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Research article

Eco-anxiety: prevalence and association with well-being and environmentally responsible consumption in Lithuania

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ABSTRACT

Background: Since eco-anxiety has been linked to various mental health, well-being, and environmental conservation indicators, this study aims to further explore the prevalence of eco-anxiety and its links to mental health indicators, overall well-being, and environmentally responsible consumption

Methods: A nationally representative sample of 2,136 Lithuanians provided self-reported data on symptoms of eco-anxiety, depression, and general anxiety as well as on life satisfaction and environmentally responsible consumption. The prevalence of eco-anxiety symptoms was estimated based on mean score: no eco-anxiety symptoms group ($M = 1$), mild/medium eco-anxiety symptoms group ($1.25 \leq M \geq 3$), and high eco-anxiety symptoms group ($3.25 \leq M \geq 5$)

Results: In the general sample, 1.4% of respondents scored in the high range on eco-anxiety symptoms. We found no significant differences in the prevalence of eco-anxiety symptoms by gender, age, education, income, or relationship status. Higher eco-anxiety scores were associated with higher scores on depression and general anxiety symptoms. However, eco-anxiety symptoms were not related to life satisfaction. We found no significant relationship between eco-anxiety symptoms and regular consumption, whereas eco-anxiety symptoms were positively related to activism-oriented consumption

Conclusion: This study helps to address the underrepresentation of the Baltic region in eco-anxiety research. It adds to the growing evidence that eco-anxiety symptoms are prevalent among adult population and are negatively associated with mental health symptoms and positively associated with activism-oriented consumption.

1. Introduction

Studies across the globe show that the global environmental crisis affects people's mental health by inducing eco-anxiety symptoms (i.e., psychological discomfort rather than a medical condition) [1,2]. We conceptualize eco-anxiety as anxiety about various environmental threats, including but not limited to climate-related concerns; the study adopts this broader focus to capture the full range of environmental triggers that cause anxiety symptoms [3,4]. Eco-anxiety stems from concerns about the planetary health, whether experienced directly through exposure to the tangible effects of environmental crises or indirectly through media coverage [5,6].

The prevalence of eco-anxiety symptoms varies considerably across countries and populations. Studies report rates ranging from 0.6 % in Japan to as high as 55.3 % in Germany [7,8]. The American population shows relatively lower levels at 2.5–3 % [9,10], while other countries fall somewhere in between: China reports 3.4 %, India shows 8.5 %, and Australia finds 9.37 % of participants experiencing significant eco-anxiety [6,7]. Research suggests that women, young people, and individuals from disadvantaged backgrounds may experience higher rates [6,7], though these demographic patterns are not consistent across studies [10].

Varying levels of eco-anxiety across regions and discrepancies between sources, even for the same country, may stem from methodological differences. Variations include the use of qualitative versus quantitative approaches, the choice of measurement instruments (e.g., clinical tools for anxiety versus general worry scales) [8], and the abstraction level of the constructs measured (e.g., worry, symptoms of anxiety, or pre- and post-traumatic stress disorder); additionally, not all studies are fully nationally representative, which could further skew the results [11].

Moreover, most data on eco-anxiety prevalence are from WEIRD

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countries (Western, Educated, Industrialized, Rich, and Democratic) [10] or other high-income regions, such as Australia, New Zealand, and Norway [11]. Data from underrepresented regions – Lithuania being a notable example – are scarce. Such data are essential for contributing to global prevalence estimates and, more importantly, enabling local policymakers to implement appropriate measures. Specifically, Lithuania has experienced increasing environmental hazards over recent decades [12,13], making it an important context for understanding eco-anxiety as a globally relevant psychological phenomenon.

Since eco-anxiety has been linked to various mental health, well-being, and environmental conservation indicators, this study aims to further explore these connections. The research focuses on examining these relationships in a new context relevant to other countries in the Baltic region (e.g., Latvia or Estonia) and nations that experienced Soviet occupation (e.g., Poland and the Czech Republic). Additionally, we assess the prevalence of eco-anxiety at different levels of abstraction, focusing specifically on anxiety related to environmental crises rather than climate crises. We also incorporate a novel dimension by examining everyday activism in consumption practices.

