

An illustration of a large globe of the Earth. The top half of the globe is engulfed in orange and yellow flames, with thick grey smoke billowing out to the right. Two stylized human figures are shown from the waist up, supporting the globe from below. On the left, a man with dark skin and short hair, wearing a green hoodie and blue pants, is walking towards the right. On the right, a woman with dark hair, wearing a white long-sleeved shirt and a dark red vest, is also walking towards the right. The background is a light blue sky with faint, distant mountains on the horizon. The bottom of the image has a white, torn-paper-like edge.

CLIMATE GRIEF AMONGST  
UNDERGRADUATE STUDENTS AT  
THE UNIVERSITY OF UTAH

Weekly Environment & Society Talk (WEST)

September 17, 2024

# PROJECT TEAM & FUNDING



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slido

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In the last two weeks, I have experienced feelings of anxiety or grief associated with the environment or climate change.

① Start presenting to display the poll results on this slide.





Climate anxiety is globally pervasive amongst youth  
(Hickman et al., 2021 *Lancet*)



Educators need to better understand emotional &  
affective responses to climate change instruction  
(Russell & Oakely 2016, *Can J of Env Education* ; Pihkala 2020,  
*Sustainability*)



*“One of the penalties of an ecological education is that one lives alone in a world of wounds...”*

“... An ecologist must either **harden his shell** and **make believe that the consequences of science are none of his business**, or he must **be the doctor** who sees the marks of death in a community that believes itself well & does not want to be told otherwise.”

– **Aldo Leopold (1953)**

# RESEARCH QUESTIONS

What is the prevalence of climate anxiety amongst undergraduate students?

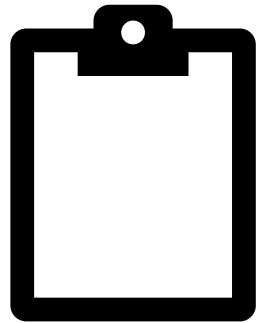
How common is climate change a concern amongst undergraduate students?

What are common strategies undergraduate students use for coping with climate anxiety?

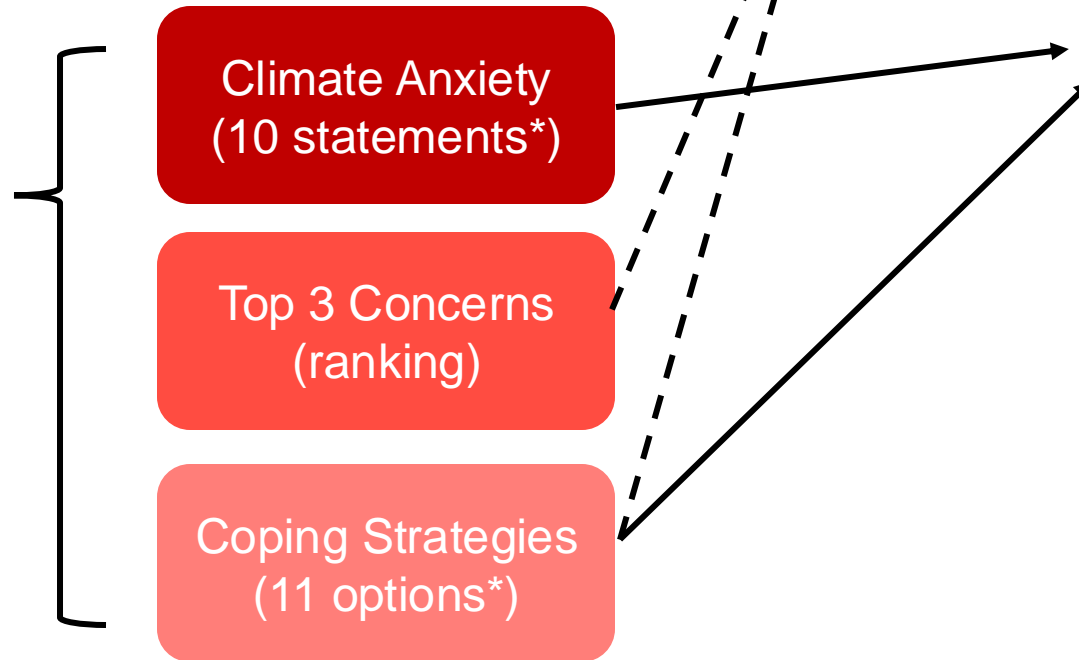
# STUDY DESIGN



Open ended responses,  
coded in Atlas software



IRB approved  
Qualtrics survey  
n = 527 students  
F: n = 348  
M: n = 179



Factor analysis, with varimax rotation  
Cronbach's alpha ( $\alpha$ ) testing  
(R software)

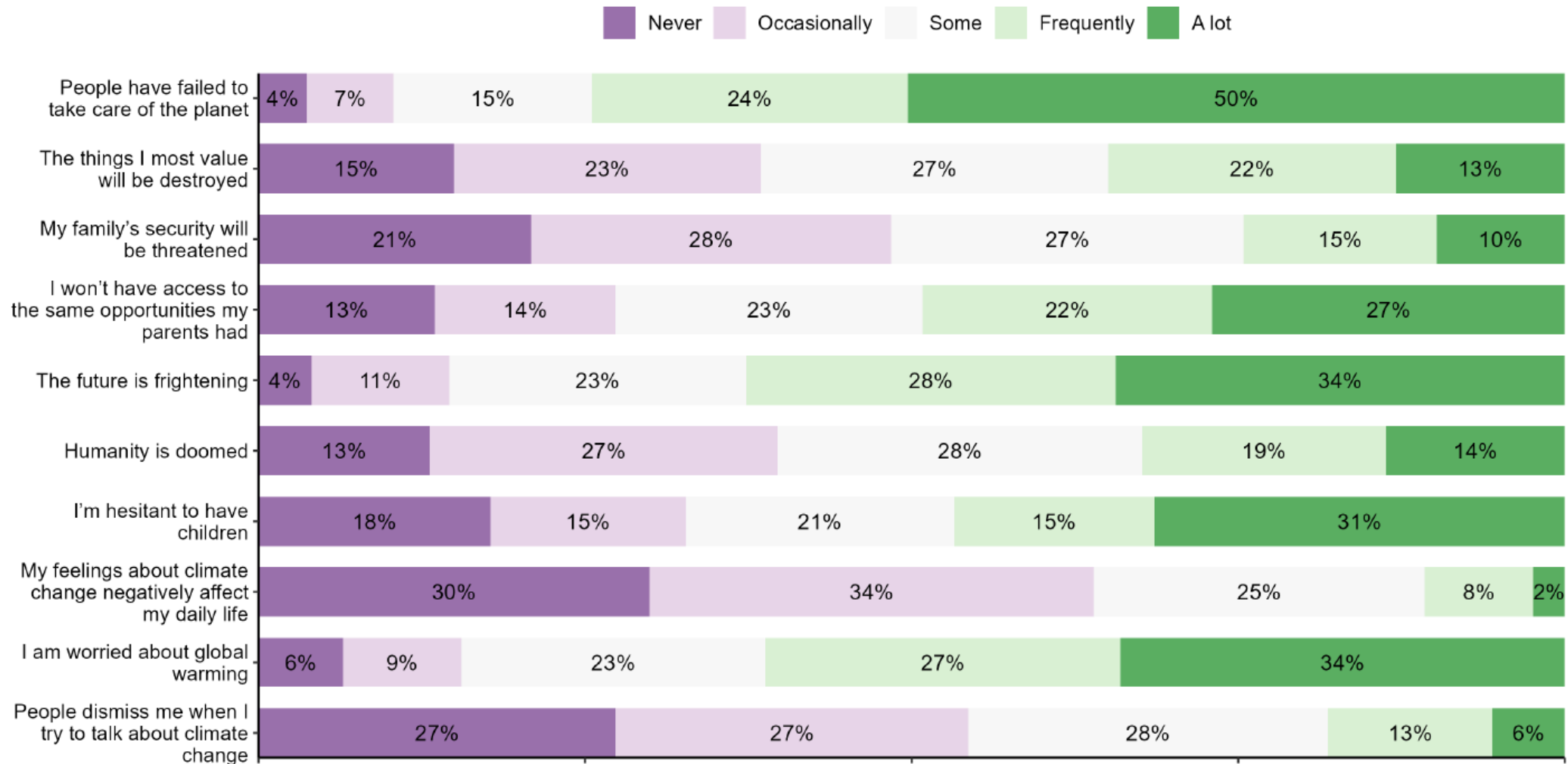
- Output:
1. Climate Anxiety Index (CAI)
  2. Coping Factors (n = 3)

