



THE LINK BETWEEN ECO- ANXIETY AND NATURE RELATEDNESS IN ASSOCIATE DEGREE STUDENTS

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Abstract. *The mounting prevalence of environmental issues has resulted in an intensified emphasis on one's relatedness with their surrounding environment and their emotional reactions to this connection in the context of ecological anxiety. This cross-sectional, correlational study attempts to explore the relation between eco-anxiety and nature relatedness among associate degree students. The data were collected using a demographic information form, the Hogg Eco-anxiety Scale, and the Nature Relatedness Scale. The findings uncovered that participants' nature relatedness exhibited significant differences by gender, non-governmental organizational membership, program of study, sources of environmental information, time spent in natural settings, and involvement in environmental activities during childhood; nevertheless, this was not the case by their place of childhood. Participants' eco-anxiety levels showed a significant difference by only their program of study. Further analysis indicated a significant correlation between students' nature relatedness and eco-anxiety. Overall, the integration of nature-related practices (e.g., engagement in addressing environmental issues) into the higher education curricula may facilitate students' nature relatedness and mitigate their excessive eco-anxiety.*

Keywords: *associate degree students, eco-anxiety, environmental issues, nature relatedness*

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Introduction

The proliferation of environmental issues has rendered the notion of ecological anxiety (eco-anxiety) a pivotal domain of research endeavors, with a view to understanding the emotional and psychological ramifications of environmental concerns on individuals. Nevertheless, extant elucidations of eco-anxiety proffer divergent perspectives on how it is shaped within a broader context. In this regard, eco-anxiety ought not to be regarded exclusively as a psychological construct but as a social phenomenon, emphasizing the evolution of individuals' attitudes and psychological responses to environmental crises. The ultimate endeavor of this study was to contribute to the existing body of knowledge by scrutinizing the psychological underpinnings of eco-anxiety in young people. In other words, this study explored the variables that may be associated with eco-anxiety and examined the potential impact of nature relatedness on eco-anxiety among associate degree students.

While being initially rooted in the domain of psychology, eco-anxiety has since become the focal point of research for a multitude of disciplines, including sociology, anthropology, and education (Connor, 2016; Lockie, 2016). It refers to "a chronic concern about environmental catastrophes" (Clayton et al., 2017), "an overall sentiment that the ecological foundations of existence are in a state of rapid deterioration" (Albrecht, 2012), "an unspecific fear about the nature of our relation with environment" (Coffey et al., 2021), or "the disappointment and helplessness one feels about the impossibility of stopping climate change and the resulting intense concern for oneself and one's loved ones" (Albrecht, 2012). While these definitions are interconnected by their association with fear and anxiety, it is crucial to acknowledge the perspective that the notion of eco-anxiety cannot be constructed solely on general fear or anxiety. While fear is characterized by its tangible nature, anxiety is defined as a distressing state involving uncertainty (Hamdon et al., 2021). Thus, eco-anxiety can be conceptualized as a state of uncertainty surrounding the future of the planet and all living things on it, accompanied by a concern for potential catastrophes that may arise due to the climate crisis (Kelly, 2017; Pihkala, 2020). While it is evident that the prevailing focus is on the detrimental aspects of eco-anxiety, some scholars



assert that eco-anxiety may prove advantageous for the individual, provided that it does not lead to pathological consequences (Tavolacci & Ladner, 2024). It can also be argued that this state serves as a catalyst, prompting one to adopt environmentally friendly behaviors.

A variety of approaches can be adopted (e.g., appraising the significance of environmental education, augmenting the availability of practices that allow the youth to engage with nature, and facilitating opportunities for nature-oriented research and discovery) to enhance positive emotions - or mitigate negative ones - in response to the diverse emotions engendered by eco-anxiety (Craps, 2020; Grose, 2020; Weber, 2020). Engagement in nature-oriented practices can foster a sense of connection with nature and elicit feelings of contentment, potentially transforming negative emotions (e.g., sadness, anger, and fear) into positive states (e.g., optimal anxiety, happiness, and peace). In addition, educators may benefit from the signals regarding the impacts of these activities on students' emotions (Cunsolo & Ellis, 2018; Fraser et al., 2013; Pihkala, 2020; Willox & Landman, 2017) to be able to facilitate the implementation of these practices and to identify and eliminate potential deficiencies.

