

Climate change and gender-based health disparities



All genders differ in their needs, perception, attitudes, and vulnerability to the effects of climate change.¹ This difference is notably true for how climate change affects health.² Although some governmental and non-governmental organisations have begun to address the inequity of gender-based climate change effects, global efforts are falling short by failing to recognise the impact that gender has on health.

Like gender diversity, human health has traditionally been neglected in the climate change discourse, despite the detrimental impact of climate change on key health determinants, such as food security, clean water, disease vectors, and air quality.³ Each year air pollution results in 7 million premature deaths.⁴ Increased temperatures directly cause heat stress and contribute to cardiovascular deaths. Extreme weather disasters result in deaths, injuries, clean water and sanitation disruption, trauma, mental illness, and ecological grief. Furthermore, the habitable range of vectors that transmit infectious diseases, such as dengue, is shifting, including movement into currently non-endemic regions.^{5,6} The effects of climate change on health are overwhelmingly negative and they are not the same across genders.⁷

Climate change acts as a so-called health threat multiplier through a multifactorial framework of direct and indirect mechanisms, while increasing existing health inequalities. Evidence suggests that in high-income countries, men and boys are more likely to have mental health problems related to climate change that increase their risk of mortality (eg, suicide and social isolation) and that unmarried men are at greater risk of dying from heat waves than unmarried women.² In addition, the 2019 *Lancet* Countdown report mentioned that women are one of groups, across a range of social and cultural contexts, that are vulnerable to the impacts of climate change.⁶ There is an unacceptable scarcity of research on climate change health effects for non-binary people, who might also be particularly vulnerable as a result of compounding discrimination. Different socially and culturally defined gender roles result in different responsibilities, disparate ecosystem use, and health needs.¹

Although the converse might be true in some places, in many regions, women and girls have increased health risks as a result of climate change compared

with boys and men.⁷ Traditional gender roles mean that women and their children spend comparatively greater amounts of time in the home than do boys and men. Consequently, they are more likely to be exposed to indoor particulate matter from the use of traditional indoor stoves for cooking and heating than are male individuals. Inhaling such particles results in increased risk of adverse reproductive, cardiovascular, and respiratory outcomes.^{7,8} Women also have different nutritional needs from men and are more likely to skip meals as they are often last in household food hierarchies. As a result, food insecurity disproportionately affects women and girls.² Climate change might also affect women's ability to seek reproductive and maternity health services, and pregnancy-related outcomes can be affected by changes in infectious diseases, temperature, and nutritional status.⁹

Despite obvious disparities between genders, gender-disaggregated health data are often either under-represented or non-existent as a variable when assessing the health effects of climate change in medical research, environmental research, and strategic planning of mitigation and adaptation policies.⁹ This disregard for gender differences is particularly concerning as climate change is predicted to worsen existing social and economic inequalities between and within countries.⁷ Much of the literature consists of qualitative case studies with small sample sizes that focus on a specific region. Although localised insights are important, this narrow focus inhibits generalisability and understanding of exposure thresholds, which results in reduced awareness among health personnel and global decision makers—especially with regard to the unique (reproductive) challenges facing women and girls.

All too often, female voices, especially those of marginalised groups, are not being heard in climate negotiations. Despite the Gender Action Plan being a central topic for the UN Framework Convention on Climate Change (UNFCCC) during the 25th UN Climate Change Conference (COP25) in 2019, only 38% of delegates at COP24 were women (2% increase from 2014) and only 27% of the heads of delegations were women.¹⁰ A preliminary analysis of COP25 Party participants indicates that only

36% of registered Party participants were women. This analysis was based on a primary analysis of the UNFCCC COP25 provisional list of registered participants. Title, designated by the UNFCCC (eg, Ms, Mr, MMe, M, Sra, or Sr), was used to identify the participants as either female or male—it should be noted that non-binary options were not available. This unavailability of non-binary options is an issue that should be addressed before the next COP, including collecting data on gender-diverse participants and providing non-binary self-identification options (with consideration of the challenges of self-identification for non-binary people).

The adoption of the Gender Action Plan at COP25 is a step in the right direction, but commitments on gender diversity and tackling the disparate experiences of gender in terms of climate change and health must be more than tokenism. The availability of gender-disaggregated data, gender-sensitive assessments, and gender-responsive interventions are essential to enhance health equity by providing more effective mitigation and adaptation policies. Climate policies must address underlying causes of vulnerability, such as gender inequity, to prove successful. Funders, researchers, and health professionals should therefore direct their attention to this knowledge gap and bring a gender perspective to research and policy that addresses the effect of climate change on society and human health. Knowledge, experience, and perspectives of all genders in this discussion are central

to develop sustainable solutions for the biggest health threat of our time.

We declare no competing interests.

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