

Climate Change Should Be on Every Nursing Research Agenda

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Human-caused climate change is a global emergency, and its harms are predicted to increase exponentially in the coming years, particularly if unsustainable practices continue unmitigated. Adverse effects of climate change on communities affected by or at risk for cancer, such as frail older adults, are already measurable and deadly. If nurse scientists continue to ignore these realities, more people are likely to suffer and die as a result. The purpose of this critical reflection is to discuss the vital necessity of including climate change in the research agenda of the Oncology Nursing Society and all nursing science. Using an approach grounded in critical theory and design justice, the authors provide specific suggestions for the incorporation of scientific considerations and nursing measures related to climate change into oncology nursing science.

The urgency of the current global crisis that is human-caused climate change is undeniable. As of the submission of this manuscript on January 7, 2020, a quarter of the country of Australia is on fire, with more than 12.35 million acres already burned (McNamara, 2020). Experts have attributed these unprecedented wildfires to periods of drought, record-breaking heat, and strong winds—all phenomena associated with a changing climate (McNamara, 2020). Once considered impossible, research backing the association of specific disasters, such as the Australian wildfires, with the ongoing effects of human-caused climate change has grown exponentially in recent years (American Meteorological Society, 2020; Waldman, 2017). A 2019 special issue of the *New England Journal of Medicine* focused specifically on clinical guidance to manage increasingly evident health effects of a changing climate (Salas et al., 2019). The journal *Science* and numerous other scholarly institutions have declared climate change the greatest threat to humanity and global ecosystems (Hoegh-Guldberg et al., 2019). According to the World Health Organization (WHO) and other global health authorities, near-term health effects of climate change include direct effects from weather-related emergencies, such as periods of extreme heat

and dramatic changes in rainfall patterns leading to wildfires, hurricanes, mudslides, and floods; indirect effects through increased incidence of disease, particularly vector-borne illnesses, increased allergens, and other environmental pollutants; mental health crises related to climate-related stress and displacement; and major disruptions to economies and built infrastructures, such as electrical grids, roads, and other supply routes (Intergovernmental Panel on Climate Change, 2018; WHO, 2018). The *Fourth National Climate Assessment* found that the health and well-being of all Americans is already affected by climate change and that these effects are expected to worsen (U.S. Global Change Research Program [USGCRP], 2018). The Intergovernmental Panel on Climate Change, in a 2018 executive report, states that higher temperatures lead to greater health risks and increased poverty, with significantly higher harm associated with warming of 2°C compared to warming of 1.5°C. Anthropogenic climate change has the potential to affect every living being on the planet, particularly individuals at risk for or living with a cancer diagnosis. Evidence indicates that, among those at risk, individuals and communities who have been socially, economically, and geographically marginalized have already experienced significant harms (Levy & Patz, 2015; Sorenson & Garcia-Trabanino, 2019; Veenema et al., 2019). These harms include displacement, economic losses, psychological morbidity, chronic illness burden, physical trauma, and death. Such harms are predicted to increase and expand as the effects of climate change accrue and become more apparent (USGCRP, 2018).

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