\*Likert scale

1 = Never, 2 = Rarely, 3 = Some, 4 = Often, 5 = A lot

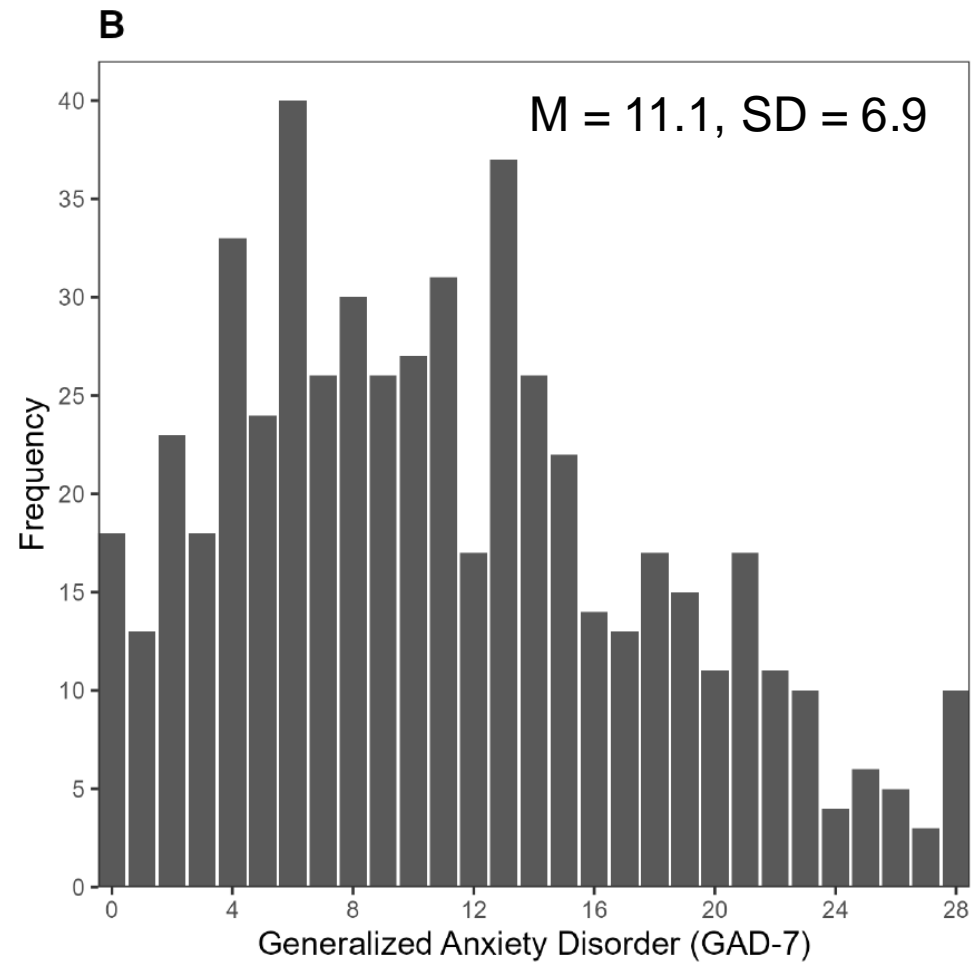
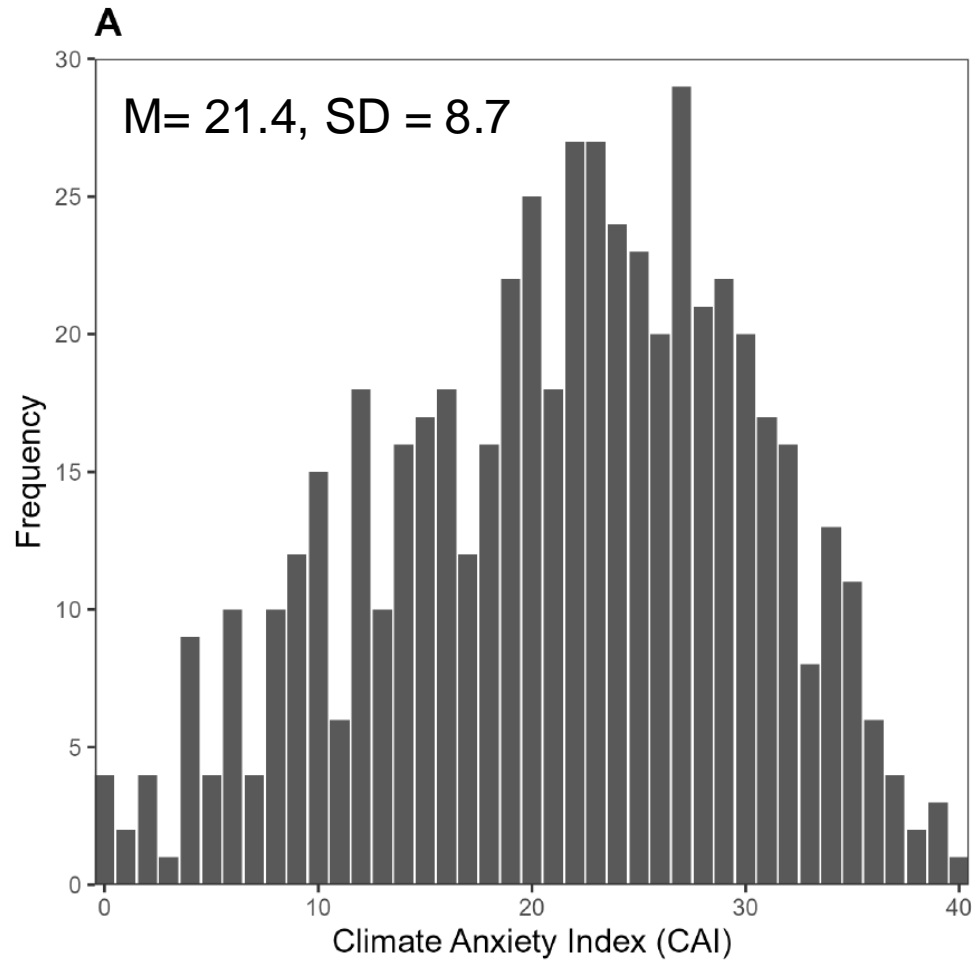


(A) How often have you related to the following statements with respect to climate change?



