



Climate Change-Induced Stress in University Students

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Introduction

Individual's mental health is an issue of growing importance. Though mental health problems have always been an aspect of society, stigmatization has prevented thorough understanding of the social phenomena until the last century. With recent destigmatization of mental health problems, there has been an increase in literature addressing stressors that may lead to increased mental health risks (Ahmedani 2021). With the exacerbation of global warming, there is a plethora of research showing how climate change is impacting the mental health of younger generations as well as professionals in the natural resources field (Clayton 2018; Léger-Goodes et al. 2022).

Eco-anxiety refers to the impact of the climate crisis on individual's mental health. Studies investigating the way this phenomena has manifested have found that it impacts professionals in the natural resources field at high rates. Climate scientists asked to describe their feelings on the subject have stated that they were frustrated, sad, and that their research made them feel powerless (Clayton 2018). With many students studying the natural resources and planning on entering similar fields, it is important to recognize the climate crisis as a possible stressor for undergraduates.

Methods

Purpose: The purpose of this study was to understand the impact of climate change education on students' mental health.

Research Question: How is exposure to climate change knowledge associated with climate change related stress?

Hypotheses:

1. Students who are part of the College of Life Sciences and Agriculture (COLSA), specifically the Department of Natural Resources, will experience higher levels of stress than students who are part of other colleges and other departments within COLSA.
2. Students who have taken Discovery courses that have addressed climate change will experience higher levels of stress than those who have not.

Research Methods: This research was conducted during the fall of 2022 at the University of New Hampshire, Durham campus. A Qualtrics survey was taken by 300 UNH undergraduates through a snowball sample. Independent variables were exposure to climate change knowledge, university major, and university department. The dependent variable was stress in relation to climate change. Exposure to climate change knowledge was defined as courses taken that addressed climate change. This was measured as courses taken for one's major or for the university Discovery program, which encourages students to take electives outside their course of study.

Results and Discussion

Table 1. Climate Stress Levels by College

Stress Level	Total	PAUL	COLA	COLSA	CHHS	CEPS
Very Low	5.56%	13.16%	4.59%	3.92%	0.00%	10.71%
Low	11.48%	7.89%	11.93%	7.84%	15.91%	14.29%
Moderate	36.67%	50.00%	33.03%	27.45%	45.45%	35.71%
High	19.26%	10.53%	22.02%	21.57%	18.18%	17.86%
Very High	12.59%	2.63%	13.76%	25.49%	6.82%	7.14%

P value = 0.03

Table 2. Climate Stress Levels by COLSA Department

Stress Level	Total	Not COLSA	Ag. Nutr. Food Syst.	Bio. Sciences	Mol. Cell. Biomed	Nat. Resources
Very Low	5.6%	6.3%	25.0%	0.0%	7.1%	0.0%
Low	11.2%	10.6%	25.0%	5.3%	28.6%	5.9%
Moderate	35.5%	38.8%	25.0%	36.8%	21.4%	17.6%
High	19.2%	18.8%	0.0%	15.8%	21.4%	29.4%
Very High	14.5%	11.3%	25.0%	26.3%	7.1%	35.3%

P value = 0.1

- 51.50% of respondents had taken a Discovery course addressing climate change and 44.21% had not, with 4.29% reporting that they were unsure.
- When cross tabulated, it was found that stress levels for both those who have and have not taken a Discovery class addressing climate change follow a normal distribution, with "yes" showing a slight tendency towards high and very high.
- Though students who had taken a Discovery course addressing climate change reported "moderate," "high," and "very high" levels of stress relative to students who had not, there was a p value of 0.3 indicating that these results are not statistically significant.

- Students in COLSA reported both "high" and "very high" levels of stress in relation to climate change relative to students in other colleges. These results were statistically significant with a p value of 0.03.
- COLSA showed a strong shift towards higher levels of stress, with both "high" (21.57%) and "very high" (25.49%) levels of stress reporting and respectively.
- Additionally, COLSA reported the highest percentage of "very high" levels of stress in relation to climate change (25.49%).
- Within COLSA, Department of Natural Resources and the Environment students showed both the highest percentages of "high" (29.4%) and "very high" (35.3%) stress levels, as well as the lowest percentage of "very low" stress levels (0.0%).

