

harp.

Hope and resilience
in climate change
education

(Climate change) Emotions in Education

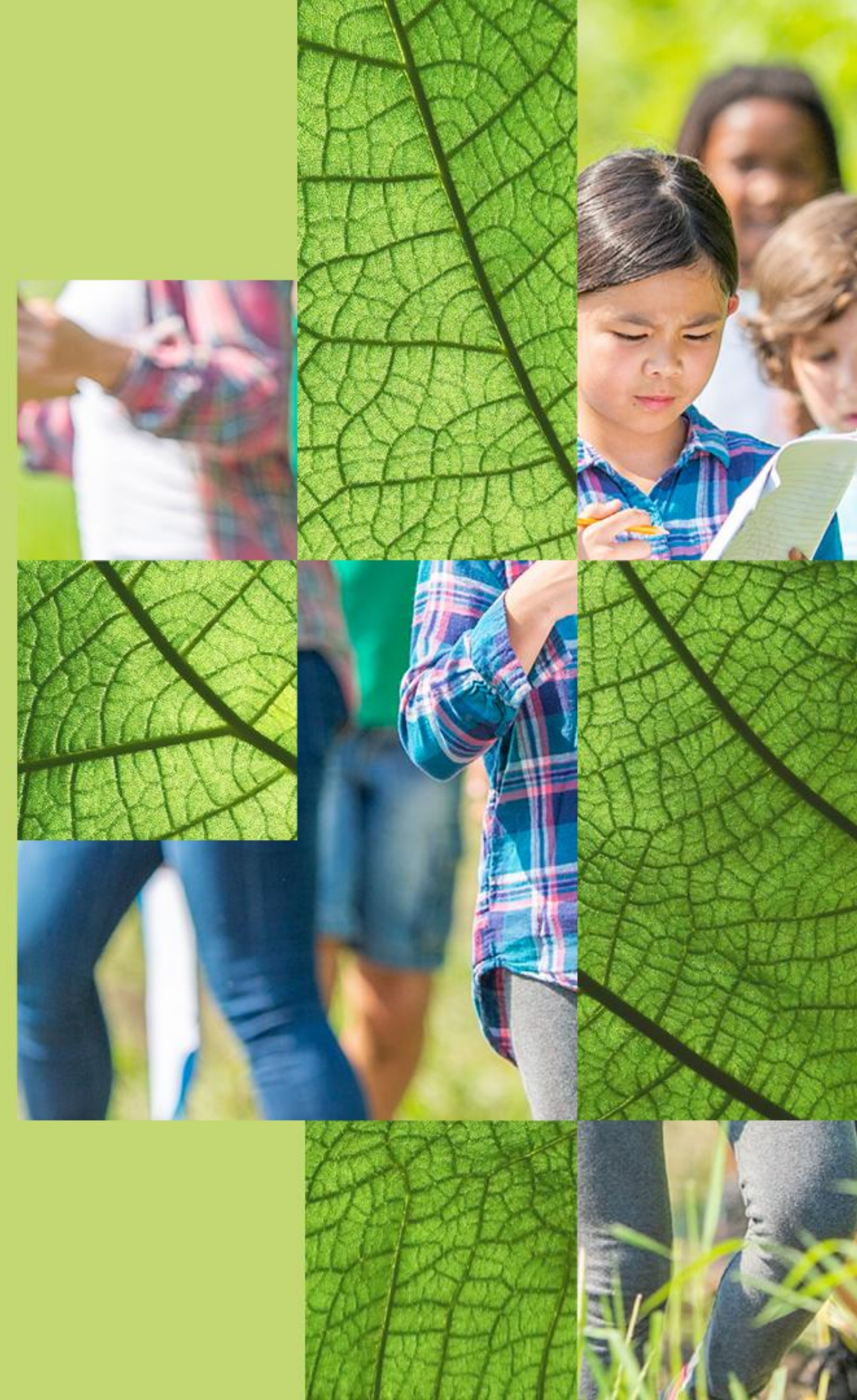
(Part 1/4)

Andrik Becht

Astrid Poorthuis

July 7th, 2026

Summer school



What do we know about climate change emotions among youth?



Sixth Assessment Report
WORKING GROUP II
Impacts, Adaptation and Vulnerability

Climate change: a threat to human wellbeing and health of the planet. Taking action now can secure our future

ipcc
INTERGOVERNMENTAL PANEL ON climate change

WHO UNEP

#IPCC
#ClimateReport



What do we know about climate change emotions among youth(2)?