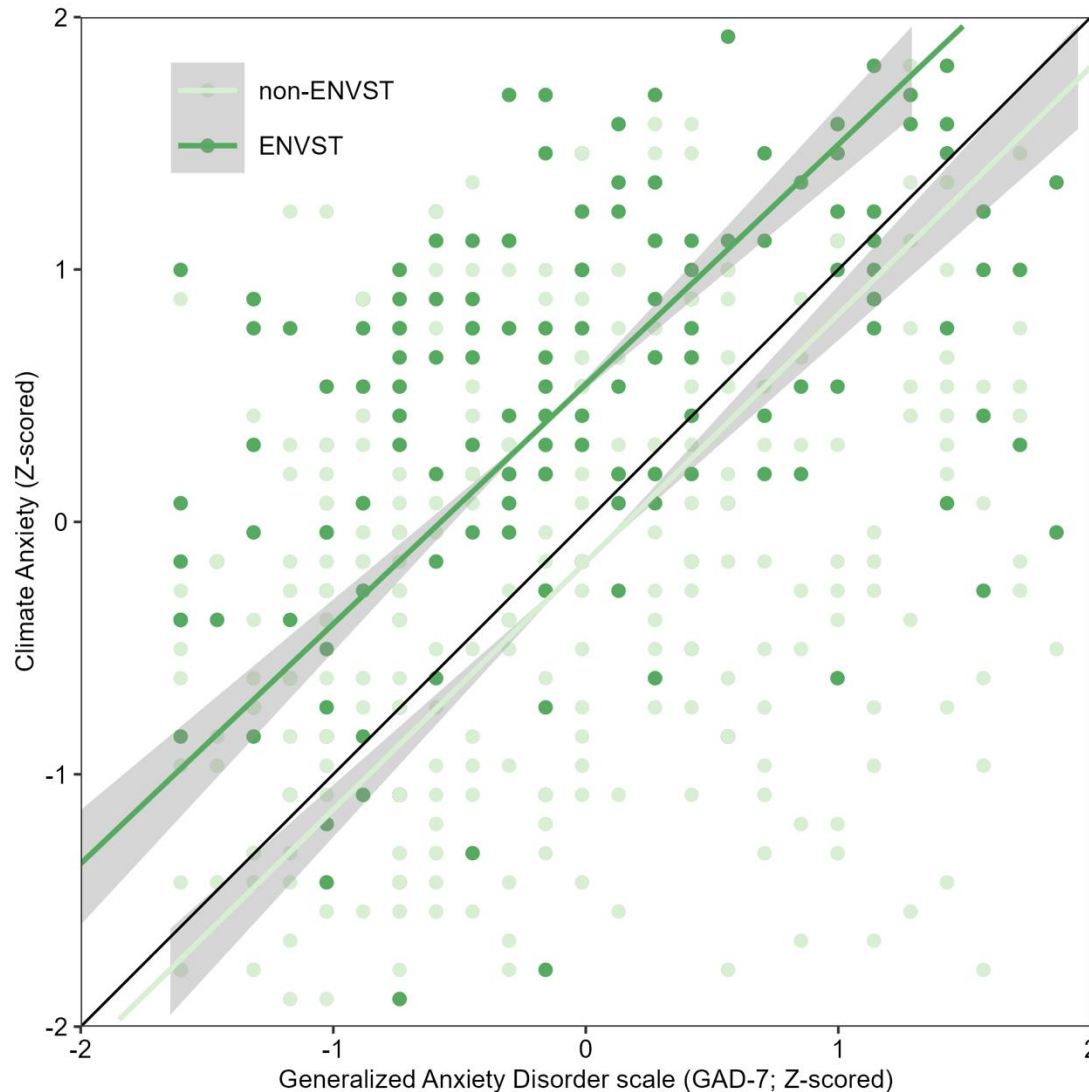
All statements loaded on 1 factor  
Cronbach's  $\alpha = 0.88$

# What is the prevalence of climate anxiety amongst undergraduate students?



GAD-7 Scale: Spitzer et al., 2006 *Arch Intern Med*

# What is the prevalence of climate anxiety amongst undergraduate students?



Reduced / Standardized  
Major Axis Regression

Non-ENVST:  $m = 0.99$

ENVST:  $m = 0.89$

**Slopes are equal**

(Likelihood ratio statistic = 1.78,  $p = 0.18$ )

