THRIVE TORONTO

The Unequal Mental Health Impacts of Climate Change in the GTA

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About this document

The Unequal Mental Health Impacts of Climate Change in the GTA is part of a series of papers on climate and mental well-being produced by Thrive Toronto to inform its future climate-focused work. Visit www.thriveto.ca to see the complete series, including a Glossary of Terms to support accessibility and understanding of key concepts.

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Climate Change and Structural Inequity

The accelerating impacts of climate change are not experienced equally. In metropolitan areas like the Greater Toronto Area (GTA), socially and economically marginalized groups, including racialized, low-income, disabled and newcomer communities, face heightened vulnerability due to intersecting structural inequities and environmental risk[1,2]. Although climate change is global in scope, its local impacts often deepen existing disparities, making equity a central concern in both climate adaptation and resilience planning[3].

Among the many consequences of climate disruptions, the psychological impacts, like eco-anxiety, climate grief, trauma and chronic stress, are increasingly recognized as critical issues for population health[4]. The pathways linking climate hazards to mental health are complex and shaped by both environmental threats and the broader social conditions in which people live[5].

Climate change acts as a "threat multiplier," intensifying existing social determinants of health such as income inequality, housing insecurity, limited access to healthcare, and systemic discrimination[3,4]. These factors influence not only the degree of exposure to climate-related hazards like heatwaves, floods, and wildfires but also the capacity of individuals and communities to recover[3,4].

In this context, mental health impacts are linked with broad socio-environmental systems[4-6]. Psychological distress is shaped by both direct experiences, such as displacement or loss caused by extreme weather, and the cumulative burden of chronic stressors, including environmental degradation, economic insecurity, and inadequate access to community resources[1,3,7]. While acute events like floods and storms can result in immediate physical harm, they frequently have longer-term mental health effects, such as trauma, grief, and anxiety stemming from displacement, property loss, or prolonged uncertainty. These experiences often occur alongside other stressors and may build over time, further eroding mental well-being and resilience[1,4].

In the GTA, climate-related vulnerabilities are compounded for equity-deserving populations living in under-served neighbourhoods with aging infrastructure, inadequate housing, limited green space, and poor urban planning[2,8]. These conditions increase exposure to climate hazards and weaken adaptive capacity at both individual and community levels[2].

Compounding these challenges is a lack of access to culturally appropriate, affordable, and accessible mental health care. Many marginalized communities encounter language barriers, stigma, and systemic discrimination when seeking support[9]. These barriers further hinder their psychological resilience in the face of climate stressors. In the same vein, climate adaptation efforts often lack a focus on mental health and equity, which can risk reinforcing existing climate-related inequities.

Climate Adaptation and Psychological Resilience

While all communities are affected by climate change to some extent, the degree of risk and ability to respond varies widely due to pre-existing structural inequities[10]. First Nations, Inuit and Métis peoples, Black and racialized groups, children and youth, older adults, individuals with disabilities and pre-existing physical and mental health conditions, and those experiencing poverty or homelessness, face disproportionate risks because they are systematically underserved by infrastructure, community resources, healthcare systems, and policy[11,1,2,5,12].

Extreme Heat in the GTA

Extreme heat events in the GTA highlight these inequities. Exposure to heat, sensitivity to its effects, and the capacity to adapt are unevenly distributed across the city[13]. Low-income and racialized residents are more likely to live in high-rise apartment buildings that lack adequate insulation or air conditioning, placing them at greater risk during heatwaves[14]. The high cost of electricity and the expense associated with retrofitting buildings for weather-resilient cooling systems present significant barriers to adaptation. These neighbourhoods are frequently "under-natured," with limited tree canopy and green spaces, and high concentrations of concrete infrastructures, conditions that intensify the urban heat island effect and exacerbate mental health risks during heatwaves[15,16].

While physical impacts like heatstroke are well known, heat also contributes to psychological stress, anxiety, sleep disruption, and social isolation[17]. Research highlights how extreme heat can worsen existing mental health conditions, and reduce access to usual coping strategies, such as exercise or social connection, especially for those with limited mobility or outdoor access[17,18].

For instance, residents of Toronto Community Housing, many of whom are racialized and low-income, face particularly acute risks[19]. These buildings often lack cooling infrastructure and are situated in areas with minimal green space, compounding heat exposure and limiting opportunities for psychological relief.