Cansel Karakas Ozden



Fig.2a. Publication years in quantitative studies

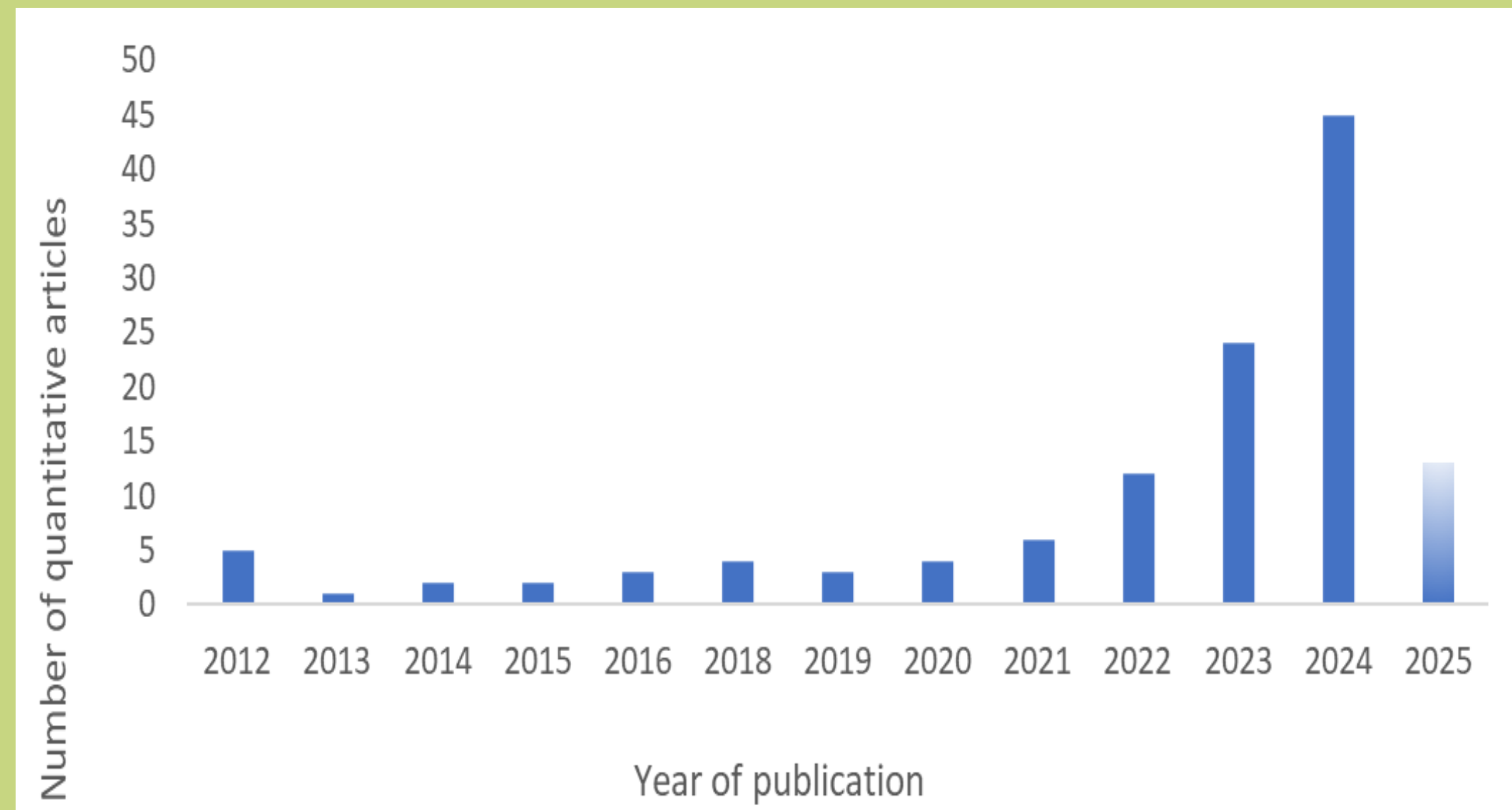
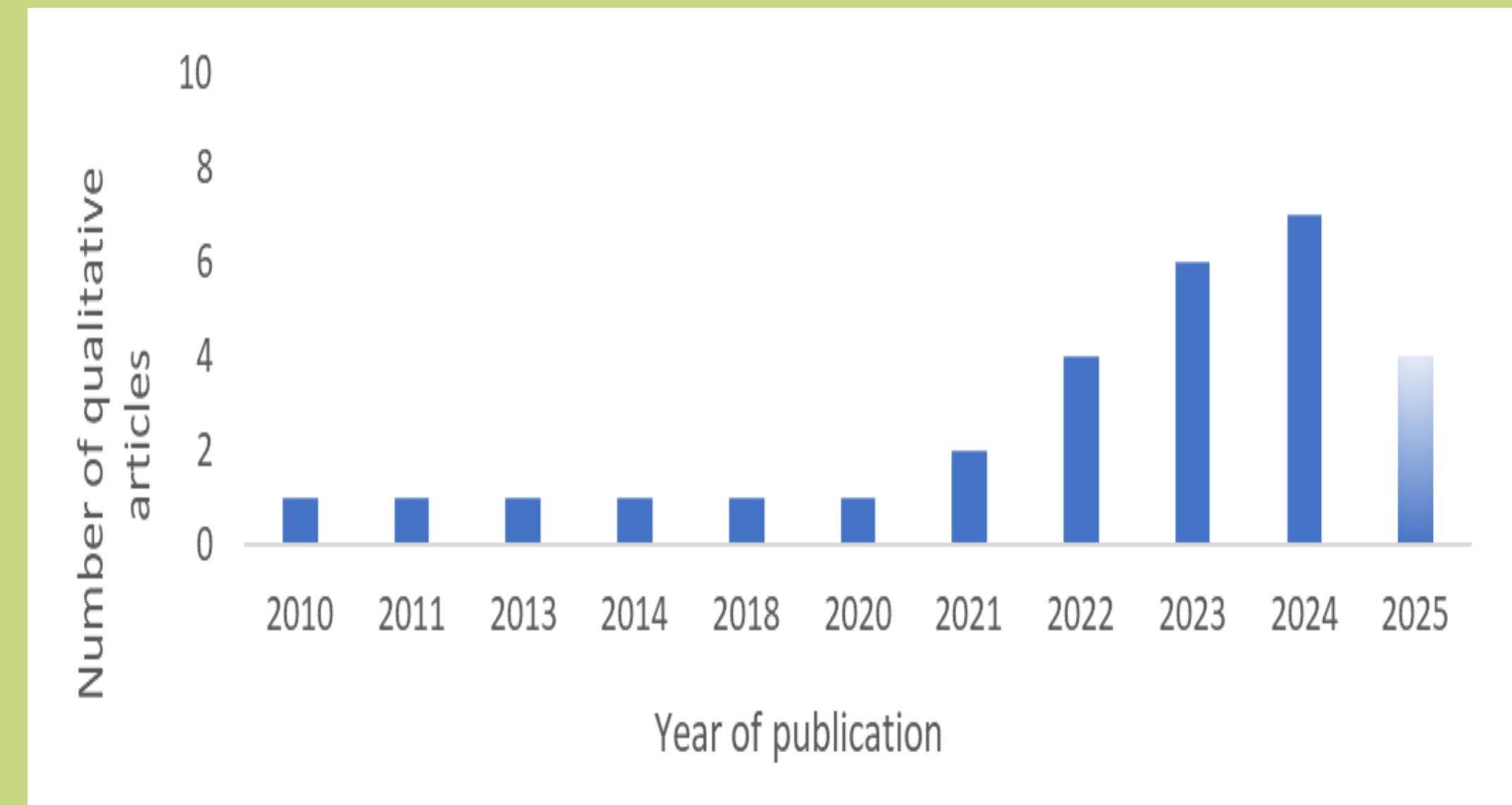


