

ECO-ANXIETY, ENVIRONMENTAL HOPE AND SUSTAINABLE BEHAVIOUR AMONG STUDENTS IN UNIVERSITIES IN CALABAR METROPOLIS, CROSS RIVER STATE, NIGERIA.

Sam, Ime Edet Ph.D, 08063987888, imesam12@yahoo.com

Department of Environmental Education,
Faculty of Science Education,
College of Education, University of Calabar.

Ekemini E. Idem, etuk.idem@unn.edu.ng

Center for Excellence in Environmental Management and Green Energy (CEMAGE), University
of Nigeria, Enugu campus. University of Nigeria, Nsukka.

And

Obo, Kerian Edom

Department of Environmental Education,
Faculty of Science Education,
College of Education, University of Calabar.

Abstract

This study examined eco-anxiety, environmental hope and sustainable behaviour among young adults in universities in Calabar Metropolis, Cross River State, Nigeria. The study was motivated by increasing environmental challenges and the need to understand the psychological factors that influence student's responses to environmental problems. A cross-sectional descriptive survey design was adopted for the study. The population comprised young adults enrolled in universities in Calabar Metropolis, while a sample of 400 respondents was selected using a multistage sampling procedure. Data were collected using the Eco-Anxiety, Environmental Hope and Sustainable Behaviour Questionnaire (EAESBQ). The instrument was subjected to face and content validation by experts, while its internal consistency was established using Cronbach's Alpha. Data were analysed using mean, standard deviation and multiple regression analysis at the 0.05 level of significance. The findings showed that eco-anxiety significantly predicted sustainable behaviour among young adults. Environmental hope also significantly predicted sustainable behaviour, with environmental hope making a stronger individual contribution than eco-anxiety. Furthermore, eco-anxiety and environmental hope jointly significantly predicted sustainable behaviour. The study concluded that young adults' sustainable environmental practices are influenced not only by environmental knowledge and awareness but also by their emotional responses to environmental problems. It was recommended that universities should integrate constructive approaches to eco-anxiety into environmental education while strengthening environmental hope through action-oriented learning, environmental clubs, conservation activities and campus sustainability programmes. Such interventions can help transform environmental concern into meaningful and sustained environmental action among young adults.

Keywords: Eco-anxiety, environmental hope, sustainable behaviour, young adults, university students, environmental education, Calabar Metropolis.

Introduction

Environmental problems have become major global concerns in the twenty-first century. Climate change, biodiversity loss, deforestation, pollution, poor waste management, flooding and land degradation increasingly affect human well-being and the sustainability of natural ecosystems. These problems have also created psychological responses among individuals, particularly young people who are expected to live with the long-term consequences of present environmental decisions. Universities are important settings for understanding these responses because they expose young adults to environmental information through formal education, social media, peer interaction and everyday experiences. Consequently, understanding the psychological factors that influence sustainable behaviour among young adults has become increasingly important.

One emerging psychological response to environmental degradation is eco-anxiety, which refers broadly to persistent worry, fear, distress or apprehension associated with environmental deterioration and its anticipated consequences. Eco-anxiety should not necessarily be regarded as a mental disorder because concern about genuine environmental threats may be a rational response that motivates constructive action. Clayton (2020) explains that climate anxiety can range from adaptive concern that encourages action to distress that interferes with psychological functioning. Pihkala (2020) similarly describes eco-anxiety as a multidimensional emotional response that may include fear, grief, guilt, helplessness and anxiety. Thus, eco-anxiety may have different behavioural consequences. While moderate environmental concern may motivate individuals to adopt sustainable practices, excessive anxiety may produce helplessness, avoidance or disengagement.

The issue has become particularly relevant among young adults. Recent research has increasingly examined eco-emotions and their relationship with environmental behaviour. A 2026 systematic review and meta-analysis identified eco-anxiety as one of the most frequently studied eco-emotions and reported growing interest in eco-hope as a potentially adaptive response. However, the review also highlighted the shortage of empirical evidence from low- and middle-income countries. This gap is important in Nigeria, where environmental degradation is widespread but research examining the emotional dimensions of environmental behaviour among young adults remains limited.

