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Climate Anxiety and Climate Change Perceptions in Malaysian Higher Education: Impacts on Emotion, Cognition, and Function

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Original Article

Climate Anxiety and Climate Change Perceptions in Malaysian Higher Education: Impacts on Emotion, Cognition, and Function

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Running Title: Climate Anxiety and Climate Change Perceptions Among IIUM Undergraduates

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Abstract

Objective: To assess the level of climate anxiety among International Islamic University Malaysia (IIUM) undergraduate students, describe associated negative thoughts and functional impacts, and examine differences by gender and faculty, as well as correlations among emotional, cognitive, and functional domains.

Material and Methods: A cross-sectional online survey was conducted among IIUM undergraduate students (n=222) using an adapted version of the Climate Anxiety Questionnaire, with government-response items removed. The instrument assessed emotional responses, negative beliefs, and functional impacts. Data were analysed using descriptive and non-parametric statistics. Mann–Whitney U tests compared median domain scores by gender and faculty (health vs non-health), while Spearman correlation assessed associations among domains. Statistical significance was set at $p < 0.05$.

Results: Participants were predominantly female (77.9%) and from health-related faculties (64.9%). Emotional concern about climate change was high, with most respondents reporting moderate to extreme worry regarding its threat to people and the planet. Negative beliefs were common, particularly perceptions of a frightening future and collective failure to protect the environment. Functional impacts on daily activities were generally low to moderate. Male students reported significantly higher emotional response and functional impact scores than female students, while negative beliefs did not differ by gender. Non-health students showed significantly higher emotional response and negative belief scores compared with health students, with no difference in functional impact. Emotional response and negative beliefs, as well as functional impact and negative beliefs, were positively correlated; however, emotional response was not significantly correlated with functional impact.

Conclusion: IIUM undergraduates demonstrate substantial emotional engagement with climate change, though functional disruption remains limited. The significant correlations between negative beliefs and both emotional response and functional impact suggest interconnected emotional and cognitive responses, although emotional response was not significantly associated with functional impact.

Keywords: Climate anxiety, climate change, emotions, cognition

Introduction

Climate change constitutes a critical global crisis with extensive ramifications for human health, welfare, and societal advancement. As emerging leaders and agents of change,

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university students are particularly vulnerable to the diverse impacts of climate change, which can affect their physical health, mental well-being, academic performance, and daily routines[1–3]. In Malaysia, elevated temperatures, more frequent extreme weather events, and environmental deterioration have been documented, with youth experiencing both physiological and psychological consequences, including heat-related distress and intensified anxiety[1,2].

Awareness and perception of climate change among university students are generally high, with most recognizing its anthropogenic origins and serious implications for their lives and communities[4–6]. However, knowledge levels and adaptive behaviors vary, leaving gaps in translating awareness into effective action[7,8]. Studies have shown that climate change can disrupt academic routines, reduce attendance, and negatively impact academic achievement—particularly when students experience environmental stressors or mental health challenges[8].

Climate anxiety refers to elevated emotional, cognitive, and functional distress provoked by climate threats. Multinational studies have confirmed the prevalence of climate anxiety among youth, linked to adverse future cognitions and everyday functional disruptions[9–12]. Empirical inquiry into climate anxiety in Malaysia is sparse. A recent Malaysian youth study indicated that >60% endorsed fear, powerlessness, guilt, helplessness, and sadness toward climate change[13]. Yet, empirical evidence for university cohorts remains unpublished.

The university setting is especially relevant for studying climate anxiety because it is a developmental period in which young adults consolidate knowledge, professional identity, and civic responsibility. University students are exposed to climate-related scientific information and public discourse whilst preparing for future societal roles. Their emotional and cognitive responses to climate change are therefore important not only for student wellbeing, but also for understanding how future professionals may engage with environmental challenges.

This investigation bridges that research gap by exploring climate anxiety among International Islamic University Malaysia (IIUM) undergraduate students, concentrating on emotional responses, negative thoughts, and functional impacts arising from climate change.