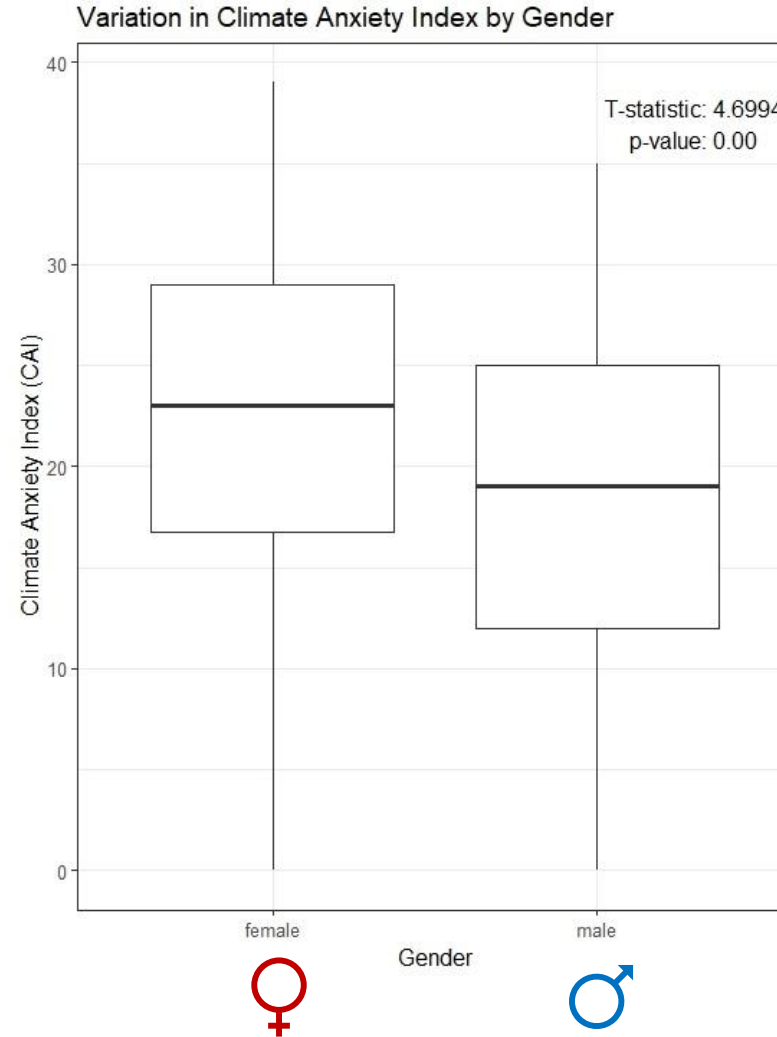
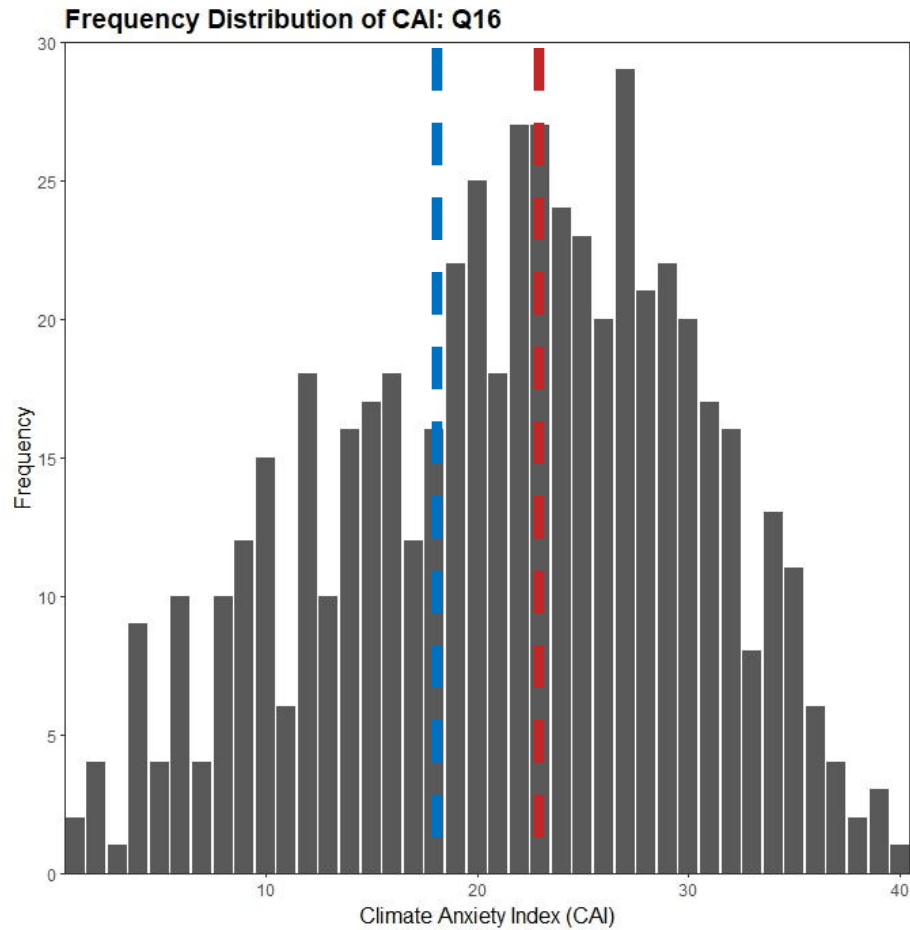
**But elevation differs**

(Wald statistic = 72.0)

**ENVST students:**

- significantly more climate anxiety than non-ENVST students
- higher climate anxiety than expected if CAI is proportional to GAD

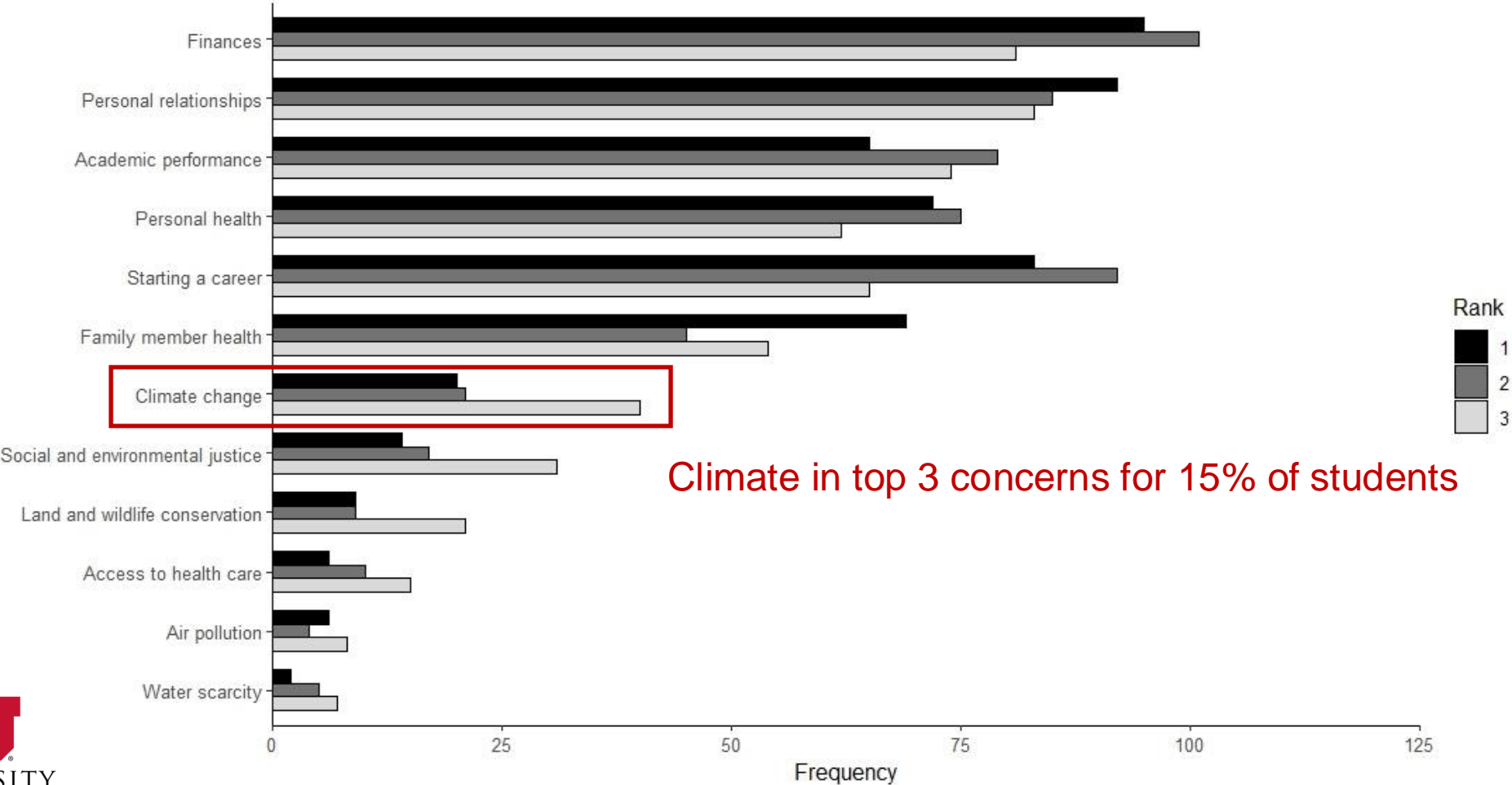
# What is the prevalence of climate anxiety amongst undergraduate students?