Fig.2b. Publication years in qualitative studies



Note. Figure 2a and 2b show the year of publication of the included articles in this review. Data from 2025 only includes studies published up to March 17, 2025.

What do we know about climate change emotions among youth(3)?



Cansel Karakas Ozden

Table 1.
Summary of Measurement Types across the Climate Emotions

Emotion Measured	Validated Questionnaires (<i>n</i>)	Single-Item Measures (<i>n</i>)	Adapted Multi-Item Measures (<i>n</i>)	<i>N</i> (%)
Negative Emotions				
anxiety	40	18	6	64 (19.3)
worry	16	30	2	48 (14.5)
concern	—	18	14	32 (9.6)
fear	—	13	—	13 (4.0)
anger	—	12	1	13 (4.0)
sadness	—	9	1	10 (3.0)
guilt	—	7	1	8 (2.4)
distress	3	1	3	7 (2.1)
helplessness	—	5	1	6 (1.8)
powerlessness	—	6	—	6 (1.8)
despair	—	4	2	6 (1.8)
shame	—	5	—	5 (1.5)
depression	—	4	—	4 (1.2)
frustration	—	4	—	4 (1.2)
grief	—	3	—	3 (0.9)
hopelessness	—	3	—	3 (0.9)
disappointment	—	3	—	3 (0.9)
hurt	—	2	—	2 (0.6)
disgust	—	2	—	2 (0.6)
indifference	—	2	—	2 (0.6)
Positive Emotions				
hope	7	13	6	26 (7.8)
optimism	2	5	2	9 (2.7)
calmness	—	3	—	3 (0.9)
pride	—	2	—	2 (0.6)
Non-specific/ Combined				
combined	2	1	7	10 (3.0)
<i>N</i> (%)	71 (21.4)	215 (64.7)	46 (14.0)	332 (100)

What do we know about climate change emotions among youth(4)?

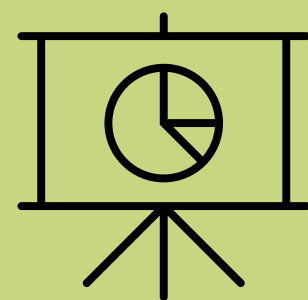


N = 10.000, 16-25 years

Study on climate anxiety in youth Articles

Climate anxiety in children and young people and their beliefs about government responses to climate change: a global survey

Caroline Hickman*, Elizabeth Marks*, Panu Pihkala, Susan Clayton, R Eric Lewandowski, Elouise E Mayall, Britt Wray, Catriona Mellor, Lise van Susteren



~59% very worried - extremely worried

Hickman et al., 2021

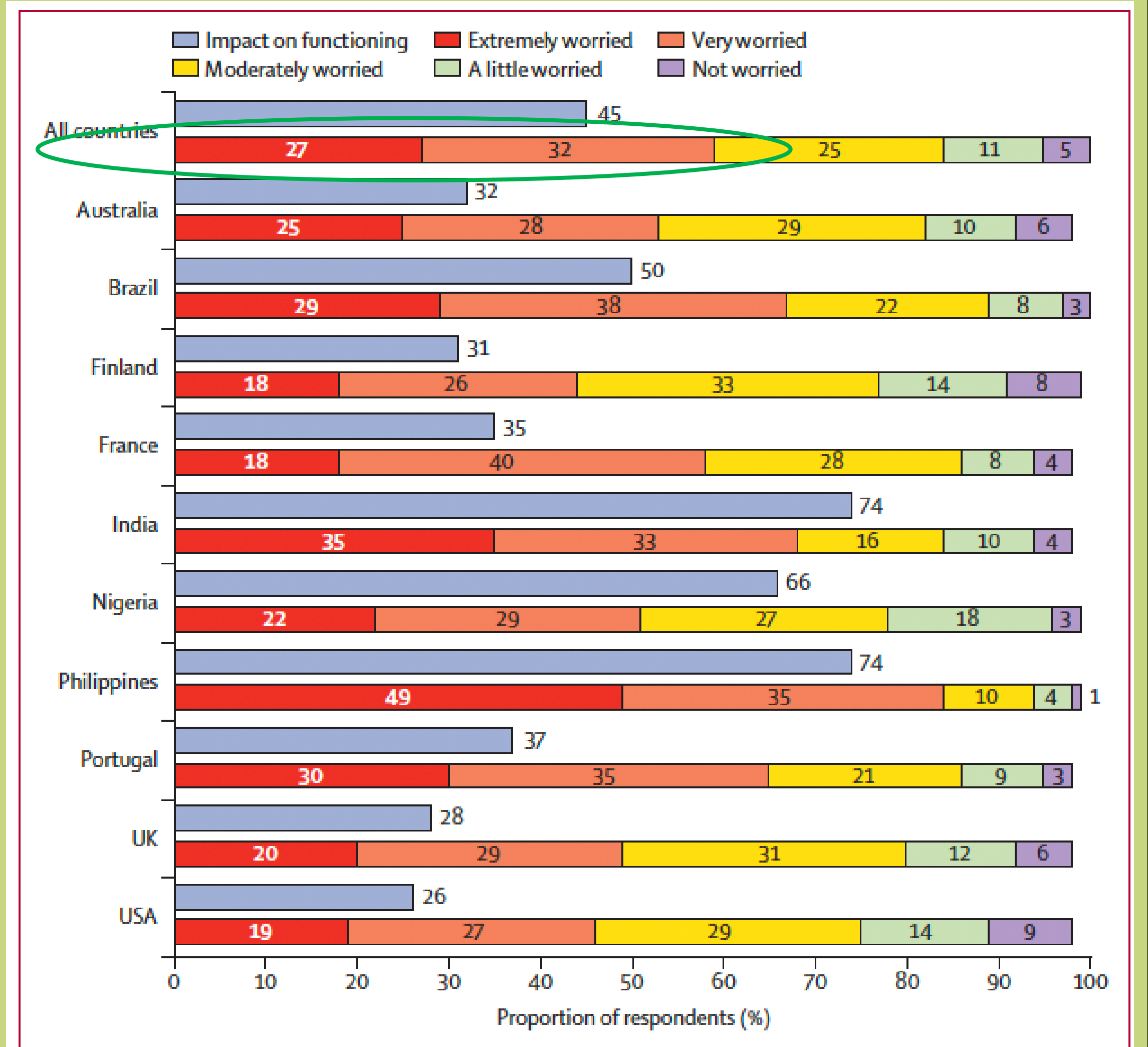
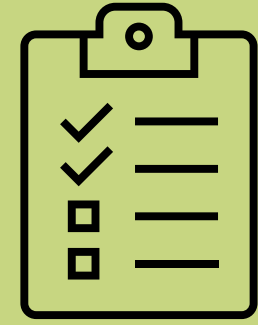
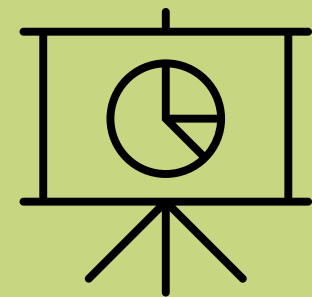