Students at the IIUM are likewise susceptible to these challenges. The university environment presents a unique opportunity to assess perceptions, experiences, and responses to climate change among its student body. The relevance of this study is strengthened by IIUM's broader institutional commitment to sustainability and climate-related educational values. In this context, examining student perceptions and climate anxiety is useful for understanding how institutional sustainability efforts may be reflected in students' emotional and cognitive engagement with climate change. Insights into IIUM undergraduate students' knowledge,

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attitudes, and adaptive behaviors are vital for devising targeted interventions, embedding climate change education in curricula, and cultivating resilience across the academic community[5–7]. The present study addresses this void by methodically examining climate change's effects on IIUM students, emphasizing impacts on health, academic performance, and adaptive strategies. Given IIUM's role in producing graduates for health, education, and policy sectors, understanding climate anxiety within this population is essential for informing student support services and curriculum development.

IIUM aligns its institutional strategic planning with the United Nations Sustainable Development Goals (SDGs), including SDG 13 (Climate Action). Sustainability initiatives, environmental awareness programs, and integration of SDG-related themes into selected curricula reflect the university's commitment to climate and environmental responsibility. Examining climate anxiety within this institutional context provides insight into how policy-level commitments translate into student perceptions and psychological engagement.

Although this study was conducted within a single institution, it provides valuable preliminary evidence regarding climate anxiety among Malaysian university students. IIUM represents a multidisciplinary university with students from both health and non-health faculties, offering insight into diverse academic backgrounds in the setting. Whilst the findings are not intended to represent all Malaysian youth, they contribute important institution-specific data that may inform targeted campus-level mental health support and climate education strategies. This study, therefore, serves as a foundational step toward larger multi-institutional investigations in Malaysia.

Material and Methods

This study employed a cross-sectional survey design to assess the impact of climate change among undergraduate students at the International Islamic University Malaysia (IIUM). The methodology was informed by established practices in similar research on university student populations and climate change perceptions[9–12].

Ethical Considerations

The study adhered to ethical standards for research involving human participants. Ethical approval (IREC-2025-337) was obtained from the IIUM Research Ethics Committee prior to data collection. Participation was voluntary, data were collected anonymously without personal identifiers, and all responses were kept confidential. The study design was modeled after previous research using similar survey-based methods[9–11].

Study Design and Participants

A self-administered, structured questionnaire was distributed online to IIUM undergraduate students. The online format may reduce social desirability bias compared to face-to-face administration, as participants may feel more comfortable disclosing emotional experiences anonymously. A total of 222 responses were collected, with 222 valid responses included in the final analysis after data cleaning for completeness and eligibility. The data were collected between 4th September 2025 and 11th September 2025. The sample size was calculated for estimating a single population proportion using the formula [$\mathbf{n = Z^2p(1-p)/d^2}$]. Assuming a 95% confidence level ($Z = 1.96$), an expected proportion of 0.733 based on a previous Malaysian study[18], and an absolute precision of 0.06, the minimum required sample size was 209 participants. A total of 222 responses were collected. After data cleaning for completeness and eligibility, all 222 responses were valid and included in the final analysis. A convenience sampling approach was used, with participants recruited via university online platforms. At the time of data collection, IIUM had approximately 26,000 undergraduate students. The survey link was disseminated through university communication channels, and participation was voluntary. Because the exact number of students who viewed the survey invitation could not be determined, a precise response rate could not be calculated. The use of convenience sampling may have introduced selection bias, as students with greater interest in environmental issues may have been more likely to participate.

Instrumentation

The primary data collection tool was an adapted version of Hickman's validated *Climate Anxiety Questionnaire*, which has been widely used to assess perceptions of climate change and psychological impacts among university and youth populations[9–12]. The instrument comprised four sections: (1) sociodemographic information, (2) emotional responses to climate change, (3) negative thoughts and beliefs about climate change, and (4) functional impact on daily activities. Each domain was measured using a Likert-type scale to capture the intensity and frequency of the respondents' feelings and behaviors.

For this study, all items related to beliefs about government action or political response to climate change were omitted, as the focus was on individual emotional and cognitive experiences rather than institutional or policy perceptions. The questionnaire was administered online via Google Forms to facilitate accessibility and efficient data collection among IIUM students. No wording or structural modifications were made to the remaining items, preserving the integrity and comparability of the original instrument.

Data Collection Procedure

The online survey was disseminated via university communication channels and social media platforms targeting IIUM students. Participation was voluntary and anonymous, and informed consent was obtained electronically prior to survey initiation. The survey remained open until the target sample size was reached.