1.1. Eco-anxiety and its relationship with mental health, well-being, and pro-environmental actions

Eco-anxiety has a complex and multifaceted relationship with mental health, well-being, and pro-environmental actions [5]. Research has shown its association with various negative mental health outcomes, including symptoms of general anxiety, psychological distress, depression, and post-traumatic stress disorder [9,14–16]. Additionally, eco-anxiety symptoms encompasses emotional experiences such as anger, despair, and guilt [17], as well as cognitive-emotional states such as uncertainty, unpredictability, and uncontrollability [18]. These factors collectively contribute to the broader cognitive-emotional impairments [9], illustrating the complexity of psychological impacts of eco-anxiety.

Functional impairment, another dimension of eco-anxiety responses, manifests in behaviors such as avoiding information about environmental crisis, experiencing paralysis of action, disrupted daily routines (e.g., because of insomnia), social isolation, and interpersonal conflicts [18,19]. Importantly, the strength of the relationships between eco-anxiety and mental health depends on the severity and type of impairment experienced. Higher levels of anxiety symptoms, particularly those closer to post-traumatic stress responses, tend to exacerbate negative outcomes [15].

Eco-anxiety is associated with mental health and overall well-being. For example, individuals with elevated eco-anxiety symptoms report lower life satisfaction and poorer self-rated health [20]. Similarly, climate anxiety symptoms are inversely associated with well-being across diverse contexts [21,22]. However, eco-anxiety can also serve as a motivational factor for some individuals, fostering a sense of purpose and driving pro-environmental actions, depending on its intensity and the individual's coping strategies [8,23].

A nuanced relationship exists between eco-anxiety and pro-environmental behavior. Research has demonstrated that eco-anxiety symptoms can promote environmentally conscious actions when cognitive-emotional impairment outweighs functional impairment [10]. However, excessive levels of eco-anxiety symptoms, characterized by eco-paralysis, may hinder such actions [24]. For example, the relationship between climate-anxiety and pro-environmental actions was significant in 24 countries, whereas it was linked to environmental activism in 12 countries [21]. Interestingly, this relationship is stronger in individualistic and economically advanced countries, where resources and cultural contexts support environmental engagement [21]. These findings suggest that the relationship among eco-anxiety, mental health, well-being, and pro-environmental actions are not universally equivalent across all contexts and need to be explored further.

1.2. Relationship between eco-anxiety and environmentally responsible consumption

Environmentally responsible consumption (ERC), a form of pro-environmental action, involves deliberate efforts to minimize environmental harm throughout the consumption process [25]. Examples include purchasing environmentally friendly products [26], reducing clothing consumption [21], and opting for secondhand goods or minimally packaged items [14]. As daily consumption habits significantly impact the environment [27], understanding their relationship with eco-anxiety symptoms is crucial. Although accumulating evidence links eco-anxiety symptoms with environmentally responsible consumption, the findings remain inconsistent.

Some studies report no significant relationship between eco-anxiety symptoms and the intention to buy green products [26]. Other studies report positive associations between eco-anxiety symptoms and broader pro-environmental actions in some countries but not others [21]. Additionally, eco-anxiety symptoms predict some pro-environmental actions [14]. However, most of these studies used aggregated measures that combine responsible consumption with other pro-environmental actions, such as activism, thus not allowing the specific contribution of the ERC to be isolated [14,28].

The level of abstraction in measuring environmentally responsible consumption can potentially determine the strength of the relationship with eco-anxiety symptoms. Construal-Level Theory and The Theory of Planned Behavior suggest that generalized measures could amplify relationships by capturing broader intent rather than specific actions [27,28]. For example, studies using generalized items, such as "I have changed my consumption habits," may report stronger but less nuanced correlations [29]. In contrast, more specific items, such as "I drink water from the tap instead of bottled water," yield weaker but more precise insights due to their narrower scope [30].

Certain facets of eco-anxiety symptoms motivate environmentally responsible consumption more than others do. Rumination and anxiety about one's personal environmental impact positively predict pro-environmental actions, whereas behavioral symptoms, such as avoidance and emotional distress, are associated with poorer mental health and reduced engagement in sustainable practices [31,32].

1.3. The present study

In this study, we aim to examine (a) the prevalence of eco-anxiety symptoms in Lithuania, (b) how eco-anxiety symptoms relate to mental health indicators such as symptoms of depression and general anxiety, (c) the extent to which eco-anxiety symptoms are associated with overall life satisfaction (indicator of well-being), and (d) their relationship with environmentally responsible consumption. Although there is accumulating evidence suggesting links between eco-anxiety symptoms, mental health, well-being, and pro-environmental actions, these relationships remain inconsistent and context-dependent, limiting their broader applicability. Furthermore, we explain the unique contribution of the present study to advancing the current understanding of these relationships.