Flood Risk and Social Vulnerability

Similarly, climate-related flooding poses acute risks for underserved neighbourhoods in the GTA[20]. Research shows that neighbourhoods like Thorncliffe Park and St. James Town, home to many newcomers and immigrants, face elevated flood risk[20,21]. Many residents work in precarious jobs, limiting their ability to prepare for or recover from climate events.

Flooding can result in loss of property, displacement, financial hardship, and long-term mental health consequences, including post-traumatic stress, depression, anxiety, and grief[22]. The cumulative toll is particularly severe for those repeatedly affected or who lack access to social and financial safety nets that can help them recover.

Exclusion in Planning Process

Crucially, these vulnerabilities are compounded by the ongoing exclusion of marginalized communities from planning and decision-making processes. This includes climate adaptation planning for flood management and recovery programs[22]. Language barriers, limited internet access, and precarious legal or social status often prevent meaningful participation[20 23].

Research in Toronto's Thorncliffe Park illustrates how planning decisions continue to overlook the needs and strengths of marginalized communities[20]. Despite their direct experiences with flooding and other hazards, residents are frequently excluded from municipal planning processes, including flood management and resilience-building efforts. This exclusion can undermine the potential of community-led knowledge and solutions to contribute to more just and effective adaptation[23].

Mental Health Equity is Climate Resilience: Community-led initiatives and co-benefits

Improving climate risks by addressing social determinants of mental health provides an opportunity to support overall public health and social equity[3]. Supporting the mental well-being of populations most exposed to climate hazards directly enhances community capacity to prepare for, respond to, and recover from environmental disruptions[23].

These efforts often generate co-benefits, positive additional or concurrent effects in related areas such as air quality, housing, mobility, and food security[23,24]. In the GTA, several community-led initiatives already highlight several co-benefits. While these initiatives focus on improving local resilience to climate change, they also have potential positive impacts in mitigation efforts (reducing carbon emissions and improving air quality), food security, affordability (energy costs), and social equity[25]. For example:

- **Green infrastructure projects,** including urban tree planting and the expansion of green spaces, mitigate extreme heat and improve air quality, both key environmental stressors linked to mental health outcomes. These spaces also provide settings for physical activity, social interaction, and psychological restoration, particularly for populations living in high-density, under-serviced neighbourhoods.
- **Community food programs** simultaneously address food insecurity, promote sustainable agriculture, and aim to improve mental well-being through hands-on, land-based engagement. These programs reduce emissions from industrial food systems while enhancing access to nutritious and culturally appropriate food, which is a known social determinant of health.
- **Active transportation and mobility initiatives**, including groups coordinating community walks and access to cycling resources, not only reduce greenhouse gas emissions but also support mental and physical health by fostering active lifestyles and social interaction.
- **Local emergency preparedness plans** strengthen community readiness while building social networks, increasing trust, and fostering agency. These forms of social capital are crucial for psychological resilience, especially during and after climate-related crises.

These examples demonstrate that climate resilience, and thus psychological resilience, are linked with social and environmental determinants of health like safe housing, nutritious food, green space, and social cohesion.

Moreover, these interventions frequently deliver cross-sectoral co-benefits, aligning climate, health, and equity goals. For instance, retrofitting housing to improve thermal comfort not only reduces exposure to extreme heat but also lowers energy costs and carbon emissions. Urban greening projects enhance biodiversity and air quality while improving mental health outcomes. Food security programs mitigate environmental degradation while fostering community cohesion and psychological stability.

Conclusion

The climate crisis presents not only environmental risks but also profound and uneven impacts on physical and mental health and well-being. In the GTA, these psychological and social consequences are most acute for communities already facing systemic inequities, including racialized groups, low-income populations, newcomers, and others marginalized by historical and structural forces. Climate-related stressors such as extreme heat, flooding, and displacement intersect with inadequate housing, limited access to healthcare, and exclusion from planning processes to intensify vulnerability. Despite increasing awareness of these dynamics, mental health remains insufficiently addressed in climate policy and adaptation efforts. Understanding climate resilience without accounting for the psychological and social dimensions can limit the full scope of harm and perpetuates patterns of neglect toward those most affected.

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