Data Analysis

Data from Google Forms were exported and subjected to statistical analysis using IBM SPSS Statistics version 27 and RStudio 2025.09.1 (Posit Software, PBC). Descriptive statistics—encompassing frequencies, percentages, and medians—were applied to characterize the sociodemographic attributes and scores within each domain. As the data violated normality assumptions, non-parametric procedures were implemented. The Mann-Whitney U test facilitated comparisons of median scores across the emotional response, negative beliefs, and functional impact domains between genders and between health and non-health faculty groups. Spearman's rank correlation coefficient evaluated the associations among these domains. All analyses were two-tailed, with statistical significance determined at $p < 0.05$. The internal consistency of the scales was evaluated using Cronbach's alpha to ensure reliability of the instrument in the Malaysian context. Results were interpreted by comparing median domain scores and correlational patterns to existing climate anxiety literature among university students.

Results

A total of 222 participants were included in this study (**Table 1**).

Most respondents were female (77.9%) and from health-related faculties (64.9%). The largest proportion was Year 5 students (27.9%), followed by Year 1 (24.8%). Almost all the participants were Malaysian (98.6%), and nearly half (45.2%) were aged 21–23 years, while 26.7% were aged 18–20 years. These figures indicate that the sample primarily consisted of young Malaysian students from health science backgrounds.

Participants demonstrated moderate to high emotional engagement with climate change issues (**Table 2**). Feelings of worry, frustration, and sadness were commonly reported, suggesting that most respondents viewed climate change as both a personal and global concern. In contrast, attitudes reflected in the negative belief domain (**Table 3**) were more variable. While a majority agreed that climate change poses a serious threat, some participants expressed

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uncertainty regarding the extent of human influence and the effectiveness of individual actions, implying mixed perceptions of responsibility and control.

Regarding functional impact (**Table 4**), most participants indicated that climate change had minimal interference with their daily activities. However, a small proportion noted occasional effects on motivation, mood, or academic focus. These findings suggest that although climate change elicits emotional responses, it may not yet substantially affect daily functioning for most students. This is further supported by participants reported emotional concern about climate change, where high levels of worry did not necessarily correspond to significant disruptions in daily life.

In addition, a single Likert-scale item assessed students' level of concern about climate change: *"I am worried that climate change threatens people and the planet."* Almost all respondents expressed some degree of worry, with 42.8% reporting that they were "very" worried and 24.3% indicating they were "extremely" worried. About 31.1% stated they were "a little" worried, while only 1.4% reported not being worried. These findings demonstrate that the vast majority of IIUM students perceive climate change as a serious threat to both people and the planet, reflecting high levels of emotional engagement. Comparisons of emotional response, negative belief, and functional impact domains between genders are presented in Figure 1. Using the Mann–Whitney U test, statistically significant differences were found in emotional response ($p = 0.027$) and functional impact ($p = 0.041$), with male students reporting higher median scores than females in both domains. No significant difference was observed in negative belief ($p = 0.162$).

Similarly, comparisons by faculty (Figure 2) revealed statistically significant differences in emotional response ($p < 0.001$) and negative belief ($p < 0.001$). Students from non-health faculties exhibited higher median scores in both the emotional response and negative belief domains compared to those from health faculties. However, no significant difference was found in functional impact ($p = 0.156$). These findings suggest that while gender and faculty influence emotional and cognitive engagement with climate change, functional impacts remain relatively consistent across groups.

Correlations among the three domains are summarized in **Table 5.** Normality testing using the Shapiro–Wilk test indicated that the data for all the main variables were not normally distributed ($p < .001$ for all); therefore, Spearman's rank-order correlation was used.

Results indicated a significant positive correlation between emotional response and negative belief ($r_s = .465$, $p < .001$), suggesting that individuals who experienced stronger emotional reactions tended to express greater acknowledgment of the severity of climate change.

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Functional impact was also positively correlated with negative belief ($r_s = .317$, $p < .001$), implying that participants who reported greater disruption in daily activities were more likely to hold stronger negative beliefs about climate change. In contrast, the correlation between emotional response and functional impact was not statistically significant ($r_s = .062$, $p = .355$), indicating no correlation between these two domains.

Overall, these findings highlight that university students in this sample were generally aware of climate change and emotionally responsive to its implications. Statistically significant differences were observed in emotional response and functional impact by gender, and in emotional response and negative belief by faculty group. These findings suggest that climate-related emotional and cognitive engagement may vary across student subgroups, although the results should be interpreted cautiously given the single-institution sample.