The national literature review reveals a substantial body of research on nature relatedness (Bulut et al., 2022; Çakır et al., 2015; Karakaya et al., 2017; Özgün et al., 2018; Özgün & Özgün, 2019; Sarıçam et al., 2015; Tağrikulu et al., 2021); however, there is a paucity of studies on eco-anxiety (Elmas & Köse, 2023; Kara, 2022; Oral & Durmuş, 2023; Uzun et al., 2022). It appears that the research interest is often concentrated on climate change (Akgün, 2023; Aras & Demirci, 2020; Cankardaş & Sofuoğlu, 2021; Cebeci et al., 2022) and climate anxiety (Cruz & High, 2022; Whitmarsh et al., 2022). Hence, it is reasonable to highlight an apparent need for further scholarly knowledge of eco-anxiety, a concept that remains nascent to educators and scholars (Pihkala, 2020). Besides, the World Health Organization (WHO) suggests that children and young people are susceptible to the repercussions of climate change (Kankawale & Niedzwiedz, 2023). Therefore, it is probable that today's youth will be more deeply exposed to the climate crisis, experience heightened eco-anxiety, and need to develop effective coping mechanisms for their negative psychological states in their adulthood (Crandon et al., 2022). In this sense, ascertaining the knowledge and awareness of young people concerning eco-anxiety can prove to be highly efficacious in informing various nature-oriented educational initiatives. A review of the extant literature also revealed no scholarly knowledge of the relation between these concepts; thus, the curiosity surrounding the nature of this relation becomes the principal motive of this research. Overall, the present study attempted to explore the correlation between eco-anxiety and nature relatedness among associate degree students and to identify their potential demographics to be associated with these variables. Accordingly, this study sought answers to the following research questions:

1. Do associate degree students' eco-anxiety levels significantly differ by their gender, program of study, place of childhood, time spent in natural settings, involvement in environmental activities during childhood, non-governmental organization (NGO) membership, and sources of environmental information?
2. Do associate degree students' nature relatedness levels significantly differ by their gender, program of study, place of childhood, time spent in natural settings, involvement in environmental activities during childhood, NGO membership, and sources of environmental information?
3. Is there a statistically significant correlation between associate degree students' nature-relatedness and eco-anxiety levels?

Research Methodology

Background

In this study, a correlational design was employed to ascertain the existence of a potential relation between the research variables under consideration (Karasar, 2011). Moreover, it was sought if participants' eco-anxiety and nature relatedness scores significantly differ by some of their demographics. The corresponding authors were asked for permission to use their instruments in this study prior to data collection. Then, the Social and Human Sciences Research Ethics Committee of Anadolu University granted ethical approval to this study (No.: 659609). The data were collected face-to-face between January and February 2024 using a printed questionnaire booklet covering the instruments.

Participants

The target population of the study consists of 850 associate degree students enrolled in several programs at the state university where researchers are employed in the Eskisehir province. Upon the criteria outlined in the



sample size determination table designed by Krejcie and Morgan (1970), the sample size was calculated to be 386 students with a margin of error of 3.5% and a reliability level of 95%. Using convenience sampling, a method that offers researchers expediency and convenience in data collection (Büyüköztürk, 2021), a total of 450 associate degree students were invited to the study to attain a sufficient sample size that is sufficiently representative to ensure the attainment of valid and reliable results. However, 406 of them provided their informed consent to participate in the research.