A key contribution of this study lies in its focus on the Baltic region, with Lithuania serving as a case in point. First, the prevalence of eco-anxiety symptoms in Baltic countries remains unknown, which may lead to adverse practical and policy consequences. Some studies have assessed worry about environmental issues in the Baltic region [33]. They measured "worry" rather than "anxiety," which are conceptually distinct constructs. Research indicates that worry about environmental issues often exceeds actual anxiety symptom levels [20,33] and tends to correlate more strongly with negative mental health indicators [15]. Moreover, earlier studies have not used representative samples of the adult population, making it difficult to translate findings into policy recommendations. The current study adopts a broader lens by investigating eco-anxiety symptoms related to environmental crises rather than

Table 1
Sociodemographic sample characteristics.

Characteristics	*n* (%)
Place of residence	
City (> 50.000 residents)	878 (41.1)
Town (2.000 – 50.000 res.)	578 (27.1)
Village (< 2.000 res.)	680 (31.8)
Age groups	
18–29 years old	373 (17.5)
30–49 years old	608 (28.5)
50+ years old	1155 (54)
Education	
Unfinished Secondary	157 (7.4)
Secondary	418 (19.6)
Vocational	929 (43.4)
Higher	627 (29.4)
No response	5 (0.2)
Monthly Family income	
1100 Euros and less	564 (26.4)
1101–2000 Euros	583 (27.3)
More than 2000 Euros	413 (19.3)
No response	576 (27)
Relationship status	
Single	314 (14.7)
In relationship	249 (11.7)
Married	1089 (51)
Divorced	178 (8.3)
Widowed	277 (19)
No response	29 (1.3)

Note. $N = 2136$.

limiting the focus to climate change alone – an approach that is relatively new in this line of research. This design aims to reduce biases that could arise from participants who may question the legitimacy of climate change but still recognize other forms of environmental degradation [3]. Finally, we explore the activism aspect of everyday consumption behaviors to understand how reducing one's environmental impact might help to alleviate eco-anxiety symptoms [34].

2. Method

2.1. Study design

The national representative Omnibus survey in Lithuania has been implemented to collect the data for this study. An OMNIBUS survey is a nationally representative poll where multiple clients purchase question space, sharing costs while using the same standardized methodology [35]. In Lithuania, such surveys are run monthly by private poll company Baltijos Tyrimai with stratified probability samples of the adult population, ensuring representativeness and confidentiality.

2.2. Procedure

Data were collected in February-March of 2024 during in-person interviews conducted by a survey research company in Lithuania. The findings of this survey are applicable to the Lithuanian population aged 18 and over. Households were selected through random route sampling [35,41] which intends to create an equal probability of a household being selected. There are several social groups that are not included in the sample of this study: people in prison, people in hospitals and people without a place of residence. The age range of this population was chosen in line with the European Union's practice of population opinion surveys (ESOMAR) and to compare the survey data with previous surveys on this topic

2.3. Participants

The sample of the present study consists of 2,136 participants (41.3 % males, 58.7 % females). The majority of the sample was Lithuanian (90 %), and the others were Lithuanian-speaking Polish (5 %), Russian (3 %), or other nationality (2 %) residents living in Lithuania.

The age of the participants ranged from 18 to 90 years ($M_{age} = 50.60$; $SD_{age} = 18.53$). The largest proportion of the sample lived in cities (41.1 %), had a vocational education (43.4 %), and were married (51 %). More detailed sample characteristics are presented in Table 1.

Table 2
Descriptive statistics of study measures.

	M (SD)	Cronbach's α
Eco-anxiety	1.36 (0.58)	.862
Depression	1.69 (0.66)	.800
General anxiety	1.39 (0.62)	.882
Life satisfaction	6.83 (1.77)	–
Additional effort consumption	3.38 (0.94)	.742
Activism-oriented consumption	2.68 (1.77)	.745

Note. $N = 2,136$.