Figure 1: Worry about climate change and impact on functioning
 The graph shows the proportion of the sample reporting a negative impact on functioning from their feelings about climate change and various levels of worry about climate change. Data are shown for the whole sample (n=10 000) and by country (n=1000 per country)

What do we know about climate change emotions among youth(5)?



N = 12.246, M age ~ 23 years



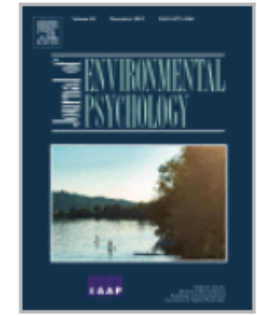
~46% very worried - extremely worried
(across countries, but country variation
Spain = ~78%)

Ogunbode et al., 2022



Journal of Environmental Psychology

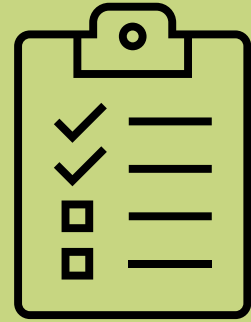
Volume 84, December 2022, 101887



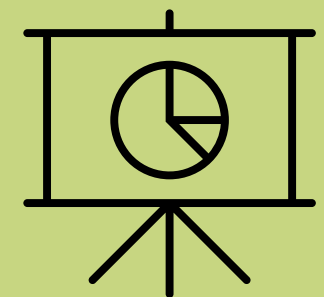
Climate anxiety, wellbeing and pro-environmental action: correlates of negative emotional responses to climate change in 32 countries

[Charles A. Ogunbode](#)^a  , [Rouven Doran](#)^b, [Daniel Hanss](#)^c, [Maria Ojala](#)^d, [Katariina Salmela-Aro](#)^e, [Karlijn L. van den Broek](#)^{f g}, [Navjot Bhullar](#)^h, [Sibele D. Aquino](#)ⁱ, [Tiago Marot](#)ⁱ, [Julie Aitken Schermer](#)^j, [Anna Wlodarczyk](#)^k, [Su Lu](#)^l, [Feng Jiang](#)^m, [Daniela Acquadro Maran](#)ⁿ, [Radha Yadav](#)^o, [Rahkman Ardi](#)^p, [Razieh Chegeni](#)^b, [Elahe Ghanbarian](#)^q, [Somayeh Zand](#)^r, [Reza Najafi](#)^s...
[Mehmet Karasu](#)^{ag}

What do we know about climate change emotions among youth(6)?