The majority of students are females (79.3%) and aged between 17-21 years (85.5%). While 25.4% of them are enrolled in the medical laboratory science program, the majority reported having grown up in an urban area (47.0%). Most of the participating students (63.1%) predominantly spend 1-3 hours a day in natural settings (e.g., parks, recreation areas). Conversely, 66.5% of them reported not being involved in environmental activities (e.g., scouting, and camping) during their childhood. The vast majority of them are not affiliated with any environmental NGOs (83.0%) and predominantly utilize social media tools to elicit environmental information (79.6%; Table 1).

Table 1
Participating Students' Demographic Characteristic

Characteristics		Variable	n	%
Gender		Female	322	79.3
		Male	84	20.7
Age (years)		17-21	347	85.5
		22-26	49	12.1
		27-31	5	1.2
		32 and older	5	1.2
Program of study		Child Development	99	24.4
		Elderly Care	87	21.4
		Hair Care and Beauty Services	28	6.9
		Medical Laboratory Science	103	25.4
		Pharmacy Services	89	21.9
Year of study		1	165	40.6
		2	229	56.4
		Other	12	3.0
Place of childhood		Rural area	75	18.5
		District	140	34.5
		Urban area	191	47.0
Nature-related characteristics*	Time spent in natural settings (e.g., parks, recreation areas, etc.)	N/A	91	22.4
		1-3 hours	256	63.1
		4-6 hours	46	11.3
		7 hours and above	13	3.2
	Involvement in environmental activities during childhood (e.g., scout camping)	Yes	111	27.3
		No	270	66.5
		No idea	25	6.2
	Membership of an environmental NGO	Yes	69	17.0
		No	337	83.0
	Sources of Environmental Information	Printed sources (books, magazines, newspapers, etc.)	64	16.0
		Mass media (TV, internet, etc.)	241	59.4
		Social media (Twitter, Instagram, etc.)	323	79.6
		Immediate circle (Family, friends, etc.)	123	30.3
		N/A	7	1.7

*More than one option marked.



*Data Collection Tools***Demographic Information Form**

A form was generated to elicit participating students' demographics, including gender, age, program of study, year of study, place of childhood, time spent in natural settings, involvement in environmental activities during childhood, NGO membership, and sources of environmental information.

Hogg Eco-Anxiety Scale

The Hogg Eco Anxiety Scale (HEAS), developed by Hogg et al. (2021) and adapted to Turkish by Uzun et al. (2022), was utilized to assess participating students' eco-anxiety levels. The scale comprises 5-point Likert-type 13 items (1 = Never, 5 = Always) distributed across four subscales: affective symptoms, rumination, behavioral symptoms, and anxiety about one's negative impact on the planet. The scale does not include a reverse-scored item, and higher total scores imply increased eco-anxiety. Cronbach's alpha coefficient was calculated to be .91 for the total score, suggesting a high internal consistency of the scale (Alpar, 2014).

Nature Relatedness Scale

The Nature Relatedness Scale (NRS) was designed by Nisbet et al. (2009) and adapted into Turkish by Çakır et al. (2015). The scale comprises twenty-one 5-point Likert-type items within three dimensions: experience, perspective, and self. Higher total NRS scores indicate a higher level of nature relatedness. In this study, the internal consistency of the NRS was computed to be $\alpha = .88$.

Data Analysis

Descriptive statistics are presented as number (n), percentage (%), mean (M), and standard deviation (SD). Prior to the analyses, the dataset was refined by excluding incomplete, missing, and outlier data. Accordingly, statistical analyses were performed on the data from 406 students. Moreover, skewness-kurtosis values (± 1.5) and respective histograms for the data were checked, and it was determined that the data exhibited a normal distribution (Tabachnick & Fidell, 2015). While pairwise comparisons were performed using independent-samples t -test, one-way analysis of variance (ANOVA) and Kruskal-Wallis H tests were run to compare eco-anxiety and nature relatedness levels between more than two groups. Moreover, post-hoc and Mann-Whitney U tests were performed to explore the source(s) of the significant difference between the multiple groups. Finally, the correlation between eco-anxiety and nature relatedness was uncovered using Pearson's correlation analysis. All analyses were performed on SPSS 26.0, and a p -value $< .05$ was accepted as statistically significant.