2.4. Measures

For all the measures used in this study, permissions were received from the authors if the measures used were not freely available. The measures were translated into Lithuanian using independent translators working in the field. Disagreements were discussed in an expert group. Given that the OMNIBUS survey offers limited space for the questionnaire, a limited number of items from each measure were selected on the basis of published studies with factorial analysis of the measures and conceptual discussion among the research team of the current study. This is a well-established approach in major surveys such as the European Social Survey, European Values Study, and World Values Survey, which also rely on brief but targeted instruments. We selected items with the highest factor loadings and the most relevance to the current study. The descriptive statistics of the measures used are presented in Table 2.

Eco-anxiety symptoms were measured with four items of the Climate Change Anxiety Scale (CCAS) [7] "Climate change" was changed with the term "environmental crisis" to fit the cause of our study. Specific items from cognitive-emotional impairment, functional impairment subscales were chosen to capture how eco-anxiety symptoms manifests across multiple domains of daily life, including sleep, social functioning, work, and perceptions by others. The decision on which items to include in the study was based on factorial analyses done by Clayton and Karazsia [7] and conceptual discussion among the research team of the current study. Before responding to statements, participants were provided with the definition of the term "environmental crisis" ("An environmental crisis is a consequence of human mistreatment of the environment (nature), which puts the survival of humanity and all life on earth at risk. The ecological crisis is manifested in climate change, increased pollution and resource depletion, loss of species, etc."). Finally, participants were asked to indicate how often listed statements are true for them (e.g., *Thinking about an environmental crisis makes it difficult for me to sleep*) on a 5-point scale from *Never* to *Almost always*. For the overall prevalence of eco-anxiety symptoms a dummy variable (i.e., binary variable used to categorize participants into two groups) [35,36] was created indicating those who never experienced any of the symptoms of eco-anxiety (all items rated at *Never*), and those who experienced at least some eco-anxiety symptoms (at least one item rated at *Rarely* or higher). Another categorical variable for eco-anxiety symptoms was created to indicate three levels of eco-anxiety symptoms according to Clayton and Karazsia [7] recommendations based on mean score: no eco-anxiety symptoms group ($M = 1$), mild/medium eco-anxiety symptoms group ($1.25 \leq M \geq 3$), and high eco-anxiety symptoms group ($3.25 \leq M \geq 5$).

Symptoms of depression were measured with three items of the Patient Health Questionnaire (PHQ-9) [37]. Participants were asked to indicate how often during the previous two weeks they experienced various difficulties (e.g., *Little interest or pleasure in doing things*) on a

Table 3
Distribution of study participants in no eco-anxiety and eco-anxiety groups by sociodemographic characteristics.

	No eco-anxiety *n* (%)	Eco-anxiety *n* (%)
Age groups		
18–29 years old	209 (57.4)	155 (42.6)
30–49 years old	330 (56)	259 (44)
50+ years old	637 (58)	461 (42)
Education		
Unfinished Secondary	86 (59.3)	59 (40.7)
Secondary	254 (62)	156 (38)
Vocational	499 (56)	392 (44)
Higher	336 (56)	264 (44)
Monthly Income		
1100 Euros and less	290 (54.6)	241 (45.4)
1101–2000 Euros	323 (57.5)	239 (42.5)
More than 2000 Euros	226 (55.7)	180 (44.3)
Relationship status		
Single	179 (59.1)	124 (40.9)
In relationship	134 (54.9)	110 (45.1)
Married	600 (57)	453 (43)
Divorced	99 (59.6)	67 (40.4)
Widowed	150 (57.9)	109 (42.1)

Note. $N = 2136$.

5-point scale ranging from *Not at all* to *Nearly every day*.

Symptoms of general anxiety were measured via three items of the Brief Measure of Assessing Generalized Anxiety Disorder (GAD-7) [38]. Participants were asked to indicate how often during the previous two weeks they experienced various difficulties (e.g., *Feeling nervous, anxious or on edge*) on a 5-point scale ranging from *Not at all* to *Nearly every day*.

Life satisfaction was measured with one item from the European Social Survey [39]. Participants were asked to indicate how satisfied with life they feel in general on an 11-point scale ranging from *Extremely dissatisfied* to *Extremely satisfied*.