Discussion

This study examined university students' emotional responses, negative beliefs, and perceived functional impact related to climate change, comparing across gender and faculty groups, and exploring inter-domain correlations. The demographic profile (Table 1) showed a predominance of female participants and a majority from health faculties, with most aged between 21 and 23 years. These characteristics are important when interpreting the findings, as they may reflect the perspectives of a relatively homogeneous student cohort.

We found that students generally expressed moderate to strong emotional engagement with climate change (Table 2). Many reported feelings of worry, frustration, and sadness—suggesting that climate change is not viewed as remote or irrelevant but rather as a personally meaningful concern. This aligns with prior studies showing that affective engagement (emotional response) is a key driver of climate risk perception and behavioral intention[16,17]. Negative beliefs about climate change (Table 3) were more variable. While most participants agreed that climate change is a serious threat, some expressed uncertainty about human influence and the efficacy of individual actions—reflecting ambivalence documented in other student populations[18]. These findings point to a tension between emotional concern and cognitive certainty: students may feel strongly about climate change but still hold doubts about the specifics of causation or mitigation.

With regard to functional impact (Table 4), most participants reported minimal interference in their daily functioning. Occasional effects on mood, academic focus, or motivation were noted for a subset of students. This suggests that for many, emotional responses do not necessarily translate into perceived functional impairment; the pattern may

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reflect heightened climate concern and awareness rather than severe impairment. That said, the existence of some reported impacts is meaningful, as prior work has emphasized that climate anxiety and stress can manifest in attentional or motivational disruptions (e.g., difficulty concentrating, emotional distress) even among university students[19].

Although gender differences in climate-related emotional and functional responses were modest in the study (Figure 1), the observed patterns remain meaningful when considered in a broader psychosocial context. Prior research suggests that women may experience climate-related concerns more intensely due to anticipated caregiving and family responsibilities, including concerns about parenting, household security, and future generations. Such concerns may shape how climate anxiety is emotionally processed, even when not translating into measurable functional impairment. In university populations, shared academic exposure, similar access to climate-related information, and comparable future uncertainties may attenuate overt gender differences. These findings suggest that climate-related mental health interventions in higher education should avoid assuming gender homogeneity, whilst also recognizing that gendered roles and expectations may influence how climate anxiety is experienced and managed beyond the university setting.

Similarly, comparisons between health vs. non-health faculties (Figure 2) showed statistically significant differences in emotional response and negative belief, with students from non-health faculties reporting higher median scores in both domains. No significant difference was observed in functional impact. This suggests that the field of study may shape emotional and cognitive engagement with climate change in this sample, although these subgroup differences should be interpreted with caution in light of the study design and sampling limitations. Some prior research hypothesizes that health or medical students might show greater concern due to the anticipated health impacts of climate change[22], but our results do not decisively confirm this in our context.

Importantly, the correlation analysis (Table 5) showed that stronger emotional responses were associated with stronger negative beliefs, and greater functional impact was also associated with stronger negative beliefs. However, emotional response and functional impact were not significantly correlated. This suggests that students' emotional engagement and daily functional effects may not always move together, even when both are linked to negative climate-related cognitions. This is consistent with the integrative models of climate engagement that emphasize the interplay of affect, cognition, and behavior[18].

The pattern observed in this study is consistent with emerging evidence among youth and university students both in Malaysia and internationally. Studies in Malaysian and

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Southeast Asian student populations have similarly reported great emotional concern regarding climate change alongside relatively limited functional disruption, suggesting that climate anxiety may manifest primarily at an affective and cognitive level during early adulthood. Globally, youth studies have emphasized that climate-related worry reflects heightened awareness rather than psychopathology, particularly in educated populations. These findings underscore the need for balanced institutional responses that validate emotional concern while strengthening adaptive coping and agency. At the policy level, integrating climate-mental health content into higher education curricula, student support services, and national youth mental health strategies may help address climate anxiety constructively. This is especially relevant in IIUM, where graduates may later contribute to healthcare, education, governance, and social services in Malaysia. Strengthening climate awareness and adaptive capacity during undergraduate training may therefore have broader implications beyond the campus setting.
Overall, these results underscore that among university students in this sample, emotional engagement is salient, but differences by gender or field of study are weak. The clustering of domain scores suggests a psychological coherence in how students experience, believe, and are affected by climate change.