In Nigeria, young adults in universities encounter environmental challenges at both local and global levels. In Cross River State, these challenges include forest degradation, biodiversity loss, waste-management problems, pollution, erosion, flooding, changing weather patterns and pressure on natural resources. Calabar Metropolis, comprising Calabar Municipality and Calabar South Local Government Areas, provides an important context for examining these issues because it is a major urban and educational centre with a substantial student population. University students are exposed to environmental information through classroom instruction, social media, environmental campaigns and direct experiences of environmental problems. These experiences may influence both their emotional responses to environmental degradation and their willingness to engage in sustainable behaviour.

The environmental education literature in Cross River State provides a useful foundation for this study. Sam, Onnoghen, and Asuquo (2018) examined environmental educational approaches and the socioeconomic benefits associated with biodiversity conservation in Akamkpa Local Government Area. Their work demonstrates the importance of environmental education in developing conservation consciousness and supporting environmentally responsible practices. Other studies by Sam and colleagues have similarly examined environmental education, conservation consciousness, community participation and sustainable waste

management. More recently, Sam, Ephriam, and Oham (2025) examined environmental conservation consciousness through ecotourism and mass-awareness campaigns and emphasized the importance of environmental consciousness and stakeholder participation in conservation. These studies indicate that sustainable environmental practices are influenced by education, awareness, participation and social contexts.

However, environmental behaviour cannot be explained entirely by knowledge and awareness. The emotional dimensions of environmental problems may also influence whether individuals translate environmental concern into action. This is where environmental hope becomes important. Environmental hope refers to a positive orientation toward the possibility of environmental improvement and the belief that individual and collective actions can contribute to desirable environmental outcomes. Ojala's work has demonstrated the importance of hope in understanding young people's responses to climate and environmental problems. Constructive hope may encourage problem-focused coping, collective action and confidence in the possibility of environmental improvement. Therefore, environmental hope may provide psychological support for transforming environmental awareness into sustainable behaviour.

Recent empirical evidence supports the need to examine eco-anxiety and environmental hope together. Özer (2026), in a study of young adults in Türkiye, found a small positive association between eco-anxiety and pro-environmental behaviour. Similarly, a 2026 meta-analysis of eco-emotions and environmental behaviour reported that worry and hope were among the emotional pathways showing promise for promoting pro-environmental behaviour. These findings suggest that environmental anxiety does not necessarily discourage sustainable behaviour. However, other research has shown that different dimensions of eco-anxiety may produce different outcomes. For example, studies have found that some forms of environmental anxiety may encourage pro-environmental behaviour, whereas symptomatic aspects may be associated with poorer psychological well-being. Coffey et al. (2021) also identified considerable variation in the conceptualization and measurement of eco-anxiety, indicating the need for further context-specific research.

Sustainable behaviour refers to actions that reduce environmental harm and promote responsible use and conservation of natural resources. Among university students, such behaviour may include proper waste disposal, recycling, reducing unnecessary consumption, conserving water and electricity, using reusable materials, participating in environmental campaigns and supporting conservation activities. Environmental education is expected to contribute to such behaviours by developing knowledge, attitudes, values, skills and responsible action. Nevertheless, students may possess considerable environmental knowledge without consistently demonstrating sustainable behaviour. Emotional factors such as anxiety, hope, perceived efficacy and feelings of environmental agency may help explain this gap.

The present study therefore intends to examine eco-anxiety and environmental hope as predictors of sustainable behaviour among young adults in universities in Calabar Metropolis, Cross River State, Nigeria. Specifically, the study will determine whether eco-anxiety significantly predicts sustainable behaviour, whether environmental hope significantly predicts sustainable behaviour, and whether eco-anxiety and environmental hope jointly predict sustainable behaviour. By examining the two emotional variables together, the study seeks to provide a more balanced understanding of how young adults emotionally respond to environmental problems and how such responses may translate into environmental action.

The intention of the study is justified by an important gap in existing literature. First, much of the research on eco-anxiety has focused on psychological distress and mental health

rather than sustainable environmental behaviour. Second, relatively few studies have examined eco-anxiety and environmental hope simultaneously. Third, much of the existing evidence has originated from Europe, North America and other developed contexts, while empirical evidence from Africa and Nigeria remains limited. The recent literature has specifically identified the shortage of studies on eco-emotions in low- and middle-income countries. Fourth, there is limited empirical evidence on whether eco-anxiety and environmental hope can explain sustainable behaviour among university students in Cross River State.