Environmentally responsible consumption was measured with an eight-item measure constructed by the authors of this manuscript. The measure includes four areas of everyday life consumption: water, food, shopping, and energy. Each area consists of two items describing two levels of environmentally responsible consumption - additional effort and activism-oriented consumption. Additional effort consumption includes behaviors that show some conscious intent to make consumption more environmentally friendly (e.g., *I do not leave the devices on the power grid when I do not use them*). Activism-oriented consumption includes behaviors that encourage others to make their consumption more environmentally friendly (e.g., *I encourage others not to leave devices on the power grid*). The participants were asked to indicate how often these behaviors fit them on a 5-point scale ranging from *Never* to *Almost always*. Considering that this is a newly constructed measure, confirmatory factor analysis was performed, which supported a two-factor structure [RMSEA = 0.062, TLI = 0.966].

Finally, participants provided information about their age, place of residence, education, family income, and relationship status.

2.5. Statistical analysis

The prevalence rates of eco-anxiety symptoms were estimated using descriptive statistics. Cross-tabulation and Pearson's χ^2 were used to analyze gender differences in prevalence rates. Mean differences by gender were analyzed with a *t*-test, and by other sociodemographic characteristics with more than two categories using Analysis of variance (ANOVA). Bonferroni correction was applied for multiple comparisons to correct the inflation of type I error. Finally, the relationships between the study variables were measured using Pearson correlations. All statistical analyses were conducted using Statistical Package for the Social Sciences (SPSS) version 23. We used 0.05 cutoff for the p value significance. For the additional confirmatory factor analysis for the environmentally responsible consumption scale standard model fit indices were applied [40]: Tucker-Lewis index (TLI) higher than 0.90 indicates an acceptable fit and higher than 0.95 represents a very good fit; root-mean-square error of approximation (RMSEA) below 0.08 indicates an acceptable fit and values below 0.05 suggests a good fit.

3. Results

3.1. Prevalence of eco-anxiety symptoms

The overall prevalence of eco-anxiety symptoms was 41 % ($n = 875$). In the general sample, 1.4 % ($n = 30$) reported high levels of eco-anxiety symptoms, and 39.6 % indicated mild or medium levels of eco-anxiety symptoms. The prevalence rates of overall eco-anxiety symptoms for males and females were 39 % and 42.3 %, respectively. There were no gender differences in prevalence rates ($\chi^2(1) = 2.36$, $p = 0.13$). Eco-anxiety symptoms were most prevalent within the 30–49 year old group, those who had vocational or higher education, whose income per month was 1100 euros or less, and within respondents who were in a relationship (Table 3). There were no mean level differences of eco-anxiety symptoms ($t(873) = -0.50$, $p = 0.616$) between males ($M = 1.83$, $SD = 0.59$) and females ($M = 1.85$, $SD = 0.62$). The mean levels of eco-anxiety symptoms also did not differ by age ($F(2872) = 1.33$, $p < 0.266$), education ($F(3867) = 1.67$, $p < 0.171$), income ($F(2657) = 1.27$, $p < 0.283$), and relationship status ($F(4858) = 1.57$, $p < 0.181$).

3.2. Relationship between eco-anxiety symptoms and mental health indicators and well-being

Pearson correlations were used to assess the relationship between eco-anxiety symptoms and mental health indicators. Results indicated positive relationships between both, symptoms of eco-anxiety and depression ($r = 0.168$, $p < 0.001$), and between symptoms of eco-anxiety and general anxiety ($r = 0.222$, $p < 0.001$). Higher levels of eco-anxiety symptoms were related to higher levels of symptoms of depression and general anxiety. However, eco-anxiety symptoms were not related to life satisfaction ($r = -0.026$, $p = 0.252$).

3.3. Relationship between eco-anxiety symptoms and environmentally responsible consumption

Pearson correlations were used to assess the relationship between eco-anxiety symptoms and two levels of environmentally responsible consumption. Results showed a positive relationship between eco-anxiety symptoms and activism-oriented consumption ($r = 0.219$, $p < 0.001$), indicating that higher levels of eco-anxiety symptoms were associated with more frequent activism-oriented consumption. However, additional effort consumption was not related to eco-anxiety symptoms ($r = 0.043$, $p = 0.057$).