Amid global crises, climate and environmental changes are increasingly associated with chronic and degenerative diseases, mental health vulnerability, and healthcare system strain. As highlighted by Karaliuniene et al. (2025), environmental stressors may exacerbate neurological and psychological conditions, particularly in aging societies[21]. In this context, revising university curricula to incorporate climate-health literacy is not merely educational reform but a public health necessity. IIUM graduates, particularly in the health and social sectors, will play critical roles in policy development, healthcare delivery, and community resilience. Enhancing climate awareness and adaptive capacity during undergraduate training may therefore strengthen Malaysia's long-term environmental and healthcare preparedness.

Limitations

This study had several limitations that should be acknowledged. Firstly, the study was conducted in a single university using convenience sampling, and the findings should not be interpreted as representative of all Malaysian university students. Second, because participation was voluntary and recruitment occurred through online dissemination channels, self-selection bias may have occurred, with students who were more interested in climate issues being more likely to respond. Third, because the exact number of students who received or viewed the survey invitation could not be determined, a response rate could not be calculated. Fourth, the

cross-sectional design precludes causal inferences between climate change perceptions, emotional responses, and functional impacts. Lastly, the study relied exclusively on self-report measures, which are inherently subjective and may not capture the full range of students' lived experiences or behavioral changes in response to climate change.

Despite these limitations, the findings provide valuable preliminary institutional evidence on climate anxiety and climate-related perceptions among IIUM students, serving as a foundation for broader national and regional studies

Conclusion

This study provides initial institutional evidence that undergraduate students at the International Islamic University Malaysia demonstrate substantial emotional engagement with climate change, accompanied by negative future-oriented beliefs and relatively modest functional effects. Although the findings are not nationally representative, they offer useful insight into campus-level educational and psychological strategies. The study also supports the value of integrating climate-related literacy and mental well-being support within university settings. Future research should include larger, more diverse samples across multiple institutions and consider longitudinal or mixed-methods approaches to better understand how climate anxiety develops and influences student functioning over time. These findings align with previous research showing that younger populations worldwide are emotionally engaged with climate change and experience varying degrees of climate anxiety[14–17].

Although the functional impact on daily activities was generally low, the observed positive correlations between emotional response, negative beliefs, and functional impact suggest that emotional engagement with climate change can subtly affect students' cognition and motivation. This coherence across domains supports the notion that affective, cognitive, and behavioral responses to climate change are interrelated, as emphasized in prior work[18–20].

The study underscores the importance of incorporating climate change education and mental well-being support into university programs to equip students with the knowledge and resilience needed to manage eco-anxiety constructively. Future research should address the limitations of this study by expanding the sample size, including multiple institutions, and adopting longitudinal or mixed-methods designs to deepen the understanding of how climate change perceptions evolve and influence behavior over time.

Conflict of interest

No conflict of interest declared.

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Table 1: Demographic data of IIUM undergraduate students who participated in the study, total n = 222

Variable	Category	n (%)
Gender	Male	49 (22.1%)
	Female	173 (77.9%)
Faculty Group	Health	144 (64.9%)
	Non-Health	78 (35.1%)
Year of Study	Year 1	55 (24.8%)
	Year 2	31 (14.0%)
	Year 3	38 (17.1%)
	Year 4	36 (16.2%)
	Year 5	62 (27.9%)
Nationality	Malaysian	219 (98.6%)
	Indian	1 (0.5%)
	Bangladeshi	1 (0.5%)
	Sudanese	1 (0.5%)
Age Group (years)	18–20	59 (26.7%)
	21–23	100 (45.2%)
	24–26	61 (27.6%)
	27 and above	1 (0.5%)

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Table 2: Emotional responses toward climate change by faculty group, total n=222

