



The Mental Health and Climate Change Alliance:

An Overview of Our Organization, Purpose, and Programming

About the MHCCA

The Mental Health and Climate Change Alliance (MHCCA) is a community of more than 50 interdisciplinary researchers, healthcare providers, and community organizers committed to identifying and addressing the adverse impacts of the climate change on mental health.

As a Canadian Not-for-Profit organization incorporated under the Canada Not-for-Profit Corporations Act, the MHCCA's purposes are to

- (1) conduct equity-based climate distress monitoring;
- (2) incubate novel interventions and policy ideas to address the mental health impacts of climate change; and
- (3) facilitate knowledge exchange and mobilization to support Canadian's experiencing climate-related ecological distress.



MHCCA

MENTAL HEALTH AND CLIMATE CHANGE ALLIANCE

Understanding the Importance of Our Work

The MHCCA was founded by a network of researchers across Canada who recognized that funders and policy-makers were not paying attention to the mental health impacts of climate change.

“When we started, less than 1% of health research dollars were being directed to the study of climate change on health.”

Meanwhile, educators, climate activists, and parents were increasingly reporting the severe adverse impacts of climate change on the mental health and wellbeing of their communities. Answering these calls for action, the MHCCA stepped up and is now one of Canada’s leading research organization dedicated to solely to addressing the negative health impacts of *climate-related ecological distress*.

What is climate-related ecological distress?

The American Psychological Associations (APA) has defined climate-related ecological distress as *“the chronic fear of environmental cataclysm that comes from observing the seemingly irrevocable impact of climate change and the associated concern for one’s future and that of future generations.”*¹

Worries and concerns about climate change are normal and rational.⁹ After all, the World Health Organization and other leading public health bodies have described climate change as *“the single biggest health threat facing humanity.”*¹⁰ As such, some degree of worry and concern about how climate change will affect you, your community, and the world is perfectly acceptable – and perhaps even beneficial.

However, experiences of climate-related ecological distress go above and beyond these natural worries and concerns.⁴⁵ Climate-related ecological distress can become chronic and can be debilitating. People impacted by climate-related ecological distress experience cognitive and functional impairment, suicidal ideation and, feelings of grief, rage and depression that reduce their capacity for a happy and healthy life. For these reasons, Health Canada’s National Assessment on the Health of Canadians in a Changing Climate highlights the mental health effects of climate change as a top research and intervention priority for coping with climate change.¹¹

How many people are impacted by climate-related ecological distress?

As noted by Health Canada's 2022 report on the health impacts of climate change, there are "limited population-level studies on climate change impacts on mental health within Canada and globally."¹¹ Supporting this view, Hwong's (2022) recent review emphasizes that research into the mental health effects of climate change is currently in its infancy.¹³ Nevertheless, a few estimates of the prevalence of climate-related ecological distress are available. According to a landmark APA study from last year, 68% of adults reported experiencing "at least a little eco-anxiety" and 48% of young people, globally, report that climate change negatively affects their daily life and functioning.^{2,3} At a minimum, this suggests that mild and moderate levels of climate-related ecological distress are common.

"People experiencing eco-anxiety today are like canaries in the coal mine. As climactic conditions worsen, so will the distress people experience about the loss of their environment."

In recent years, valid measures of climate-related ecological distress have emerged, which allow for the measurement and study of climate-related ecological distress. For example, Clayton et al. (2020) published the Climate Change Anxiety Scale (CCAS) as the first developed measure to account for the cognitive and functional impairments of climate anxiety.⁴ Hogg et al. (2021) replicated this factor structure when creating the Hogg Eco-Anxiety Scale.⁵ Cunsolo & Harper's (MHCCA Affiliated Researchers) ongoing random-digit dialing study will soon provide the first national estimate of climate-related ecological distress in Canada using these reliable measures and tools. Based on our team's own research using these measures, the prevalence of severe cognitive and functional impairments in online samples seem to be low – around 5 to 10% of the population.¹⁴

Regardless of the actual prevalence of climate-related ecological distress, several authors have speculated that those with severe symptoms may represent "sentinel populations" and that as the effects of climate change become more apparent, the prevalence and severity of climate-related ecological distress will increase.¹⁵

Who is impacted by climate-related ecological distress?