# How common is climate change a concern amongst undergraduate students?

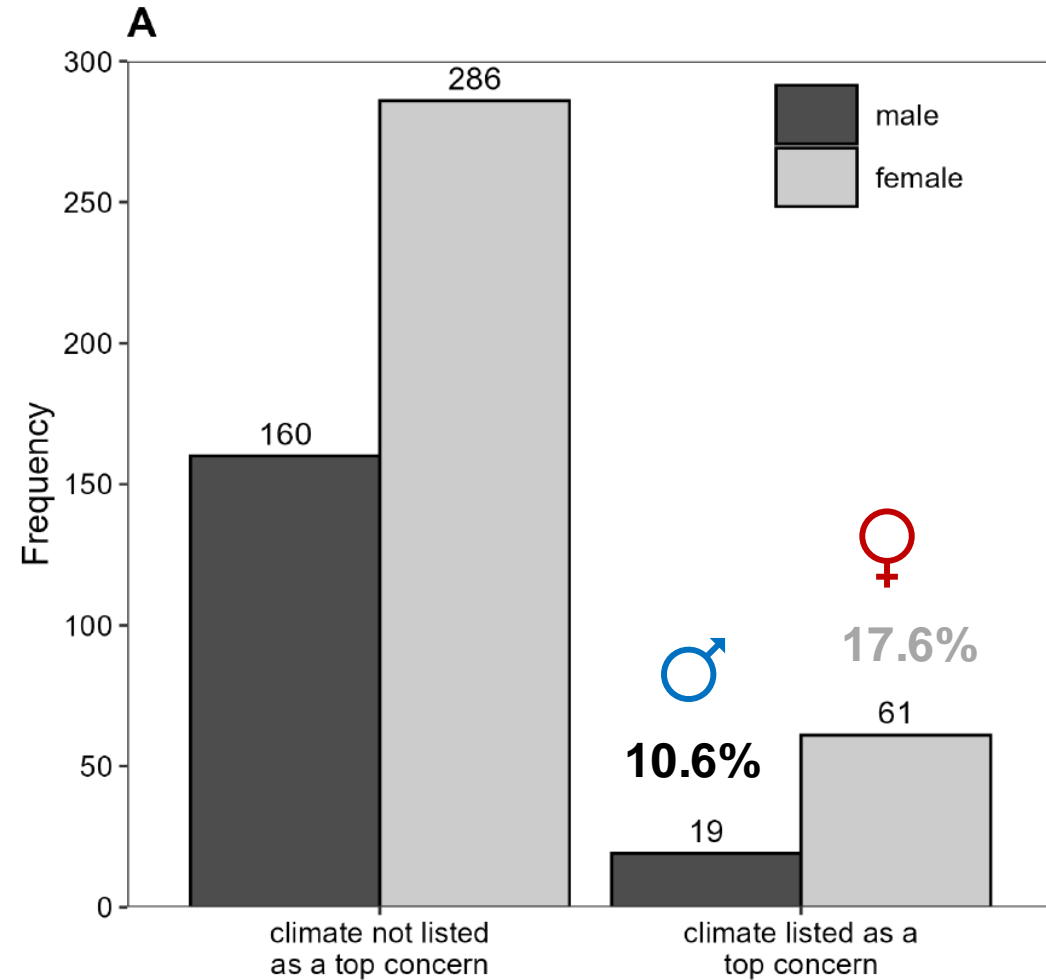
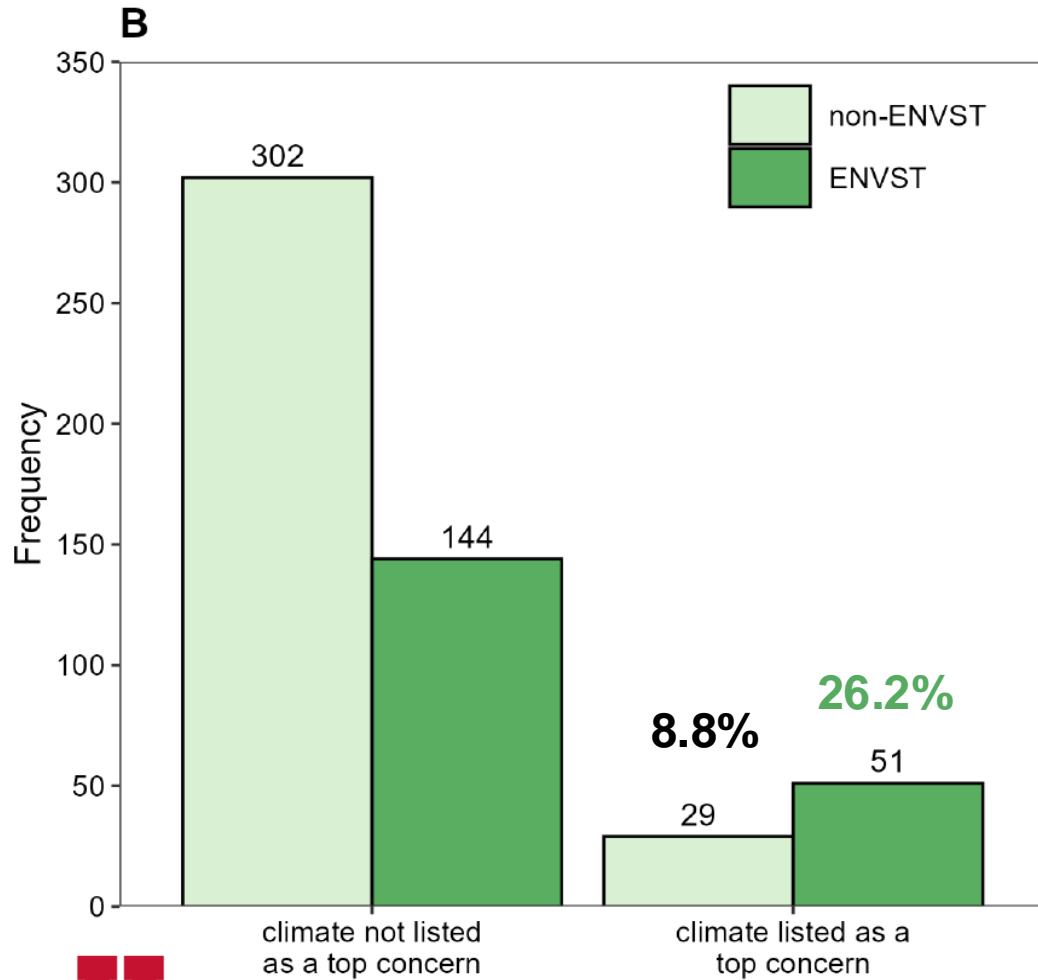
Top 3 ranks of all Concerns in life

Q13 Please rank your top 3 concerns in life.