Research Results

Pairwise comparisons showed that participants' eco-anxiety levels did not significantly differ by their gender ($p = .386$), NGO membership ($p = .052$), sources of environmental information ($p = .523$ (printed sources), $p = .501$ (mass media), $p = .115$ (social media), $p = .920$ (immediate circle), and $p = .693$ (N/A)). Despite being statistically insignificant, it seems that participants who are environmental NGO members and obtain environmental information through any means had higher eco-anxiety levels than those without NGO membership and who do not need to elicit environmental information.



Table 2
Pairwise Comparisons of Participants' Eco-anxiety Levels

Characteristics	Category		<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Gender	Female		322	27.90	8.44	.870	.386
	Male		84	26.94	10.03		
NGO membership	Yes		69	29.44	9.04	1.948	.052
	No		337	27.35	8.70		
Sources of environmental information	Printed sources (books, magazines, newspapers, etc.)	No	338	27.63	9.99	-.639	.523
		Yes	64	28.35	9.07		
	Mass media (TV, internet, etc.)	No	165	27.37	8.67	-.674	.501
		Yes	241	27.93	8.88		
	Social media (Twitter, Instagram, etc.)	No	83	26.44	8.04	-1.581	.115
		Yes	323	28.03	8.95		
	Immediate circle (Family, friends, etc.)	No	283	27.73	8.68	.100	.920
		Yes	123	27.64	9.08		
	N/A	No	399	27.74	8.81	.693	.693
		Yes	7	25.58	8.07		

When it comes to multiple comparisons of participants' eco-anxiety levels, one-way ANOVA and Kruskal-Wallis *H* tests were performed contingent upon whether the distribution of the respective variables satisfied the homogeneity of variance assumption. Accordingly, the findings showed significant differences between students' eco-anxiety scores by their program of study ($\chi^2 = 14.161$; $p = .007$). Pairwise comparisons with the Mann-Whitney *U* tests showed that students enrolled in the child development program had significantly lower eco-anxiety levels than those enrolled in the elderly care ($p = .002$) and hair care and beauty services programs ($p = .043$). Moreover, it was discovered that elderly care students had significantly higher eco-anxiety levels when compared to their counterparts in the medical laboratory science ($p = .009$) and pharmacy services programs ($p = .007$). Yet, participating students' eco-anxiety levels did not significantly differ by their place of childhood [$F_{(2, 403)} = .126$; $p = .882$], time spent in natural settings ($\chi^2 = 1.903$; $p = .593$), and involvement in environmental activities during childhood [$F_{(2, 403)} = .714$; $p = .490$]. The findings are outlined in Table 3.

Table 3
Multi-group Comparisons of Participants' Eco-anxiety Levels

Characteristic	Categories	<i>n</i>	<i>M_(rank)</i>	χ^2	<i>p</i>	Significant Difference
Program of study	Child Development ¹	99	188.77	14.161	.007*	1-2,3 2-4,5
	Elderly Care ²	87	236.44			
	Hair Care and Beauty Services ³	28	237.29			
	Medical Laboratory Science ⁴	103	192.36			
	Pharmacy Services ⁵	89	190.28			
Time spent in natural settings	N/A	91	211.69	1.903	.593	
	1-3 hours	256	198.69			
	4-6 hours	46	204.87			
	7 hours and above	13	236.12			

Characteristic	Categories	<i>n</i>	<i>M</i> _(rank)	<i>SD</i>	χ^2	<i>p</i>	Significant Difference
		<i>n</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>	Significant Difference
Place of childhood	Rural area	75	30.13	8.15	.126	.882	
	District	140	29.60	8.67			
	Urban area	191	29.72	9.15			
Involvement in environmental activities during childhood	Yes	111	29.79	8.66	.714	.490	
	No	270	29.94	8.98			
	No idea	25	27.60	7.11			

**p* < .05

It was found that female students (*p* = .029), those with an NGO membership (*p* = .016), those eliciting environmental information from printed sources (*p* = .001), mass media (*p* < .001), and immediate circle (*p* = .007), and those not interested in environmental information (*p* < .001) had significantly higher nature relatedness scores when compared to their counterparts. The results are summarized in Table 4.