Vulnerability to climate-related ecological distress is shaped by a wide variety of factors, including exposure to extreme weather events connected to climate change, the availability of economic and material resources that can be mobilized to buffer against environmental threats, common risk factors for other mental health disorders, socio-

political and cultural conditions that shape knowledge about climate change, and so on. Youth and young adults are also especially vulnerable, as are parents of children, as these groups may face particularly harsh realities when faced with the threat of climate change.^{3,16}

While some authors have argued that climate-related ecological distress is a mental health condition associated with privilege,¹⁷ there is little empirical support for this position – and in fact a growing body of literature contradicts this view.^{8,18} For example, in forthcoming empirical work from our team’s previous research on climate-related ecological distress, we see that those with higher privilege – men, able-bodied persons, middle-aged and older adults, high income earners, and those in management occupations – report the **lowest** levels of climate-related ecological distress. In fact, education is the only marker of privilege that we’ve identified as being associated with higher climate-related ecological distress.

“The available evidence suggests that there are severe health inequities in who experiences climate-related distress.”

Is climate-related ecological distress different from other forms of psychological distress?

A common question we get about our work is how climate-related distress differs from other forms of psychological distress. Studies leveraging recently developed measures of climate-related ecological distress by Clayton et al. and Hogg et al. demonstrate discriminate measurement validity from other measures of distress. That said, climate-related ecological distress may share many of the same mechanisms as other forms of psychological distress.⁵ Nevertheless, any public health or psychological intervention needs to be adapted for the particular content of distress. One-size-fit-all mental health interventions have not been shown to be effective across mental health disorders, and some otherwise effective mental health interventions have found to be ineffective in treating climate-related ecological distress^{19,20}. Climate-related ecological distress is also unique from generalized distress in the extent to which individuals are able to mitigate their exposure to threatening stimuli, such as extreme weather.⁵

Recognizing these challenges, mental health practitioners have been among the leading voices calling for therapeutic interventions and coping strategies specific to climate-

related ecological distress. In fact, in a survey of mental health care providers, most reported that they did not feel adequately prepared by their clinical and therapeutic training to adequately support patients experiencing climate-related ecological distress.⁶ Since the launch of the Mental Health and Climate Change Alliance, our team has been repeatedly asked by mental health care providers to provide information about how people with climate-related ecological distress can be supported. Some therapists report that traditional treatments for anxiety have been viewed by patients as minimizing and dismissive of their experiences of climate-related ecological distress.²¹ These experiences of clinicians and patients highlight the need to treat climate-related ecological distress as a distinct mental health condition. As such, it is necessary to develop evidence-based approaches for the prevention and treatment of climate-related ecological distress to address these significant knowledge gaps.

What can be done to treat climate-related ecological distress?

In recent years, climate-related ecological distress has attracted increasing interest and a growing cottage-industry of the “wellness movement” has coalesced around the issue. Some programs cost patients hundreds of dollars in out-of-pocket expenses. However, most of the resources developed for climate-related ecological distress are not rooted in empirical studies of climate-related ecological distress. The effectiveness of most public health efforts have not been rigorously evaluated.

While some of the recommended coping strategies for the management of climate-related ecological distress are promising – based on evidence for their effect on other mental health conditions, domain-specific research is needed. This need is underscored by growing evidence that the effectiveness of therapeutic interventions varies widely according to health condition and target population. A growing body of literature does warn that un-adapted mental health interventions may not be effective for treating climate-related ecological distress ^{19,20}

“As the climate worsens, the importance of addressing climate-related ecological distress will only become more important as a growing number of individuals experience triggering events from weather-related drivers. of stress.”

A 2021 review by Baudon & Jachen’s highlights a growing body of literature examining psychological approaches for climate-related ecological distress.²² They recommend a focus on holistic, group-based, multi-pronged interventions that validate patient’s worries and concerns about climate-related ecological distress. However, they emphasize that it

still remains unclear what interventions are best and that the refinement and promotion of such interventions will yet require significant public health investment.²³⁻²⁷

Unfortunately, Canada's lacks a functioning mental health care system's and access to therapy-based programs is severely limited for most people.²⁸ As such, it is important to understand how people are already coping with climate-related ecological distress and what coping strategies might be most effective at reducing climate-related ecological distress. For example, various experts have hypothesized that engagement in pro-environmental behaviours (such as...) might have a therapeutic effect for individuals with climate-related ecological distress.²⁹⁻³² Pro-environmental behaviours not only offer the direct benefit of slowing climate change itself,^{33,34} but they may also refocus individuals on actions and circumstances within their sphere of control.^{32,35} Focusing on these behaviours may thus help ameliorate anxious feelings by promoting a sense of self-efficacy, meaning, purpose, and solidarity; which in turn can help individuals overcome the powerlessness, hopelessness, and dread that characterize climate-related ecological distress.^{21,30,36,37} However, there are also concerns that promoting climate-related behavioural engagement could exacerbate feelings of worry by causing climate-anxious individuals to become preoccupied pre-occupied with the object of their distress.³⁸ These concerns are reflected in the experiences of climate activists, who, despite personal effort and commitment, experience significant levels of distress and burnout in the face of government and corporate inaction.³⁹⁻⁴²