# How common is climate change a concern amongst undergraduate students?





Anxiety is more common in women than men

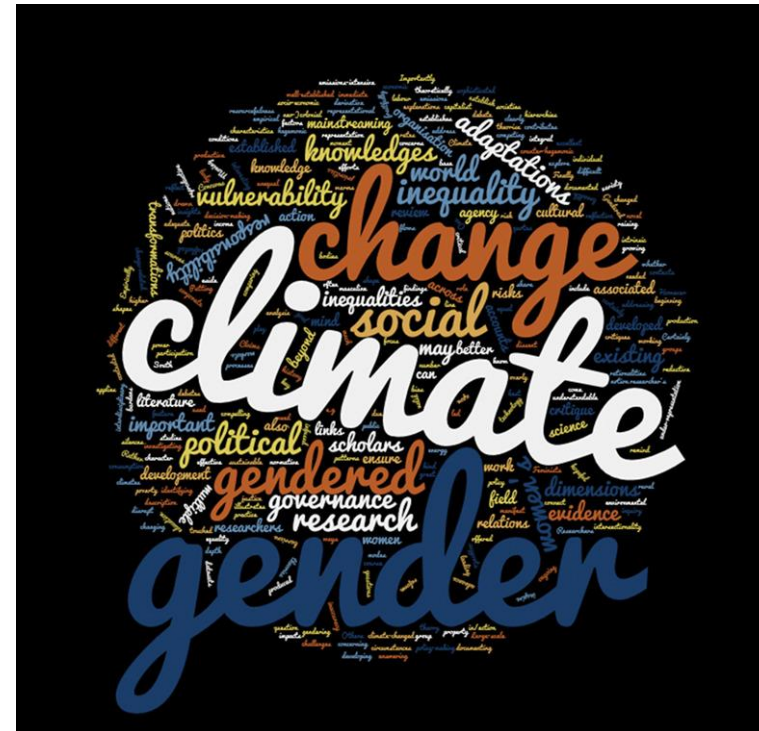
(Hallars-Haalboom et al., 2020 *Handbook of Clinical Neurology*)

Females have heightened sensitivity to unpredictable threat

(Burani & Nelson, 2020 *Int J Psychophysiology*)

Females are disproportionately affected by climate change, heightening risk of negative mental health impacts

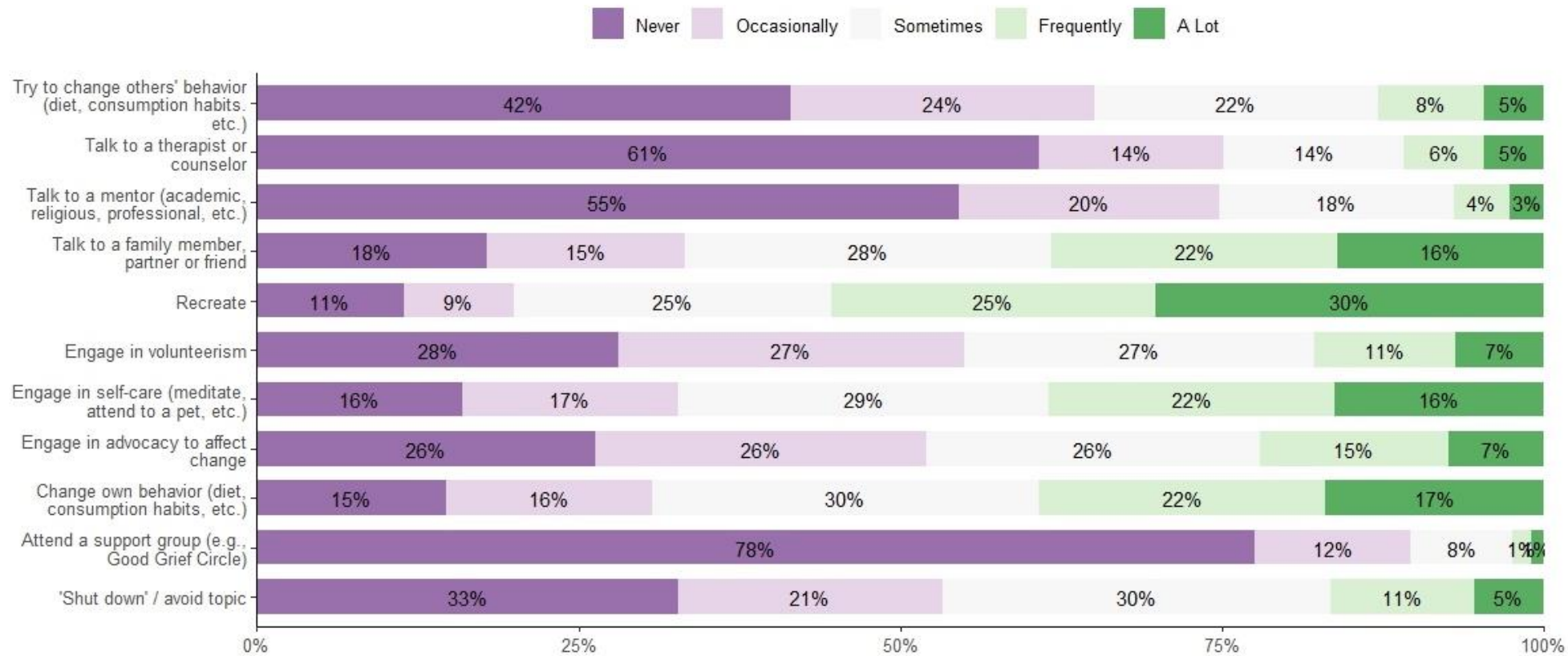
(Terry et al., 2009 *Gend Dev*; Pearse et al., 2016 *WIREs Climate Change*; Lau et al., 2021 *Nature Climate Change*; Rothschild & Haase, 2023 *Intl J Gynecol Obstet*)



# What are common strategies undergraduate students use for coping with climate anxiety?

## Coping Mechanisms for Climate Anxiety

Q22 - When I am feeling particularly anxious or upset about climate change I do the following ...



Therapy Focused

Self Focused

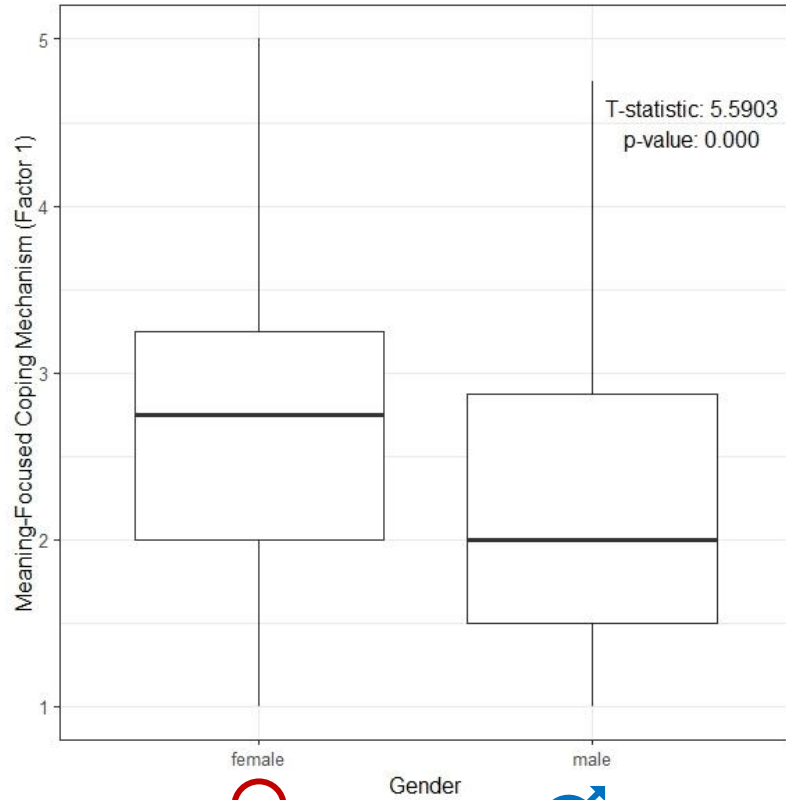
Meaning Focused

Options loaded on 3 factors,  $\chi^2 = 112.3$ ,  $df = 25$ ,  $p < 0.001$   
 Cronbach's  $\alpha$ : 1 = 0.79, 2 = 0.75, 3 = 0.66

