the burning of fossil fuels. As the earth warms, the delicate balance of climate, weather events and life is disrupted. Consequences emerge that threaten human health and, ultimately, survival.

This is one of several fact sheets produced by Physicians for Social Responsibility that examine recent scientific evidence of global warming's impact on health.

All of the specific health risks of global warming have associated mental health risks.ⁱ

- Heat waves contribute to more alcohol and substance abuse.ⁱⁱ
- Just an increase of 1 degree F (0.5 C) seems to increase the risk of violent behavior, especially in warm climates and the inner city.ⁱⁱⁱ
- Food and water shortages threaten our basic sense of security and therefore are associated with increases in Posttraumatic Stress Disorder and other mental health problems.^{iv}
- The chronic drought in the outback of Australia is causing a new and dangerous variation of grief, solastalgia, which is a kind of distress about environmental losses in one's homeland.^v
- Perceptions of poor air quality results in increased anxiety, especially in children, along with increased family violence.^{vi}
- Individual panic and group hysteria are risks of vector-borne or waterborne diseases. Recent harbingers of this possibility were seen in the SARS epidemic.^{vii}
- People with schizophrenia are of particular risk health-wise as they tend to ignore health risks and tend not to take necessary precautions. One study links increased air pollution, specifically from motor vehicles, with an increased risk for schizophrenia. If duplicated, this would be an important finding with implications in regard to climate change.^{viii}
- When viewed in the totality of its impacts, global warming creates the potential for large-scale human conflict, as a result of displacement from climate-scarred lands and/or disputes over increasingly scarce resources.

The direct mental health risks of global warming have some unusual variations.

- The mental health implications will vary with the type, suddenness, and scale of climate change damage, as well as the social, historical, and cultural context. All of this will be filtered through the resilience of each individual.^{ix}
- In certain isolated locales, the climate change of global warming can be desirous and beneficial to human life, at least temporarily. In these environments, mental wellbeing can improve.
- Under-recognized background anxiety exists in communities prone to undesired climate change and the associated natural disasters.^x
- Children who feel they are growing up in a threatened future tend to be more troubled than their parents or grandparents. A survey of Australian children indicated that a quarter of the children fear the world will come to an end before they grow up.^{xi}
- If the perception is that people are causing climate change, rather than it being mainly a natural phenomena, the risk of Posttraumatic Stress Disorder will increase following climate-related disasters. Whenever there is a perception that more could have been done to avert, mitigate or respond to disasters, the mental health toll will be higher. Such was the case with Hurricane Katrina.^{xii}
- People who have to move from climate-ravaged environments, such as flooded Bangladesh, have come to be known as “climate refugees.” Stress Disorders are common in such situations and complicated by “cultural bereavement.”^{xiii}

Resources for providing mental healthcare related to global warming are inadequately developed

- More people are likely to be vulnerable to the mental health implications of climate change than physical health impairments. Yet for general mental healthcare in most countries, insurance and resources are inadequate compared with general healthcare.
- Disaster Response Teams are prepared for responding to acute disasters, but not to the more chronic and slowly developing mental health problems related to global warming.
- Even with adequate resources, people with mental illness often receive inadequate care.^{xiv}

i Parker CL, Shapiro SM. *Climate Change: Your Health at Risk*. Westport, Connecticut: Praeger, 2008.

ii Bulbena A, Sperry L, Cunillera J. “Psychiatric effects of heat waves.” *Psychiatric Services* 2006; 57(10): 1519-1519.

iii Rotton J, Cohen EG. “Global warming and U.S. crime rates: An application of routine activity theory.” *Envir Beh* 2003; 25: 802-825.

iv Lee Y, Lee MK, Chun KH, Lee HK, Yoon SJ. “Trauma experience of North Korean refugees in China.” *Am J Preventive Med* 2001; 20(3): 225-229.

v Albrecht G, Santore G-M, Connor L, Higginbotham N, Freeman S, Kelly B, Stain H, Tonna A, Pollard G. “Solastalgia: the distress caused by environmental change.” *Australian Psychiatry* 2007; 15(1): 595-598.

vi Rotton J, Frey J. “Air pollution, weather, and violent crimes. Concomitant time-series analysis of archival data.” *J Pers & Soc Psychology* 1985; 49(5): 1207-1220.

vii Lee AM, Wong JGWS, McAlonan GM, Cheung V, Cheung C, Sham PC, et al. “Stress and psychological distress among SARS survivors 1 year after the outbreak.” *Canadian J Psychiatry* 2007; 52(4): 233-240.

viii Pedersen, C. B., Raaschou-Nielsen, O., Hertel, O., & Mortensen, P. B. (2004). Air pollution from traffic and schizophrenia risk. *Schizophrenia Research*, 66, 83-85

ix Fritze JG, Blashki GA, Burke S, Wiseman J. “Hope, despair and transformation: Climate change and the promotion of mental health and well-being.” *Intern J Ment Health Systems* 2008; www.ijmhs.com/content/2/1/13

x Reser J. “The experience of natural uncertainty. In *International Perspectives on Natural Disasters: Occurrence, migration, and consequences*. Edited by: Stoltman JP, Lidstone J, DeChano LM. Dordrecht: Kluwer Academic; 2004; 369-384.

xi Tucci J, Mitchell J, Goddard C. *Children’s Fears, Hopes and Heroes: Modern Childhood in Australia*. Melbourne: Australian Childhood Foundation; 2007.

- xii Ozer E, Best S, Lipsey T, Weiss D. "Predictors of post-traumatic stress disorder and symptoms in adults: a meta-analysis." *Psychol Bulletin* 2003; 129: 52-73.
- xiii Porter M, Haslam N. "Predisplacement and postdisplacement factors associated with mental health of refugees and internally displaced persons: a meta-analysis. *JAMA* 2005; 294(5): 602-612.
- xiv Mitchell AJ, Malone D, Doebbeling CC. "Quality of medical care for people with and without comorbid mental illness and substance misuse: systematic review of comparative studies." *British J Psychiatry* 2009; 194: 491-499.