It largely remains unclear to what extent even this basic, widely endorsed coping strategy might do for people with climate-related ecological distress. Investigation into the coping strategies for climate-related ecological distress is thus important to helping individuals and communities to pre-emptively build "pre-traumatic resilience" in the face of climate change.⁸

About The MHCCA's Programs and Activities

Recognizing the importance of climate-related ecological distress, the Mental Health and Climate Change engages in a variety of activities intended to mobilize and generate new knowledge that can help our social and health systems better respond to the needs of communities and individuals experiencing distress due to climate change.

Resource Curation & Knowledge Dissemination

One of the key reasons the MHCCA exists is to design interventions, curate resources, and exchange knowledge that helps individuals, health providers, families, educators, and activists build resilience and manage the mental health and emotional impacts of climate change. To support this mission, we work with communities to develop and evaluate interventions, review and curate the best resources for managing climate-related ecological distress, and host quarterly meetings to exchange knowledge with our national network of researchers, leaders, and practitioners.

The Annual Summit on Mental Health and Climate Change

In February 2021, we held the first Summit on Mental Health and Climate Change — a two-day virtual event attended by more than 120 climate change and mental health experts, stakeholders, and community members. The meeting aimed to raise awareness and facilitate community engagement on the topic of climate change and mental health and specifically discuss the pathways by which mental health and wellness and climate change influence each other. Given the incredible success of the MHCCA Summit, we have continued to host the conference each February.

The Journal of Mental Health and Climate Change

As the official publication of the Mental Health and Climate Change Alliance, The Journal of Mental Health and Climate Change (JMHC) is a semi-annual open-access publication that features interdisciplinary scientific research and evidence-based editorials focused on the intersection of mental health and climate change. The Journal fills a critical gap by providing a publication venue for scholarly work focused on the study, prevention, and treatment of mental health conditions related to climate change.

Workshops to Build Resilience and Manage Climate Distress

Partnering with registered mental health professionals, the Mental Health and Climate Change Alliance Facilitates Workshops and Events for Schools, Business, Municipalities, and other interested organizations on a cost-recovery basis.

Primary Research

The bulk of the MHCCA's work is focused on generating new knowledge through research and evaluation. Below is a list of our ongoing research projects that aim to build new knowledge related to the mental health impacts of climate change.

The British Columbia Climate Distress Monitoring Surveys

Funder: Faculty of Health Sciences, Simon Fraser University

Summary: In the Summer of 2021, we piloted the Climate Distress Monitoring System (CDMS), a serial cross-sectional survey to measure experiences of climate distress among British Columbians. For example, in Summer 2021 we found that the prevalence of people experiencing cognitive and functional impairments (i.e., eco-anxiety) due to climate change increased 13% following the heat wave in British Columbia. These data highlighted the broad effects and increasing prevalence of ecological distress and the need to focus on ecological resilience. Since the heat dome, additional waves of data collection have been undertaken and our team is currently conducting analyses that (a) explore sex and gender differences in climate change anxiety; (b) examine cynicism about government action on climate change; (c) explore whether engagement in pro-environmental behavior exacerbates or attenuates climate anxiety; (d) assesses the impact of climate anxiety on people's decision to have children, (e) study what factors drive concerns about the impact of climate change on their occupation, industry, and neighborhood; (e) determines what effect social support has on climate anxiety; and (f) explores subpopulation longitudinal trends in climate anxiety.

TAKE NOTICE Network: Targeting Action and Knowledge Exchange at the Nexus of Environment and Health Through Integrated Children and Youth Engagement.

Funder: Social Science and Humanities Research Council

Summary: The goals of the proposed project are (1) to build a network of researchers, practitioners, policy-makers, and youth who operationalize the principles of intergenerational justice and equity in partnering to advance sustainable and transformative climate solutions; and (2) to enable this network to amplify the use of an intergenerational justice lens in climate change-related priority setting and largescale responses through refining and sharing tools and frameworks that effectively build equitable and sustainable intergenerational partnerships.

Future Directions

In addition to the studies featured in this overview, the MHCCA has identified a number of research challenge areas that are to be explored in future research related to the mental health impacts of climate change. These topics include:

- Understanding what coping strategies are most effective for managing climate-related ecological distress;
- Exploring the importance of social, emotional, and existential connection to climate residence;
- Examining how self-efficacy, self-esteem, and personal wherewithal relate to climate action and resilience;
- Testing what types of pro-environmental behavioural engagement are most meaningful to individuals and communities;
- Exploring inequities in the impacts of climate change on mental health.