# What are common strategies undergraduate students use for coping with climate anxiety?

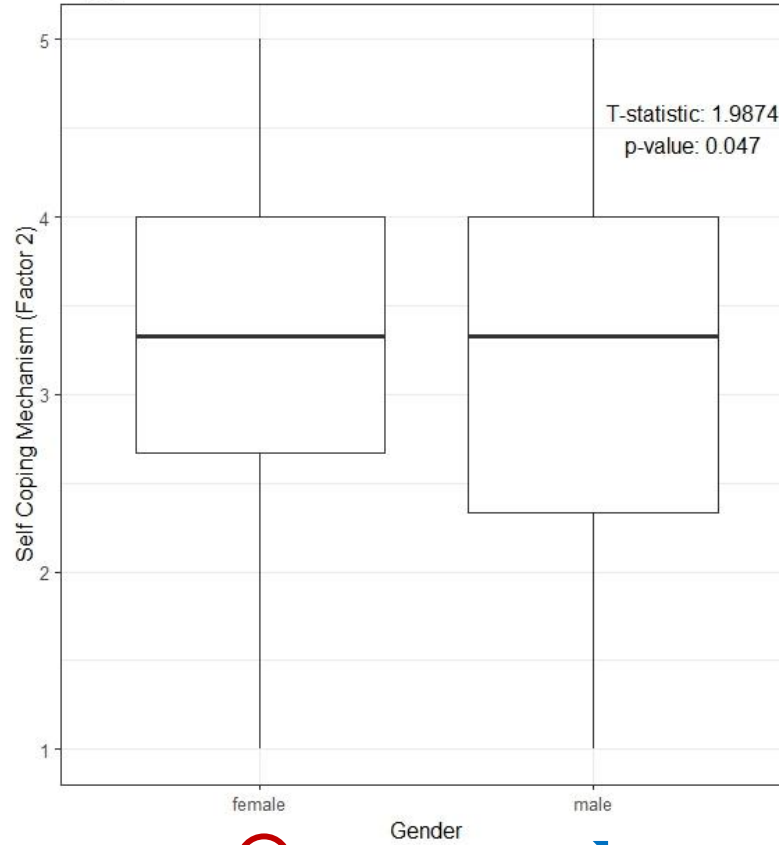
**A: Variation in Meaning-Focused Coping Mechanism by Gender**

engage in volunteerism,  
engage in advocacy, change own  
behavior, and change others'  
behavior



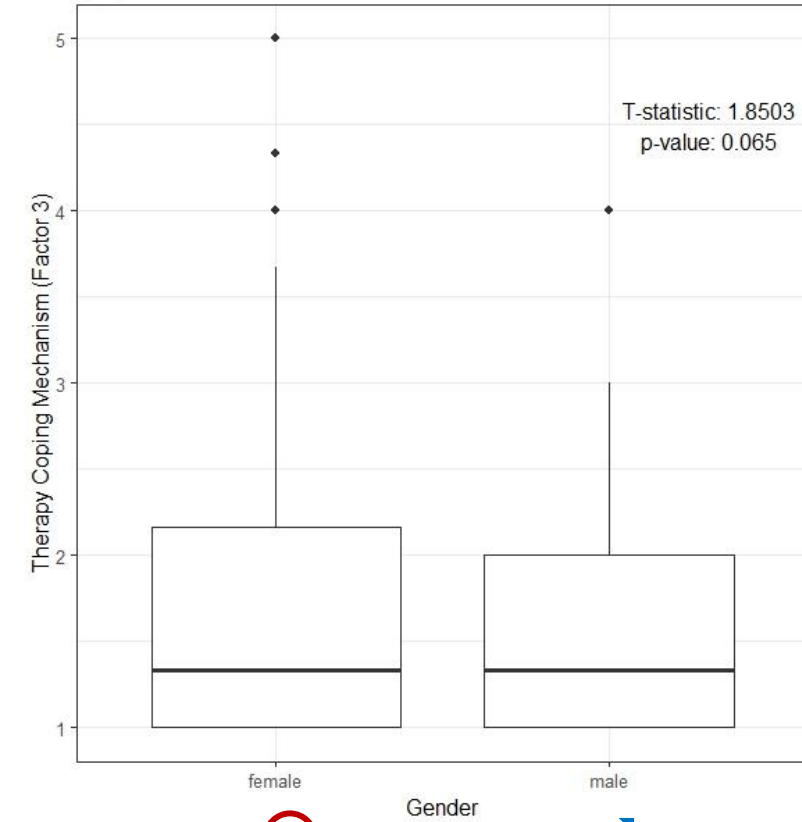
**B: Variation in Self Coping Mechanism by Gender**