N = 1.000, 16-30 years



70% is worried about climate change

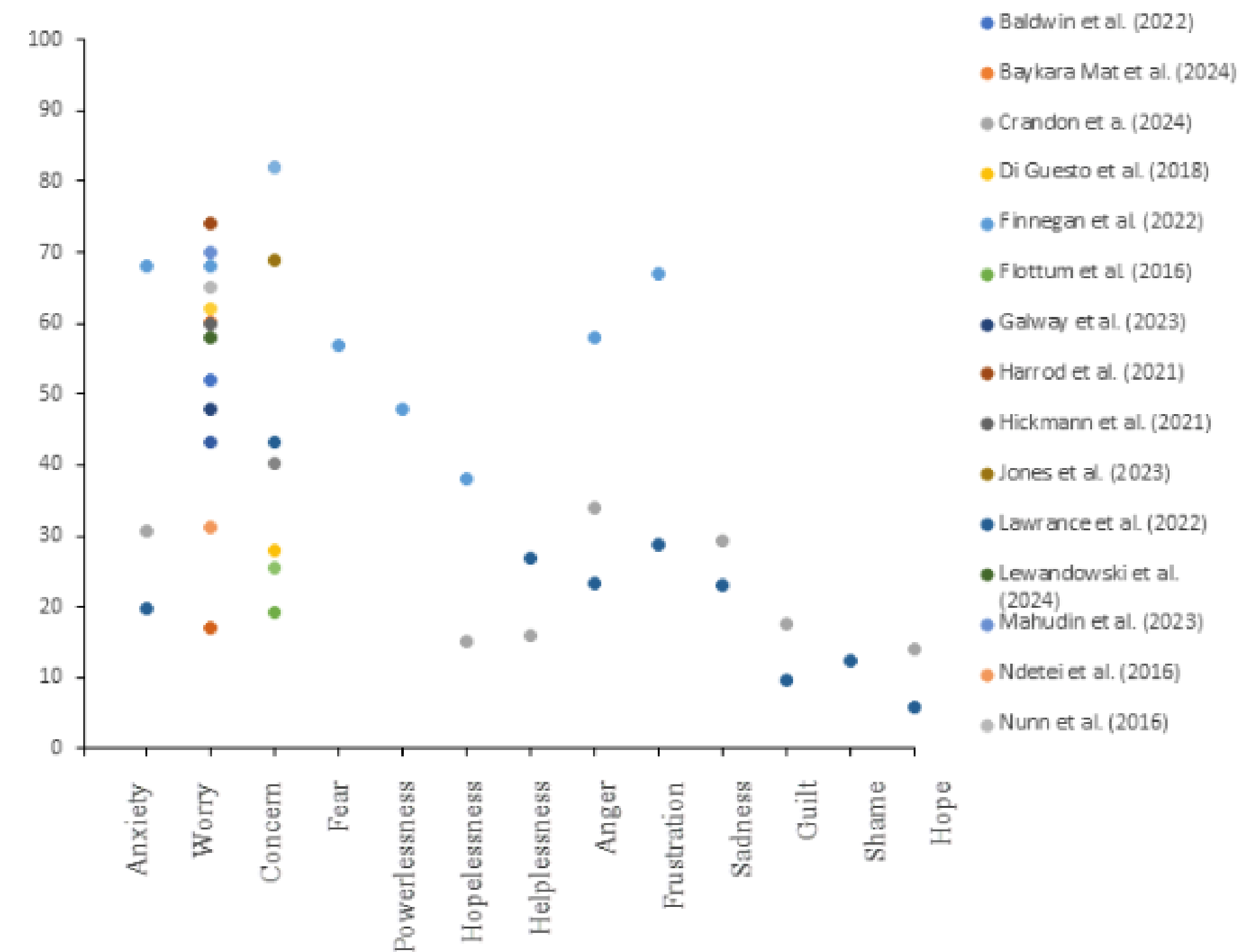
20% is anxious about climate change
(e.g., poor sleep)



What do we know about climate change emotions among youth(7)?

Figure 5.

Prevalences in Single-Item Questions based on Likert Scale Response Options



Note. Values represent the percentage of participants endorsing high-intensity responses (e.g., “very”, “extremely”, “very much”, “a lot”) for each emotion as reported in each study. When studies reported multiple response categories, only the highest intensity category/categories were extracted for comparability across studies. Due to variation in measurement instruments, response scales, and cut-off definitions across studies, prevalence estimates are not directly comparable and should be interpreted as indicative of relative magnitude rather than a pooled estimate.

Emotion: Motivation or Eco-Paralysis?

- Teacher experiences → eco-paralyses?
- Theory clinical psychology: e.g., Albrecht, 2011 → eco-paralyses
- Empiric studies: eco-paralysis and/or constructive response?