Developing an Index That Simultaneously Measures the Environmental and Socio-Cultural Vulnerability of Municipalities Across British Columbia

Funder: BC Ministry of Health & Providence Health Research

Summary: Climate change is directly impacting local communities across British Columbia, leading to significant levels of local devastation. The ability for communities to respond to these environmental changes is moderated by the capacity and resources of the community. As such, vulnerability to climate change is driven by not only environmental vulnerabilities (e.g., the extent to which weather and climate will change in a region), but also socio-structural vulnerabilities (e.g., community assets, population health). This project aims to develop an index that simultaneously measures the environmental and socio-cultural vulnerability of municipalities across British Columbia.

Creating an Automated Climate Change Distress Monitoring System (A-CDMS) for Measuring Population-level Distress About Climate Change

Funder: New Frontiers in Research Fund

Summary: Climate change is adversely affecting the mental health of Canadians. Yet, climate distress is not routinely monitored, making secondary public health responses difficult. Given this gap, the MHCCA has pioneered climate distress monitoring systems in Canada. While our work has demonstrated the feasibility and utility of climate distress monitoring, its reliance on continuous self-reported data is limiting – especially since the start of the COVID-19 pandemic, which has increased the prevalence of online surveys and resulted in survey fatigue and increased recruitment costs. Addressing these challenges, this project, funded by the New Frontiers in Research Fund, aims to create an Automated Climate Distress Monitoring System (A-CDMS) that leverages social media, internet search, and news data to monitor climate distress in the context of extreme weather events and other triggers. To accomplish this, we are identifying social media and news content related to climate change and developing a platform that can be used to alert knowledge users of elevated climate distress using data from Twitter, Reddit, Facebook, the Google News aggregator, the Google Trends platform.

Understanding Climate-Related Ecological Distress and Resilience within Changing and Challenging

Funder: Social Science and Humanities Research Council

Summary: This interdisciplinary project aims to move beyond conventional measurements of ecological distress -- which are used to detect cognitive and functional impairments -- and explore the diverse and manifold ways that individuals and communities are experiencing and processing ecological change. We further aim to understand not only the adversities of climate change, but also the positive adaptation strategies that individuals and communities employ to mitigate adversity. To accomplish the aims, we will develop and validate new multi-dimensional measures of climate-related ecological distress and resilience; characterize patterns of climate-related ecological distress and resilience; assess differences in the performance of these measures between key populations; and identify theoretically-informed factors associated with these patterns. To execute our aims, the qualitative phase of the study has begun with concept mapping to delineate experiences of climate-related ecological distress and ecological resilience.

Funding the MHCCA

The MHCCA has received \$553,946 CAD in direct funding from Canada's leading health and social science funders. Additionally, the MHCCA has partnered on projects awarded an additional \$920,662 CAD.

The MHCCA's Scientific Director, Dr. Kiffer G. Card, has further received more than \$1.5 million as a principal investigator, \$1.2 million as a co-principal investigator, \$4.9 million as a co-investigator, and \$11.0 million as a collaborator on projects related to mental health and social wellbeing. Other research scientists affiliated with the MHCCA have received tens of millions of dollars in funding for health and social science research.

While the financial statistics above demonstrate our team's capacity to manage projects valued by funders, there are a few reasons why ongoing financial contributions are critical for the MHCCA:

- In Canada, health funding is incredibly competitive. In fact, Canada's leading grant competitions have an average success rate of less than 20%. This means that our scientists must spend more time pursuing funding than doing research. This slows and limits the research process – delaying critical insights that could make importance differences in people's lives.
- The MHCCA does not receive any core funding to sustain its day-to-day operations. Therefore, all staff are funded through research projects. This means that most of our staff are employed through year-to-year contracts – limiting their job security and posing a significant barrier to long-term retention of highly skilled and expert staff.
- All scientists affiliated with the MHCCA donate 100% of their time to our projects. This represents an incredible in-kind donation and value add for those choosing to support the MHCCA.
- Most of the costs associated with our research go to supporting trainees and staff. In fact, approximately 75% of our project funding goes towards the training and development of Canada's next generation of climate health researchers.
- Many key aspects of our work, such as those focused on networking and relationship building, are not directly related to research. Therefore, it can be difficult to fund these activities with federal and provincial research grants. Having funding that is ear-marked for these activities greatly supports our knowledge mobilization and dissemination efforts.

Our People

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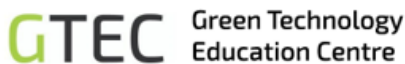


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