Emotional response toward climate change		Faculty		
		Health, *n* (%)	**Non-Health, *n* (%)**	**Total, *n* (%)**
Sad	Yes	105 (72.9%)	69 (88.5%)	174 (78.4%)
	No	33 (22.9%)	7 (9.0%)	40 (18.0%)
	Prefer not to say	6 (4.2%)	2 (2.6%)	8 (3.6%)
Helpless	Yes	85 (59.0%)	50 (64.1%)	135 (60.8%)
	No	53 (36.8%)	26 (33.3%)	79 (35.6%)
	Prefer not to say	6 (4.2%)	2 (2.6%)	8 (3.6%)
Anxious	Yes	66 (45.8%)	60 (76.9%)	126 (56.8%)
	No	71 (49.3%)	15 (19.2%)	86 (38.7%)
	Prefer not to say	7 (4.9%)	3 (3.8%)	10 (4.5%)
Afraid	Yes	94 (65.3%)	59 (75.6%)	153 (68.9%)
	No	47 (32.6%)	17 (21.8%)	64 (28.8%)
	Prefer not to say	3 (2.1%)	2 (2.6%)	5 (2.3%)
Optimistic	Yes	57 (39.6%)	38 (48.7%)	95 (42.8%)
	No	69 (47.9%)	32 (41.0%)	101 (45.5%)
	Prefer not to say	18 (12.5%)	8 (10.3%)	26 (11.7%)
Angry	Yes	57 (39.9%)	49 (62.8%)	106 (48.0%)
	No	75 (52.4%)	23 (29.5%)	98 (44.3%)
	Prefer not to say	11 (7.7%)	6 (7.7%)	17 (7.7%)
Guilty	Yes	65 (45.1%)	56 (71.8%)	121 (54.5%)
	No	66 (45.8%)	20 (25.6%)	86 (38.7%)
	Prefer not to say	13 (9.0%)	2 (2.6%)	15 (6.8%)
Ashamed	Yes	54 (37.5%)	46 (59.0%)	100 (45.0%)
	No	82 (56.9%)	28 (35.9%)	110 (49.5%)
	Prefer not to say	8 (5.6%)	4 (5.1%)	12 (5.4%)

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Emotional response toward climate change		Faculty		
		Health, *n* (%)	**Non-Health, *n* (%)**	**Total, *n* (%)**
Hurt	Yes	59 (41.0%)	46 (59.0%)	105 (47.3%)
	No	78 (54.2%)	28 (35.9%)	106 (47.7%)
	Prefer not to say	7 (4.9%)	4 (5.1%)	11 (5.0%)
Depressed	Yes	19 (13.2%)	18 (23.1%)	37 (16.7%)
	No	119 (82.6%)	56 (71.8%)	175 (78.8%)
	Prefer not to say	6 (4.2%)	4 (5.1%)	10 (4.5%)
Despair	Yes	32 (22.2%)	27 (34.6%)	59 (26.6%)
	No	105 (72.9%)	46 (59.0%)	151 (68.0%)
	Prefer not to say	7 (4.9%)	5 (6.4%)	12 (5.4%)
Grief	Yes	27 (18.8%)	28 (35.9%)	55 (24.8%)
	No	108 (75.0%)	45 (57.7%)	153 (68.9%)
	Prefer not to say	9 (6.3%)	5 (6.4%)	14 (6.3%)
Powerless	Yes	90 (62.5%)	50 (64.1%)	140 (63.1%)
	No	51 (35.4%)	26 (33.3%)	77 (34.7%)
	Prefer not to say	3 (2.1%)	2 (2.6%)	5 (2.3%)
Indifferent	Yes	40 (27.8%)	23 (29.5%)	63 (28.4%)
	No	86 (59.7%)	48 (61.5%)	134 (60.4%)
	Prefer not to say	18 (12.5%)	7 (9.0%)	25 (11.3%)

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Table 3: Negative beliefs about climate change by faculty group, total n = 222

Negative beliefs about climate change		Faculty		
		Health, *n* (%)	**Non-Health, *n* (%)**	**Total, *n* (%)**
I am hesitant to have children	Yes	20 (13.9%)	27 (34.6%)	47 (21.2%)
	No	106 (73.6%)	44 (56.4%)	150 (67.6%)
	Prefer not to say	18 (12.5%)	7 (9.0%)	25 (11.3%)
Humanity is doomed	Yes	59 (41.0%)	52 (66.7%)	111 (50.0%)
	No	70 (48.6%)	17 (21.8%)	87 (39.2%)
	Prefer not to say	15 (10.4%)	9 (11.5%)	24 (10.8%)
The future is frightening	Yes	112 (77.8%)	69 (88.5%)	181 (81.5%)
	No	27 (18.8%)	6 (7.7%)	33 (14.9%)
	Prefer not to say	5 (3.5%)	3 (3.8%)	8 (3.6%)
I won't have access to the same opportunities that my parents had	Yes	87 (60.4%)	60 (76.9%)	147 (66.2%)
	No	42 (29.2%)	14 (17.9%)	56 (25.2%)
	Prefer not to say	15 (10.4%)	4 (5.1%)	19 (8.6%)
My family's security will be threatened (eg, economic, social, or physical security)	Yes	82 (56.9%)	52 (66.7%)	134 (60.4%)
	No	48 (33.3%)	16 (20.5%)	64 (28.8%)
	Prefer not to say	14 (9.7%)	10 (12.8%)	24 (10.8%)
The things I most value will be destroyed	Yes	65 (45.1%)	45 (57.7%)	110 (49.5%)
	No	59 (41.0%)	24 (30.8%)	83 (37.4%)
	Prefer not to say	20 (13.9%)	9 (11.5%)	29 (13.1%)