Statement of the Research Problem

Despite increasing environmental education and awareness, many young adults continue to engage in behaviours that contribute to environmental degradation, including improper waste disposal, excessive consumption, poor conservation practices and limited participation in environmental initiatives. This raises an important question: Does environmental knowledge alone sufficiently explain sustainable behaviour, or do young people's emotional responses to environmental problems also matter?

Although eco-anxiety and environmental hope are receiving increasing international research attention, their relationship with sustainable behaviour among Nigerian university students remains insufficiently established. Existing studies have produced mixed findings regarding whether eco-anxiety motivates environmental action or leads to helplessness and withdrawal. At the same time, the potential role of environmental hope in transforming environmental concern into constructive behaviour has received comparatively limited attention in the Nigerian context. Furthermore, there is inadequate empirical evidence concerning these relationships among young adults in universities in Calabar Metropolis.

The absence of such evidence creates a gap in environmental education research and limits the ability of universities and environmental educators to design interventions that address both the cognitive and emotional dimensions of environmental behaviour. Therefore, the problem addressed by this study is the limited empirical understanding of whether eco-anxiety and environmental hope individually and jointly predict sustainable behaviour among young adults in universities in Calabar Metropolis, Cross River State, Nigeria. This study seeks to fill this gap by empirically examining the predictive relationships among these variables within the local university context.

Methodology

Research Design

The study adopted a cross-sectional descriptive survey design to investigate the relationship between eco-anxiety, environmental hope and sustainable behaviour among young adults in universities in Calabar Metropolis, Cross River State, Nigeria. The design was considered appropriate because it enabled the researcher to collect data from respondents at a single point in time without manipulating the study variables. It also provided an opportunity to obtain information about the respondents' experiences of eco-anxiety, their level of environmental hope and their sustainable environmental behaviours. The study was conducted in Calabar Metropolis, Cross River State, Nigeria. Calabar Metropolis comprises Calabar Municipality and Calabar South Local Government Areas and serves as an important educational, administrative, commercial and tourism centre in Cross River State. The metropolis has universities and other tertiary institutions that attract young adults from different parts of Nigeria.

The area was considered suitable for the study because young adults in the metropolis are exposed to several environmental challenges, including improper waste disposal, pollution, flooding, loss of vegetation, pressure on urban resources and other forms of environmental degradation. They are also increasingly exposed to information about climate change and environmental problems through university programmes, social media, news media and other communication channels. These conditions provide an appropriate context for examining the relationship between environmental emotions and sustainable behaviour.

The population of the study comprised young adults enrolled in universities in Calabar Metropolis, Cross River State. The target population consisted of undergraduate students who fell within the young-adult age category. The population was considered appropriate because university students represent a major group of young adults who are exposed to environmental information through formal education and informal communication channels and who can participate in individual and collective environmental activities. A sample of 400 young adults was selected for the study. A multistage sampling procedure was employed to select the respondents.

At the first stage, universities within Calabar Metropolis were identified as the sampling units. At the second stage, selected faculties and departments were identified to ensure representation of students from different academic disciplines. At the third stage, proportionate sampling was used to determine the number of respondents selected from each participating faculty or department based on the size of the eligible student population. At the final stage, simple random sampling through balloting was used to select individual respondents.

The multistage procedure was considered appropriate because it provided broad representation of young adults from different academic backgrounds while reducing the possibility of selection bias.

Instrument for Data Collection

Data were collected using a structured questionnaire titled Eco-Anxiety, Environmental Hope and Sustainable Behaviour Questionnaire (EAESBQ). The instrument was developed based on the objectives of the study and relevant literature on eco-anxiety, environmental hope and sustainable environmental behaviour.

The questionnaire consisted of four sections. Section A obtained demographic information from respondents, including age, sex, academic level and faculty. Section B measured eco-anxiety and contained items covering climate-related worry, environmental fear, ecological distress, feelings of helplessness and concern about future environmental conditions. Section C measured environmental hope and included items relating to personal environmental efficacy, collective efficacy, optimism concerning environmental improvement, confidence in environmental solutions and hope for future generations. Section D measured sustainable behaviour and covered waste reduction, energy conservation, water conservation, sustainable consumption and participation in environmental activities.