Table 4
Pairwise Comparisons of Participants' Nature Relatedness Levels

Characteristics	Categories	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Gender	Female	322	75.79	6.08	2.216	.029*
	Male	84	72.84	8.78		
NGO membership	Yes	69	77.61	6.33	2.410	.016*
	No	337	74.69	6.72		
Sources of environmental information	Printed sources (books, magazines, newspapers, etc.)	No	338	74.51	399	.001*
		Yes	64	78.57		
	Mass media (TV, internet, etc.)	No	165	72.67	-4.632	< .001*
		Yes	241	76.90		
	Social media (Twitter, Instagram, etc.)	No	83	73.69	-1.662	.094
		Yes	323	75.57		
	Immediate circle (Family, friends, etc.)	No	283	74.37	-2.727	.007*
		Yes	123	77.07		
	N/A	No	399	75.41	9.551	< .001*
		Yes	7	62.27		

**p* < .05

The results of the multiple comparisons of participants' nature relatedness scores are presented in Table 5. Accordingly, the respective analysis showed that their nature relatedness levels significantly differed by their program of study [$F_{(4, 400)} = 3.525$; *p* = .008], time spent in natural settings [$F_{(3, 401)} = 3.575$; *p* = .014], and involvement in environmental activities during childhood [$F_{(2, 402)} = 5.581$; *p* = .004]. However, this was not the case by their place of childhood [$F_{(2, 402)} = 1.553$; *p* = .213]. Post-hoc tests demonstrated that child development students had significantly higher nature relatedness levels than their peers enrolled in the hair care and beauty services (*p* = .028) and medical laboratory science programs (*p* = .031). In addition, nature relatedness scores were significantly higher among those not spending time in natural settings than students allocating 1-3 hours for activities in these areas (*p* = .009). Finally, those who reported participating in environmental activities during their childhood scored significantly higher on the NRS than those who did not (*p* = .008) and had no idea about it (*p* = .036).



Table 5
Multi-group Comparisons of Participants' Nature Relatedness Levels

Characteristics	Categories	<i>n</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>	Significant Difference
Program of study	Child Development ¹	99	66.05	5.20	3.525	.008*	1-3,4
	Elderly Care ²	87	67.04	6.87			
	Hair Care and Beauty Services ³	28	66.57	9.42			
	Medical Laboratory Science ⁴	103	67.73	6.60			
	Pharmacy Services ⁵	89	65.68	7.13			
Time spent in natural settings	N/A ¹	91	66.25	7.14	3.575	.014*	1-3
	1-3 hours ²	256	66.83	6.12			
	4-6 hours ³	46	66.17	7.28			
	7 hours and above ⁴	13	67.46	11.94			
Place of childhood	Rural area	75	66.40	6.00	1.553	.213	
	District	140	66.19	6.86			
	Urban area	191	67.07	6.89			
Involvement in environmental activities during childhood	Yes ¹	111	67.52	7.60	5.581	.004*	1-2,3
	No ²	270	66.37	6.35			
	No idea ³	25	65.72	6.27			

p* < .05Table 6**
Relation Between Participants' Eco-anxiety and Nature Relatedness Levels

Variables	1	2
1. Eco-anxiety	<i>r</i>	1
	<i>p</i>	.160
2. Nature relatedness	<i>r</i>	.001*
	<i>p</i>	1

The correlation analysis showed a weak positive association between students' eco-anxiety and nature relatedness levels ($r = .160$, $p = .001$), suggesting that participants' nature relatedness levels are elevated as their eco-anxiety levels increase.