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Negative beliefs about climate change		Faculty		
		Health, *n* (%)	**Non-Health, *n* (%)**	**Total, *n* (%)**
People have failed to take care of the planet	Yes	118 (81.9%)	71 (91.0%)	189 (85.1%)
	No	16 (11.1%)	3 (3.8%)	19 (8.6%)
	Prefer not to say	10 (6.9%)	4 (5.1%)	14 (6.3%)

Table 4: Functional impact of climate change by faculty group, total n = 222

Functional impact of climate change		Faculty		
		Health, *n* (%)	**Non-Health, *n* (%)**	**Total, *n* (%)**
Eating	Yes	14 (9.7%)	9 (11.5%)	23 (10.4%)
	No	128 (88.9%)	66 (84.6%)	194 (87.4%)
	Prefer not to say	2 (1.4%)	3 (3.8%)	5 (2.3%)
Concentration	Yes	38 (26.4%)	28 (35.9%)	66 (29.7%)
	No	105 (72.9%)	47 (60.3%)	152 (68.5%)
	Prefer not to say	1 (0.7%)	3 (3.8%)	4 (1.8%)
Work	Yes	41 (28.5%)	26 (33.3%)	67 (30.2%)
	No	103 (71.5%)	50 (64.1%)	153 (68.9%)
	Prefer not to say	0 (0.0%)	2 (2.6%)	2 (0.9%)
School	Yes	38 (26.4%)	32 (41.0%)	70 (31.5%)
	No	106 (73.6%)	44 (56.4%)	150 (67.6%)
	Prefer not to say	0 (0.0%)	2 (2.6%)	2 (0.9%)

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Functional impact of climate change		Faculty		
		Health, *n* (%)	Non-Health, *n* (%)	Total, *n* (%)
Sleeping	Yes	44 (30.6%)	24 (30.8%)	68 (30.6%)
	No	100 (69.4%)	50 (64.1%)	150 (67.6%)
	Prefer not to say	0 (0.0%)	4 (5.1%)	4 (1.8%)
Spending time in nature	Yes	89 (61.8%)	58 (74.4%)	147 (66.2%)
	No	54 (37.5%)	18 (23.1%)	72 (32.4%)
	Prefer not to say	1 (0.7%)	2 (2.6%)	3 (1.4%)
Playing	Yes	52 (36.1%)	36 (46.2%)	88 (39.6%)
	No	92 (63.9%)	40 (51.3%)	132 (59.5%)
	Prefer not to say	0 (0.0%)	2 (2.6%)	2 (0.9%)
Having Fun	Yes	47 (32.6%)	35 (44.9%)	82 (36.9%)
	No	96 (66.7%)	40 (51.3%)	136 (61.3%)
	Prefer not to say	1 (0.7%)	3 (3.8%)	4 (1.8%)
Relationships	Yes	10 (6.9%)	10 (12.8%)	20 (9.0%)
	No	127 (88.2%)	64 (82.1%)	191 (86.0%)
	Prefer not to say	7 (4.9%)	4 (5.1%)	11 (5.0%)

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Table 5: Correlation between emotional response, functional impact, and negative belief domains among IIUM students

		Emotion	Functional Impact	Negative Belief
Emotion	Correlation Coefficient	1.000	0.062	.465***
	Sig. (2-tailed)		0.355	< 0.001
	N	221	221	221
Functional Impact	Correlation Coefficient	0.062	1.000	.317***
	Sig. (2-tailed)	0.355		< 0.001
	N	221	222	222
Negative Belief	Correlation Coefficient	.465***	.317***	1.000
	Sig. (2-tailed)	< 0.001	< 0.001	
	N	221	222	222