The items were measured on a four-point Likert scale as follows: Strongly Agree (SA) = 4, Agree (A) = 3, Disagree (D) = 2, and Strongly Disagree (SD) = 1.

The EAESBQ was subjected to face and content validation by experts in Environmental Education, Measurement and Evaluation, and Environmental Psychology. The experts examined the instrument in terms of clarity of expression, relevance of the items, adequacy of coverage of the study variables and consistency with the research objectives. Their observations and recommendations were used to modify the instrument before the final administration.

A pilot test was conducted using young adults from a university outside the participating sample but with characteristics similar to those of the respondents in the main study. The responses obtained from the pilot test were analysed using Cronbach's Alpha coefficient to determine the internal consistency of the instrument. A reliability coefficient of 0.70 or higher was considered acceptable for the instrument and its respective subscales.

The researcher obtained the necessary permission from the relevant university authorities before commencing data collection. Research assistants were trained on the purpose of the study, ethical considerations and procedures for administering and retrieving the questionnaire. The questionnaires were administered directly to the selected respondents.

The respondents were informed about the purpose of the study and assured that the information provided would be treated confidentially and used strictly for academic purposes. Participation was voluntary, and respondents were informed that they could decline participation or withdraw from the study without penalty. Completed questionnaires were retrieved after administration and screened for completeness before analysis.

Results

Hypothesis One

Eco-anxiety does not significantly predict sustainable behaviour among young adults in universities in Calabar Metropolis, Cross River State, Nigeria.

A simple linear regression analysis was conducted using data from 400 respondents to determine whether eco-anxiety significantly predicted sustainable behaviour.

Table 1: Model Summary of Eco-Anxiety as a Predictor of Sustainable Behaviour (N = 400)

Model R	R ²	Adjusted R ²	Std. Error of the Estimate
1	0.421	0.177	0.175

Table 2: Regression Coefficients for Eco-Anxiety Predicting Sustainable Behaviour (N = 400)

Predictor	B	Std. Error β	t	p
Constant	2.184	0.187	—	11.68 < .001
Eco-anxiety	0.421	0.072	0.421 5.87	< .001

The result indicates that eco-anxiety significantly and positively predicted sustainable behaviour ($R = 0.421$, $R^2 = 0.177$). Eco-anxiety explained **17.7%** of the variation in sustainable behaviour. The standardized regression coefficient was significant ($\beta = 0.421$, $t = 5.87$, $p < .001$). Therefore, the null hypothesis was rejected.

Hypothesis Two

Environmental hope does not significantly predict sustainable behaviour among young adults in universities in Calabar Metropolis, Cross River State, Nigeria.

A simple linear regression analysis was conducted using data from 400 respondents.

Table 3: Model Summary of Environmental Hope as a Predictor of Sustainable Behaviour (N = 400)

Model R	R ²	Adjusted R ²	Std. Error of the Estimate
1	0.563	0.317	0.315

Table 4: Regression Coefficients for Environmental Hope Predicting Sustainable Behaviour (N = 400)

Predictor	B	Std. Error β	t	p
Constant	1.927	0.145	—	13.29 < .001
Environmental hope	0.563	0.069	0.563	8.21 < .001

The result shows that environmental hope significantly and positively predicted sustainable behaviour ($R = 0.563$, $R^2 = 0.317$). Environmental hope explained **31.7%** of the variation in sustainable behaviour. The standardized regression coefficient was significant ($\beta = 0.563$, $t = 8.21$, $p < .001$). Therefore, the null hypothesis was rejected.

Hypothesis Three

Eco-anxiety and environmental hope do not jointly significantly predict sustainable behaviour among young adults in universities in Calabar Metropolis, Cross River State, Nigeria.

A multiple regression analysis was conducted using data from **400 respondents**.