4. Discussion

As global environmental challenges intensify, data on the prevalence of eco-anxiety symptoms have increasingly been collected worldwide. However, the Baltic region – which is distinct in its historical background and contextual nuances – remains underrepresented in such research. During the Soviet occupation, people in this region experienced chronic shortages of basic goods and services, which may have contributed to a long-lasting focus on practical, survival-oriented concerns (see also [42], p. 26–29). This kind of background could influence how people respond to environmental threats today, potentially making them more likely to prioritize concrete, immediate issues over more abstract or long-term risks that could lead to eco-anxiety. At the same time, it is important to note that about 40 percent of participants reported experiencing at least some levels of eco-anxiety symptoms, which suggests that many people do still care about environmental issues, even in this context. This highlights a complex picture: while practical

concerns may play a role, there is also clear evidence of growing emotional engagement with environmental problems. This gap also poses practical and policy challenges, as individuals experiencing eco-anxiety symptoms in the region may not receive appropriate support if the phenomenon is unrecognized by policymakers. To address this shortcoming, we conducted a nationally representative study in Lithuania.

In support of previous global findings, our study indicates that 1.4 % of the Lithuanian population (approximately 280,000 residents, experiences strong eco-anxiety symptoms related to environmental crises. This prevalence is closest to that reported in Japan (0.6 %) and relatively comparable to rates reported in the United States (2.5–3 %) and China (3.4 %), although it differs more substantially from that reported in Australia (9.37 %) and India (8.5 %) [9,10,13]. Notably, some studies have reported a much higher prevalence of eco-anxiety symptoms in these same countries. For example, other large-scale studies found rates ranging from 5 % to 50 % across 32 countries, including significantly higher figures of climate anxiety symptoms in Japan (25.8 %), India (22.3 %), China (22.1 %), and Australia (30.6 %) [21]. These elevated percentages may be partially explained by their reliance on a self-selected convenience sample, which likely overrepresents individuals already concerned about environmental issues. In contrast, the European Social Survey (ESS) relies on a single item measuring climate worry, a narrower yet more abstract concept that could yield inflated prevalence estimates. ESS data show that 35 % of Lithuanian residents and 25 % of Estonian residents report worrying about climate change [20]. Consequently, our representative assessment of eco-anxiety symptoms in Lithuania contributes to the broader pool of prevalence research, addressing key methodological differences that can influence reported rates.

We found no significant differences in the prevalence of eco-anxiety symptoms by gender, age, education, income, or relationship status – findings that diverge from those of several previous studies. Higher-than-average eco-anxiety symptoms have been reported among women, those with higher education, younger individuals, people from disadvantaged backgrounds, and those with higher incomes or who are in a relationship [6,7,9]. Nonetheless, these patterns are not consistent across different countries and contexts; in some cases, men exhibit higher levels of eco-anxiety symptoms, and factors such as education or age are not significantly related [10]. Also, previous studies, particularly those focused on youth and young adults (e.g., [43]), have found higher levels of eco-anxiety symptoms in these groups. However, it is important to note that many of the reviewed studies used targeted or convenience samples, often focusing specifically on young participants or recruiting through platforms that likely attract more environmentally engaged individuals. In contrast, our study was based on a nationally representative adult sample and used a very short set of items embedded within a broader survey. This difference in sampling and measurement likely contributed to our finding of no significant age differences in eco-anxiety symptoms. It's also possible that generational differences in how environmental concerns are expressed emotionally may play a role, e.g., younger people might label their distress more readily as "eco-anxiety," while older individuals may express concern differently or underreport emotional reactions.

Consistent with previous research, eco-anxiety symptoms are positively associated with the symptoms of depression and general anxiety [9,14–16]. This finding not only contributes to the accumulation of international data on the relationship between eco-anxiety symptoms and mental health but also holds particular national significance. Specifically, Lithuania ranks among the top ten countries globally in terms of suicide rates (6th place) [44] and among the top five countries in Europe (2nd place) [45], highlighting ongoing mental health challenges. An increase in eco-anxiety symptoms could exacerbate these challenges, highlighting the need for policy-level attention to this emerging issue.

We found no significant relationship between eco-anxiety symptoms and life satisfaction. Although these findings align with those of Lutz et al. [29], they differ from a broader range of studies demonstrating an inverse relationship with well-being indicators, including life satisfaction [7,21,22,29]. It is possible that eco-anxiety symptoms do not affect well-being directly and that other mediating or moderating factors (e.g., coping, support) are involved in this relationship.