***. Correlation is significant at the 0.001 level (2-tailed).

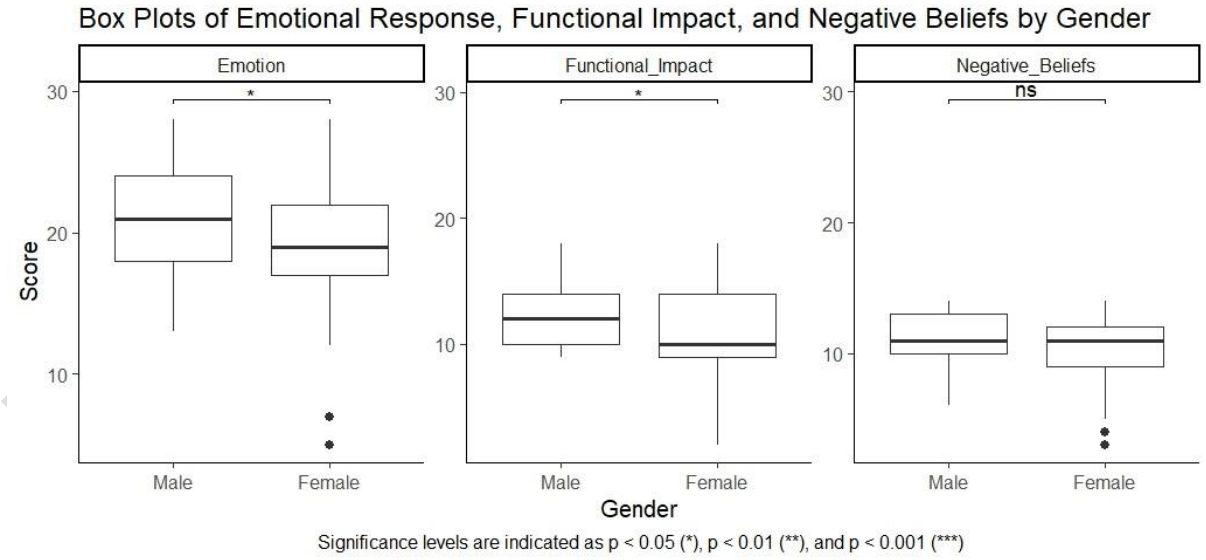


Figure 1. Box plots comparing emotional response, functional impact, and negative belief scores between male and female students using the Mann–Whitney U test (n = 222).

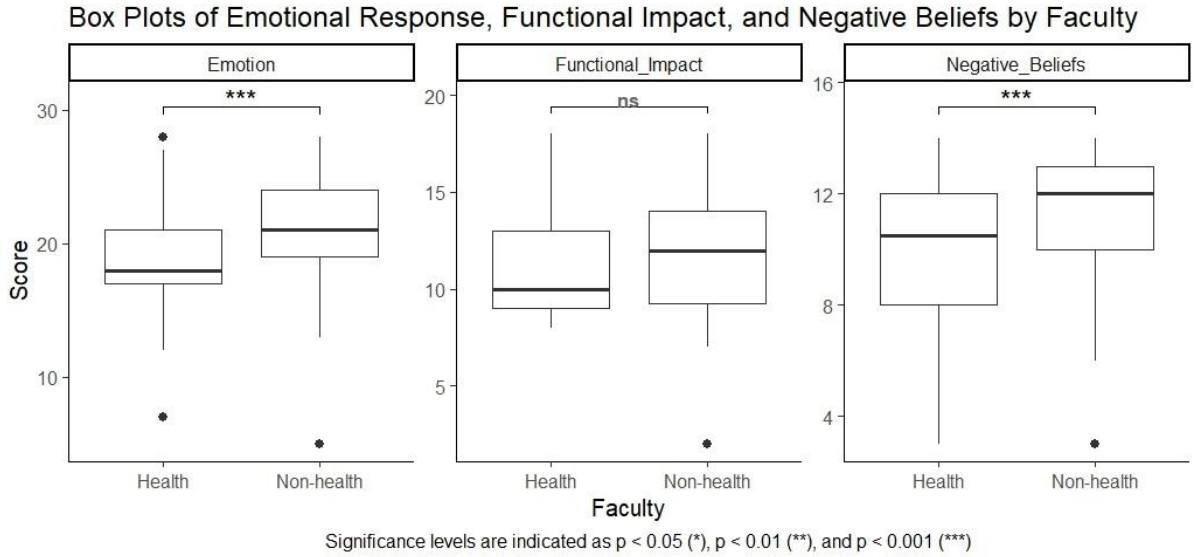


Figure 2. Box plots comparing emotional response, functional impact, and negative belief scores between health and non-health faculty using the Mann–Whitney U test (n = 222).

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