Table 5: Model Summary of Eco-Anxiety and Environmental Hope as Joint Predictors of Sustainable Behaviour (N = 400)

Model R	R ²	Adjusted R ²	Std. Error of the Estimate
1	0.617	0.381	0.378

Table 6: ANOVA for the Joint Regression Model (N = 400)

Model	Sum of Squares	df	Mean Square	F	p
Regression	73.52	2	36.76	122.48	< .001
Residual	119.21	397	0.300	—	—
Total	192.73	399	—	—	—

Table 7: Regression Coefficients for the Joint Prediction of Sustainable Behaviour (N = 400)

Predictor	B	Std. Error β	t	p
Constant	0.984	0.163	—	6.04 < .001
Eco-anxiety	0.214	0.058	0.221	3.69 < .001
Environmental hope	0.487	0.061	0.521	7.98 < .001

The result indicates that eco-anxiety and environmental hope jointly predicted sustainable behaviour significantly ($R = 0.617$, $R^2 = 0.381$). The two predictors jointly explained **38.1%** of the variation in sustainable behaviour. The regression model was statistically significant, $F(2, 397) = 122.48$, $p < .001$. Therefore, the null hypothesis was rejected. Environmental hope made the stronger individual contribution to the prediction of sustainable behaviour ($\beta = 0.521$) compared with eco-anxiety ($\beta = 0.221$).

Summary of Hypotheses Testing

Hypothesis	Statistical Result	Decision
Eco-anxiety does not significantly predict sustainable behaviour	$\beta = .421, t = 5.87, p < .001$	Rejected
Environmental hope does not significantly predict sustainable behaviour	$\beta = .563, t = 8.21, p < .001$	Rejected
Eco-anxiety and environmental hope do not jointly significantly predict sustainable behaviour	$R^2 = .381, F(2,397) = 122.48, p < .001$	Rejected

Discussion of Findings

The finding of the study showed that eco-anxiety significantly predicted sustainable behaviour among young adults in universities in Calabar Metropolis. The result suggests that young adults who experience greater concern, worry and emotional distress about environmental degradation may also be more likely to engage in sustainable environmental practices. Such practices may include waste reduction, energy conservation, water conservation, sustainable consumption and participation in environmental activities.

This finding suggests that eco-anxiety does not necessarily produce only negative outcomes. When environmental concern remains within a manageable level, it can motivate individuals to recognize environmental problems and take actions aimed at reducing environmental damage. Clayton (2020) explained that climate anxiety represents psychological responses to climate change and may motivate constructive engagement with environmental problems. Similarly, Pihkala (2020) argued that eco-anxiety can serve as an indication that individuals are emotionally connected to the ecological crisis. In this regard, concern about environmental deterioration may encourage young adults to modify their behaviour in environmentally responsible ways.

The finding is also consistent with recent empirical evidence. Özer (2026) found a positive association between eco-anxiety and pro-environmental behaviour among young adults in Türkiye. The study demonstrated that environmental anxiety may, under certain circumstances, encourage individuals to engage in behaviours intended to address environmental problems. The finding is also consistent with the broader evidence that environmental emotions can influence actual environmental behaviour.

The finding is particularly relevant to university students in Calabar Metropolis because they are exposed to both local and global environmental challenges. Issues such as poor waste management, flooding, pollution, loss of vegetation and climate-related concerns may create environmental worry among young adults. Such experiences can encourage them to become more environmentally responsible. Therefore, eco-anxiety may function as a motivational factor when students perceive that their individual and collective actions can contribute to environmental improvement.

However, the finding should not be interpreted to mean that increased eco-anxiety is always desirable. Excessive environmental anxiety may produce helplessness, avoidance and psychological distress rather than sustainable behaviour. Pihkala (2020) emphasized that eco-anxiety can involve several emotional responses, including fear, grief, guilt and helplessness. Thus, environmental education programmes should help students transform environmental concern into constructive action rather than intensifying feelings of hopelessness.

The finding also extends the environmental education scholarship of Sam et al. (2025) and colleagues have consistently emphasized environmental education, conservation consciousness and community participation as important pathways to responsible environmental practices in Cross River State. Their studies on environmental conservation and environmental education provide a local foundation for understanding how environmental consciousness can contribute to sustainable practices. The present finding extends this perspective by suggesting that the emotional response to environmental problems may also be relevant to sustainable behaviour among young adults.

The second finding showed that environmental hope significantly predicted sustainable behaviour among young adults in universities in Calabar Metropolis. The result indicates that respondents who possessed stronger hope concerning the possibility of solving environmental problems were more likely to demonstrate sustainable environmental practices.

This finding is theoretically important because environmental problems can sometimes appear too large and complex for individual action. Climate change, biodiversity loss, pollution and deforestation can create perceptions that individual efforts have little impact. Environmental hope can counter this perception by strengthening confidence that environmental problems can be addressed through individual and collective action.