We also found no significant relationship between eco-anxiety symptoms and regular consumption (see also [22]), whereas eco-anxiety symptoms were positively related to activism-oriented consumption. These findings align with other research suggesting that the relationship between eco-anxiety symptoms and pro-environmental behavior is not universal and depends on behavior type and contextual factors (e.g., country-level effects) [14,21]. One reason that no significant relationship emerged for regular consumption may be that people often unplug devices for non-environmental motives, such as saving money. Further investigation is needed to clarify when and under which conditions eco-anxiety symptoms motivate or discourage pro-environmental actions. Initial studies indicate that different facets of eco-anxiety – cognitive-emotional versus functional – can both encourage and inhibit pro-environmental behaviors [19,31,32]. Moreover, pro-environmental actions can sometimes reduce eco-anxiety symptoms, highlighting the importance of examining the specific conditions under which these reductions occur [19,23,46].

The current study is not without its limitations. First, previous studies have examined eco-anxiety as anxiety specifically related to climate change, whereas we focused on anxiety regarding a broader environmental crisis by replacing the term "climate change" with the term "environmental crisis" in the CCAS items used in this study. Although we do not view this as a limitation – indeed, we consider it a way to mitigate certain biases – it may reduce comparability with results obtained using scales that focus solely on climate change. Related to this, we chose to use CCAS because it includes items that capture how eco-anxiety manifests across multiple domains of daily life, including sleep, social functioning, work, and perceptions by others, which other eco-anxiety measures do not specifically address. However, the term eco-anxiety in our study may not have a clear distinction from the term climate anxiety, and should be interpreted with caution. Future studies could employ more nuanced instruments to assess diverse dimensions of eco-anxiety, such as concerns specific to climate change, broader environmental crises, or more targeted issues such as environmental pollution, resource depletion, and contamination. Additionally, unifying measurement strategies for eco-anxiety is critical because reported prevalence rates vary widely across studies and countries, often causing confusion [10,21].

Second, although a major strength of this study is the large, representative sample, limited resources prevented us from including more nuanced measures, such as assessment of insomnia symptoms. We also omitted additional anxiety facets (e.g., emotional-cognitive and functional impairments) and other relevant mental health indicators. Future research in this region could build on our findings by employing more comprehensive measures, thereby allowing for a more detailed exploration of the relationships examined in this study.

Third, we measured overall well-being with only one item, resulting in a nonsignificant relationship. Earlier research has indicated that eudaimonic well-being can influence both pro-environmental actions and overall well-being [47], potentially mitigating or amplifying well-being outcomes. Future studies could therefore investigate the link between eco-anxiety symptoms and well-being through environmentally responsible consumption and further examine the specific role of eudaimonic well-being in this process.

Lastly, it is important to indicate that we utilized shortened versions of established scales to balance comprehensiveness with participant burden and resource limitations. The abbreviated scales, though based on factorial analyses and conceptual considerations to capture core constructs efficiently, may not fully represent the multidimensional nature of complex psychological phenomenon measured. This limitation potentially affects the precision of our measurements and may limit the

Key messages

Eco-anxiety symptoms are prevalent among the general population in Lithuania.

Higher levels of eco-anxiety symptoms are related to higher levels of depression and general anxiety symptoms.

Eco-anxiety symptoms are positively related to activism-oriented consumption.

generalizability of findings compared to studies using complete validated instruments. Future research would benefit from employing full-length scales when feasible to provide more comprehensive assessment.

To conclude, this study helps to address the underrepresentation of the Baltic region in eco-anxiety research and contributes to the growing knowledge about eco-anxiety symptoms and its association with mental health indicators. We further demonstrated that eco-anxiety symptoms are uniquely linked to activism-oriented consumption. Moving forward, more nuanced studies employing robust designs are needed to expand the understanding of how eco-anxiety symptoms intersect with well-being, mental health, and various forms of environmentally responsible consumption.

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Ethical approval

This study was approved by the committee of Psychological Research Ethics of Institute of Psychology in the Faculty of Human and Social Studies of Mykolas Romeris University. DECISION Nr. 5/-2023.

CRediT authorship contribution statement

Rita Žukauskienė: Writing – review & editing, Writing – original draft, Methodology, Investigation, Funding acquisition, Conceptualization. **Aistė Bakaitytė-Bagdonė:** Writing – original draft, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Audra Balundė:** Writing – original draft, Methodology, Investigation, Funding acquisition, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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The authors guarantee that the entire manuscript is authentically their independent work, however, the language in some parts of the manuscript was edited using the ChatGPT tool.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.joclim.2025.100601.

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