Discussion

This study was carried out to reveal the relation between associate degree students' eco-anxiety and nature relatedness levels, as well as their potential demographic factors associated with these variables. The findings demonstrated no significant differences in participants' eco-anxiety scores by their gender, NGO membership, sources of environmental information, time spent in natural settings, place of childhood, and involvement in environmental activities in childhood. Nevertheless, their eco-anxiety scores significantly differed by their program of study. Accordingly, students enrolled in elderly care and hair care and beauty services had significantly higher eco-anxiety levels. This result suggests that curriculum and pedagogical approaches that shape students' environmental awareness and sensitivity may vary between programs of study, underscoring the necessity of cultivating students as environmentally conscious and problem-solving professionals to address pressing environmental challenges in their respective careers.

A significant difference was also found between students' nature relatedness levels by their gender, with female students exhibiting more pronounced nature relatedness compared to male students. A review of the

literature reveals similar (Özgün et al., 2018) and contrasting (Karakaya et al., 2017) findings to this result. Besides, some studies suggest gender is not associated with nature relatedness (Bulut-Öngen & Ersay, 2023; Bulut et al., 2022). The reason for the discrepancy in research results may be attributed to various factors, including variations in samples, participants' educational attainment, and the significance of the topic for participants. In this study, participants with NGO membership had significantly higher nature relatedness levels than those without. In their study with prospective classroom and preschool teachers, Özgün and Özgün (2019) could not conclude a significant relationship between participants' nature relatedness levels and their membership in environmental NGOs. The primary underlying reason for the discrepancy between the results might lie in the insufficiency of NGO membership to attain specific environmental outcomes. The findings in this study revealed that students enrolled in the child development program exhibited a higher level of nature relatedness compared to their peers in the other programs, overlapping with previous results (Karakaya et al., 2017; Özgün & Özgün, 2019). Yet, Tağrikulu et al. (2021) found no significant differences in commitment to nature between students enrolled in the child development program and their counterparts in other programs. The high nature relatedness levels among child development students in this study may be attributed to valuable outcomes from an elective course, "Environmental Education in Early Childhood," in their curriculum.

A subsequent examination by sources of environmental information revealed that those accessing such information through printed materials, mass media, and their immediate circle had significantly higher nature relatedness levels. Yet, those using and not using social media for environmental information had similar nature relatedness scores. Students' limited engagement with this issue on social media or limited posts related to the environment on social media and their more active and effective use of other sources of environmental information may be shown as principal factors explaining this finding. Thompson et al. (2021) demonstrated that adolescents primarily obtain environmental information from family and friends (93.3%), followed by social media (73.3%) and school (66.7%), suggesting that sources of environmental information do vary by personal interests, with all sources catching a degree of attention of individuals. The analysis in this study yielded that participants who spend 1-3 hours in natural settings had significantly higher nature relatedness when compared to those who do not. Contrary to expectations, nature-relatedness levels did not increase with increased time spent in nature, prompting further reflection on the relationship between exposure to nature and nature-relatedness. One potential explanation for this finding may be that the manner in which individuals allocate their time to natural settings is more influential than the absolute amount of time they spend in such settings. In a previous study, Derince (2019) reported that orienteering athletes engage with nature during their competitions, thereby elevating their nature relatedness levels. Accordingly, it is prudently recommended that individuals be encouraged to engage in activities that offer a combination of enjoyment, physical activity, and exposure to nature to attain greater nature relatedness.