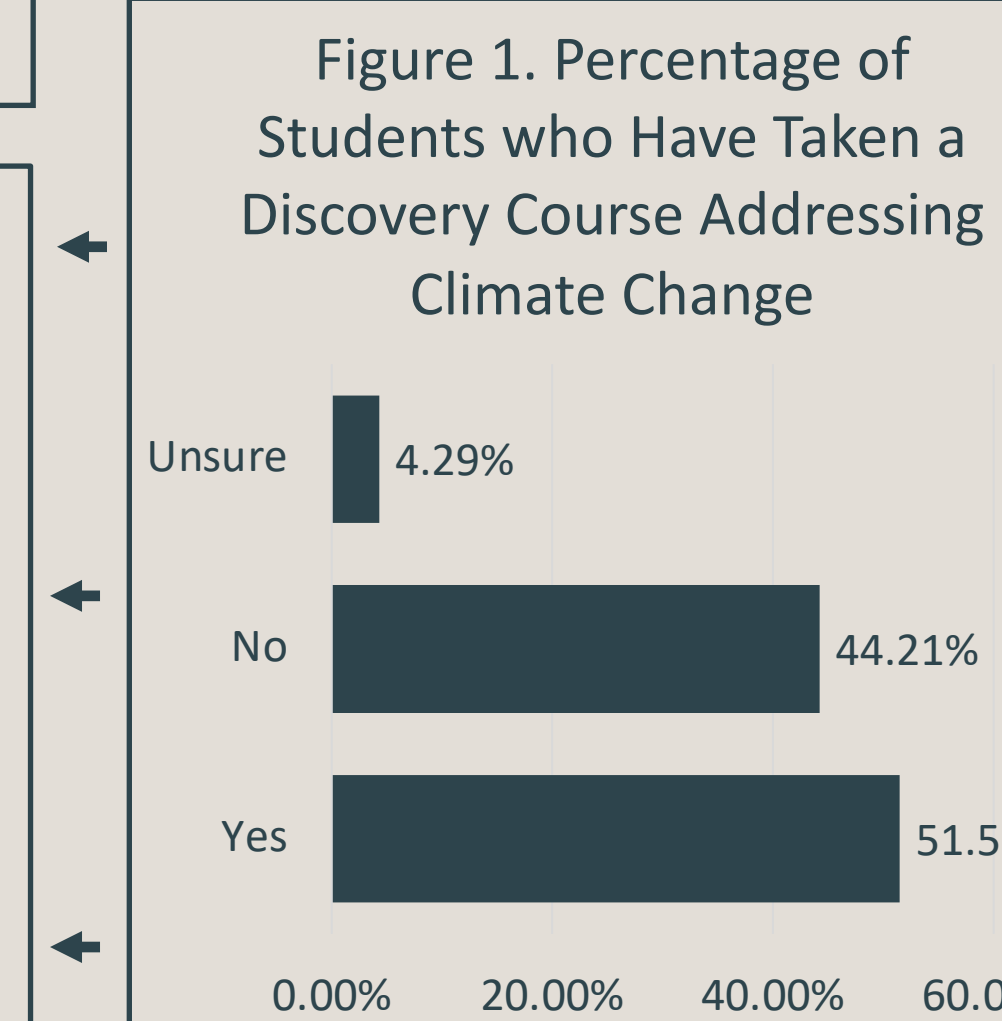


Table 3. Climate Stress Levels by Climate Discovery Course

Stress Level	Total	Yes	No
Very Low	5.8%	5.0%	6.8%
Low	14.8%	10.8%	19.4%
Moderate	42.2%	43.3%	40.8%
High	22.4%	23.3%	21.4%
Very High	14.8%	17.5%	11.7%

P value = 0.3

Conclusions

Students whose coursework involves the natural sciences are likely to develop climate change related stress. Respondents with majors in COLSA, specifically the Department of Natural Resources, experienced high and very high levels of climate change related stress at significantly greater rates than other respondents and are at risk for eco-anxiety. While my results support the hypothesis that students with majors in the Department of Natural Resources experience higher levels of climate change related stress, the hypothesis that students who take Discover courses addressing climate change will experience higher levels of climate change related stress was not supported. Students who are not part of COLSA but take classes discussing climate change may experience higher levels of stress than others, but do not appear to be at risk for eco-anxiety.

References

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