talk to family, recreate, and  
engage in self-care



**C: Variation in Therapy Coping Mechanism by Gender**

talk to mentor, talk to  
therapist, and attend support  
group





# FEMALE CLIMATE LEADERS



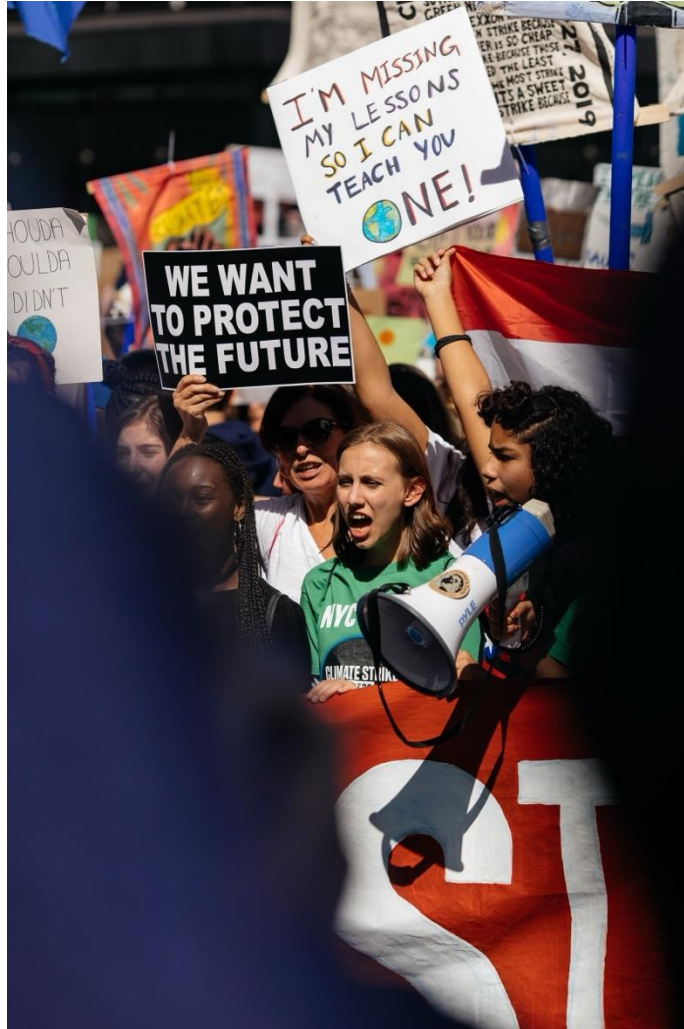
Greta Thunberg,  
Activist

T. Slavin & K. Luckhurst,  
Reuters, March 7, 2023

*25 Trailblazing women leading the fight  
against climate change*



## What are common strategies undergraduate students use for coping with climate anxiety?



- When properly channeled, **anxiety & grief can be a motivator to action** that alleviates negative emotions  
(Wang et al. 2018, *Global Env Change*; Comtesse et al, 2021, *Intl J of Env Res & Public Health*; Stanley et al. 2021, *J of Climate Change Health*)
- **Climate activism** is a form of meaning-focused coping, which is more strongly **associated with climate optimism** as compared to problem focused coping or de-emphasizing climate change  
(Ojala 2012, *J of Env Psych*; Cattell 2021, *Can J of Family & Youth*)

## What are common strategies undergraduate students use for coping with climate anxiety?



- *“I want to quell that anxiety by **doing something to help and contribute ...**”*
- *“I feel responsible to **be a part of a solution** after learning and knowing the current social injustices surrounding climate change”*
- *“I am **hopeful for change**, and the only thing that I can do is **fix my own habits, support good companies, and bring awareness**. I think it is important to accept this and then work towards fixing it.”*

# What are common strategies undergraduate students use for coping with climate anxiety?



Community Engaged Learning (CEL) /  
Capstone Projects



Undergraduate Research



@saveourhappyplace

We, as instructors and mental health professionals, must do a better job of offering **resources** to young adults (especially females) that both **direct creative action** and **avoid debilitating mental health outcomes**.



# Support Groups as a Resource

## 10-Step Program

### 10 STEPS TO RESILIENCE & EMPOWERMENT IN A CHAOTIC CLIMATE

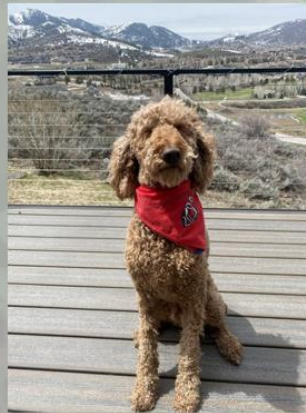
- 1 Accept the Severity of the Predicament
- 2 Be With Uncertainty
- 3 Honor My Mortality & the Mortality of All
- 4 Do Inner Work
- 5 Develop Awareness of Biases & Perception
- 6 Practice Gratitude, Witness Beauty, & Create Connections
- 7 Take Breaks & Rest
- 8 Grieve the Harm I Have Caused
- 9 Show Up
- 10 Reinvest in Meaningful Efforts

© LaDra Schmidt & Anne Lewis

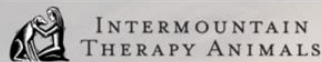
[goodgriefnetwork.org](http://goodgriefnetwork.org)

## Good Grief

*Do you experience climate or eco-anxiety? Are you feeling grief over the current future changes in our climate and the impacts of them?*



"Good Griff" Therapy Dog



The University of Utah Good Grief Affiliate Program offers climate grief sessions for the U of U community. We offer sessions both fall and spring semesters and we encourage anyone struggling with climate or ecological grief to join. The circles are about 1 ½ - 2 hours long depending on attendance and include guided meditations, journaling and the opportunity to share your feelings in a safe space. Contact Andrea Brunelle for this semester's offerings.







# 10 STEPS

## TO PERSONAL RESILIENCE & EMPOWERMENT IN A CHAOTIC CLIMATE

★ **8** ★  
YEARS

of GGN 10-Step groups around the world

Good Grief Network's 10-Step Program is a community-based support group that teaches practical skills for building emotional intelligence, agency, and resilience.

### WHAT WE PRACTICE



#### SELF-RESPONSIVENESS

We practice bounded self-care by paying attention to our emotional and physical needs, so that we can build self-confidence and regulate our nervous systems.



#### COMMUNITY RESILIENCE

We build collective resilience by creating brave and emergent spaces where people feel comfortable being vulnerable and exploring their heavy emotions.



#### GENERATIVE ACTION

We try on new ideas, deconstruct harmful cultural narratives, and identify the intersection of our skills, passions, and experience so that we may invest in meaningful opportunities and actions.



**OVER 2,500 PEOPLE REACHED**



**OVER 80 GROUPS FACILITATED**

**Facilitators in over nineteen countries around the globe**

#### 97% OF PARTICIPANTS

Say that the program helped them feel less alone and more connected



*"This was hands-down the most helpful resource I've experienced to navigate climate anxiety."*

-10-Step Program participant Heather H. D.

#### 87% OF PARTICIPANTS

Say that the program empowered them to take meaningful action



<https://www.goodgriefnetwork.org/>

# QUESTIONS

- Jennifer Follstad Shah – [jennifer.shah@ess.utah.edu](mailto:jennifer.shah@ess.utah.edu)
- Andrea Brunelle – [andrea.brunelle@ess.utah.edu](mailto:andrea.brunelle@ess.utah.edu)



**Table 1**

*Unstandardized regression coefficients and standard errors (in parentheses in hierarchical OLS models predicting climate anxiety (CAI; Z-scored) among students.*

	Model 1	Model 2	Model 3	Model 4
Constant	0.71 *** (0.15)	-1.31 *** (0.21)	-1.30 *** (0.20)	-1.48 *** (0.21)
Gender (female)	0.23 ** (0.08)	0.19 ** (0.07)	0.09 (0.07)	0.09 (0.07)
Race (White)	0.14 (0.08)	0.11 (0.07)	0.08 (0.07)	0.13 (0.07)
Political ideology (conservative)	-0.48 *** (0.05)	-0.32 *** (0.04)	-0.25 *** (0.04)	-0.25 *** (0.04)
Major (Environmental Studies)	0.41 *** (0.08)	0.08 (0.08)	0.11 (0.07)	0.48 (0.50)
Info source: Classroom		0.19 *** (0.04)	0.19 *** (0.03)	0.15 *** (0.04)
Info source: Online sources		0.30 *** (0.05)	0.28 *** (0.04)	0.35 *** (0.05)
Info source: Interpersonal sources		0.05 (0.04)	0.02 (0.04)	0.04 (0.04)
Climate as a top concern			0.35 *** (0.09)	0.69 ** (0.25)
General anxiety (GAD-7)			0.27 *** (0.03)	0.28 *** (0.03)
Gender × Climate as a top concern				0.12 (0.20)
Race × Climate as a top concern				-0.39 (0.20)
Major × Climate as a top concern				-0.20 (0.18)
Major × Information source: Classroom				0.10 (0.11)
Major × Information source: Online sources				-0.22 ** (0.08)
N	524	524	524	524
Adj. R-squared	0.29	0.44	0.52	0.53
F	53.35	60.88	64.14	42.90
df	4.00	7.00	9.00	14.00
p	0.00	0.00	0.00	0.00

\*\*\* p < 0.001; \*\* p < 0.01; \* p < 0.05.