While participants involved in environmental activities during their childhood exhibited higher nature relatedness; yet, their eco-anxiety scores did not significantly differ by this variable. Participants' childhood experiences in environmental activities may have invoked closeness and happiness in nature in them, positively influencing their nature relatedness in their adulthood. In a previous study, participants reported reaping direct interaction with nature predominantly through gardening, agriculture, and nature walks (Zubari & Kaçmazoğlu, 2023). Another study highlights that nature walks and sports are linked with emotional intelligence (Ardahan, 2012). The findings of Akin (2021) further emphasized the positive impact of outdoor activities on mental well-being, noting that engaging in nature-based sports (e.g., mountaineering, camping, and trekking) fosters calmness, serenity, appreciation for nature, academic motivation, and social interaction.

Finally, it was found that participants' eco-anxiety and nature relatedness levels were positively correlated. Yet, it should be noted that, despite demonstrating higher nature relatedness levels, participants enrolled in the child development program had lower eco-anxiety. What positively affects one's sense of nature relatedness may be only the optimum level of eco-anxiety they exhibit; the higher eco-anxiety levels may hinder one's healthy functioning in daily life. The previous research underscored that decreased nature relatedness may lead to increased depression, anxiety, and stress levels (Sarıçam et al., 2015; Zelenski & Nisbet, 2014). It was reported that being more connected to nature may contribute to one's eco-anxiety level (Clayton & Karazsia, 2020; Dean et al., 2018). Conversely, spending time in nature was found to alleviate anxiety (Bratman et al., 2015) and stress (Shuda et al., 2020). A study by Chawla (2020) further highlighted the significance of nature relatedness during childhood, asserting that it serves as an effective coping strategy for eco-anxiety. In a longitudinal study, Baptiste-Pavani et al. (2023) found that eco-anxiety motivates one's pro-environmental behaviors. As also indicated by similar findings in the existing literature (Innocenti et al., 2023; Schwartz et al., 2022; Stanley et al., 2021; Verplanken et al., 2020), it may be concluded that the degree of nature relatedness may exert an influence on individuals' levels of eco-anxiety in varying directions.



Conclusions and Implications

This study explored the relation between associate degree students' eco-anxiety and nature relatedness levels, as well as potential demographic factors associated with these variables. The findings showed only participants enrolled in the child development program had significantly higher eco-anxiety levels. Besides, females, NGO members, child development students, those accessing environmental information from sources other than social media, those spending some time in natural settings, and students having been involved in environmental activities during their childhood had significantly higher nature relatedness levels when compared to their mentioned counterparts. Besides, there was a positive significant correlation between participants' nature relatedness and eco-anxiety levels. Notwithstanding its apparent weakness, the direction of this relation is an anticipated outcome, as a close interest in environmental issues is likely to engender a high degree of awareness of these problems, which in turn is likely to be an occasion of a certain degree of eco-anxiety. Individuals with limited nature relatedness may not experience eco-anxiety, suggesting that a weak connection with nature might render individuals indifferent to environmental issues. Alternatively, the non-central role of nature in one's life could be a contributing factor for hindering their ability to internalize ecological problems. Overall, higher education students, representing the adults of tomorrow, may be particularly vulnerable to ecological challenges. Therefore, it is key for these individuals to assume an active role and collaborate with communities and institutions to promote effective, global solutions to ecological issues. This approach has the potential to assist individuals with low eco-anxiety in maintaining optimal levels of it and those with high eco-anxiety in effectively managing their symptoms. Moreover, this strategy will safeguard the mental well-being of individuals and foster the development of a robust social movement to combat potential ecological crises.

The present study is not free of a few limitations. While the sample size is constrained to 406 associate degree students, the data collection procedure is limited to the variables addressed and the measurement tools utilized. Further studies may employ a qualitative design or diverse sample groups/variables to scrutinize the potential causes of eco-anxiety. Moreover, prospective researchers may use advanced statistical analyses to construct a prediction model for the relationship between the variables addressed. Future research may also test the role of environment-oriented courses for nature relatedness and eco-anxiety among higher education students.

Declaration of Interest

The authors declare no competing interest.

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