

Exploring Climate Anxiety among Environmental Students at UTM

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Introduction

Climate change is a multifaceted phenomenon that is becoming more prevalent in various aspects of human life. The impacts of climate change are surfacing all over the globe, and according to the World Health Organization, it will be the most pressing threat to human health.¹ This threat has been studied and found to manifest itself in several ways.

An emerging phenomenon called **climate anxiety** has surfaced, and scholars define it as the stresses individuals face when considering the potential future impact climate change would have on their lives.² Studies worldwide have already confirmed climate change to be a source of worry for many and found an increased prevalence of worrying among youth and those concerned about environmental issues.^{2,3} Notably, these studies found emotions such as guilt, anxiety, depression, fear, shame, and hope to be reported alongside worrying about climate change.^{1,4}

Although knowledge of this phenomenon is still emerging, it is important to understand the prevalence of these intense emotions among youth within a local context. Furthermore, it is important to understand the degree to which these emotions impact youth and if the impact warrants additional support to cope with it.

Responding to this need, this study synthesizes current knowledge around the phenomenon of climate anxiety and assesses its prevalence among young people in environmental courses who attend the University of Toronto Mississauga (UTM).

Literature Review

A literature review was conducted to assess three key drivers of climate anxiety:

- Geographic Region:** Those living closer to climate change impacts experience increased levels of anger, fear, sadness and guilt than those further removed from direct impacts.⁵
- Gender:** Females are more vulnerable to experiencing climate anxiety than males and also have experienced higher levels of domestic violence, rape and femicide as temperatures increase.^{6,7}
- Age:** Youth are physically (their bodies are not fully developed to adapt to the heat) and mentally (prolonged exposure to stress puts their brain development at risk and can impact their psychological health) vulnerable to experiencing climate change impacts.^{2,8}

Coping with Climate Anxiety

A scoping review was referenced to identify available treatments for eco-anxiety.⁹ The findings highlighted four major themes focused on empowering the client through fostering inner resilience, building social connections and support groups, encouraging action, and connecting with nature.

Research Design and Methodology

The literature review findings guided the formulation of the paper's research questions, hypotheses and survey.

Research Questions

- RQ 1:** What is the level of climate anxiety among students who take undergraduate and master's level environmental courses at the University of Toronto Mississauga (UTM)?
- RQ 2:** Does the level of climate anxiety vary among gender and legal status (Domestic and International) students?
- RQ 3:** What climate anxiety interventions are most popular among these students?

Survey Design and Methodology

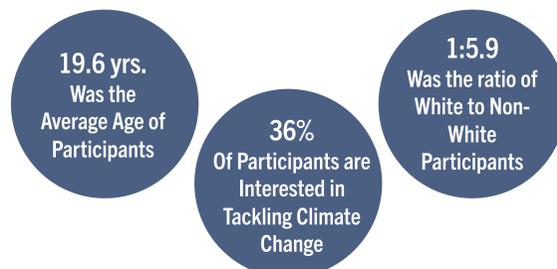
The survey consisted of six sections (demographics, climate anxiety, personality, sense of agency, cultural tightness and eco-anxiety interventions), totalling to 74 questions. T-tests and a correlation matrix were used to measure the level of climate anxiety and its association with the factors above.

Survey Participant Demographics

Gender Identification	Legal Status	Count
Male	Domestic	121
	International	78
Female	Domestic	223
	International	110

Total of 532 participants were studied.

93% of all International Participants were from Asia.



Survey Results

Gender Identification	Legal Status	Climate Anxiety Score
Female	International	2.05 / 5
Male	International	2.03 / 5
Female	Domestic	1.82 / 5
Male	Domestic	1.67 / 5

Climate Anxiety is present at a **low intensity** for all groups, but is most prevalent among female international students.



"Mostly climate change makes participants feel..."

...Powerless and Anxious"

Climate Anxiety Interventions



Participants are likely to leverage support resources such as a list of green spaces in Mississauga to spend time in nature or participate in individual/group extra-curricular sustainability initiatives to cope with climate anxiety.

Key Findings

- The first key finding was uncovering a **low intensity of climate anxiety among students** who take undergraduate and master's level environmental courses at UTM. Furthermore, the thought of climate change makes all four groups of students studied feel powerless and anxious. These emotions align with the findings from the global survey conducted across 10 countries where 50% of their 10,000 respondents reported feeling powerless and anxious when thinking about climate change.⁴
- The second key finding identified that the average **climate anxiety levels of international students are higher and statistically different than the climate anxiety levels of domestic students**. Moreover, male international students' climate anxiety levels were close to those of female international students. This indicates that the variable of legal status has a greater influence on climate anxiety levels than the variable of gender.
- The third key finding was observing a **stronger positive correlation between students' negative sense of agency and climate anxiety levels**, and a weaker negative correlation between students' positive sense of agency and climate anxiety levels.

Recommendations

- The first recommendation is for the Master of Science in Sustainability Management program to leverage the findings from this study and expand the scope of research on climate anxiety. This can be done by commissioning an MScSM student to conduct a campus-wide study to assess the prevalence of climate anxiety among the student population to better understand its impact on students' lives.
- The second recommendation is for the UTM Health & Counselling Centre (HCC) to align with the climate anxiety resources being offered by other universities to help foster an environment where students feel safe to work through their climate anxiety emotions and feel inspired to take climate action. Simon Fraser University is a good benchmark as they offer seminars on climate anxiety led by a psychologist who uses a strength-based solution-focused model to support students in understanding their challenges and take away strategies to work through them.¹⁰
- The third recommendation is for the UTM Sustainability Office to continue hosting their "Feel Circle" sessions but instead of hosting them indoors, host them outside in a green space on campus (weather permitting) while also incorporating a meditation exercise to spark calmness and inspiration among students. This would leverage the insights gained from the survey by giving students an opportunity to spend time in nature.
- The fourth recommendation, encourages the UTM Sustainability Office team members, who play a key role in advising the UTM's Principal's Sustainability Action Committee (PSAC), to highlight to the PSAC committee that students are interested in taking individual and group action through extra-curricular sustainability initiatives as a way of coping with climate anxiety and to request the support of professors and staff to create opportunities for students to participate in.

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