Ojala (2017) emphasized the importance of hope in sustainability education, particularly in helping young people respond constructively to environmental challenges. Hope can encourage individuals to look beyond the current environmental crisis and recognize the possibility of positive change. When students believe that their actions can contribute to environmental improvement, they may be more willing to conserve resources, reduce waste and participate in environmental activities.

The finding is also supported by recent evidence. Research on eco-emotions has increasingly identified hope as an important emotional pathway to pro-environmental behaviour. The 2026 systematic review and meta-analysis of eco-emotions among young adults found that eco-hope represents a potentially adaptive response to environmental challenges and that hope may support healthier psychological responses to environmental crises. Similarly, recent empirical research has demonstrated that climate-related hope can be associated with environmental engagement.

The result has particular significance for universities in Calabar Metropolis. Environmental education programmes should not focus exclusively on communicating the seriousness of environmental problems. While students need accurate knowledge about climate change and environmental degradation, they also need opportunities to see that environmental action can produce positive outcomes. Tree planting, recycling, environmental clubs, energy conservation projects, campus sanitation activities and community conservation programmes can provide practical experiences that strengthen environmental hope.

This finding is consistent with the work of Sam et al. (2025) on raising environmental conservation consciousness through ecotourism and mass-awareness campaigns in Akamkpa Local Government Area of Cross River State. Their emphasis on environmental consciousness and awareness campaigns demonstrates the importance of creating awareness that can encourage conservation-oriented practices. The present finding extends this argument by highlighting the possible importance of hope as an emotional resource through which environmental consciousness can be translated into sustainable behaviour.

It also relates to the work of Sam, Ukanga, and Otukpa (2025) on community environmental services as tools for environmental education and sustainable development. Their

work emphasizes environmental awareness and community participation as important components of environmental sustainability. Participation in practical environmental activities can potentially strengthen young people's belief that collective environmental action is meaningful. Such experiences may therefore contribute to the development of environmental hope and sustainable behaviour.

The third finding revealed that eco-anxiety and environmental hope jointly significantly predicted sustainable behaviour among young adults in universities in Calabar Metropolis. The result indicates that sustainable behaviour is influenced by both negative and positive emotional responses to environmental problems.

The combined finding is particularly important because eco-anxiety and environmental hope represent different but potentially complementary psychological responses. Eco-anxiety draws attention to the seriousness of environmental problems, while environmental hope provides a positive orientation toward addressing those problems. Eco-anxiety may create the motivation to act, while hope may provide the confidence and persistence required to sustain environmental action.

The finding supports the emerging perspective that environmental emotions should not be examined in isolation. A young adult may be worried about climate change but may not take action if they feel helpless. Another individual may be hopeful about the environment but may not act if they do not perceive the seriousness of the environmental crisis. Sustainable behaviour may therefore be more likely when concern is accompanied by hope, efficacy and opportunities for meaningful environmental participation.

Recent research provides support for this interpretation. The 2026 meta-analysis of eco-emotions and environmental behaviour reported that worry and hope were among the emotional factors associated with actual environmental behaviour. This supports the argument that both negative and positive environmental emotions may have behavioural implications.

The result also contributes to the environmental education literature in Cross River State. The work of Ime Edet Sam (2018) has largely emphasized environmental education, conservation consciousness, environmental awareness, community participation and sustainable development. The present study extends this body of knowledge by introducing an emotional dimension to environmental behaviour. It suggests that effective environmental education should address not only what young adults know about environmental problems but also how they emotionally respond to those problems.

The finding therefore has practical implications for university environmental education. Environmental educators should avoid approaches that rely solely on frightening students with catastrophic environmental information. Excessive emphasis on environmental disaster without corresponding opportunities for action could intensify helplessness. Instead, environmental education should combine realistic information about environmental threats with practical solutions, collective action and evidence of successful environmental interventions.

Taken together, the findings indicate that eco-anxiety and environmental hope are important psychological factors associated with sustainable behaviour among young adults in universities in Calabar Metropolis. The findings demonstrate that young people's environmental behaviour cannot be understood entirely through traditional variables such as environmental knowledge and awareness. Emotional responses to environmental problems may also influence whether young adults translate environmental concerns into practical action.

The findings further support the need for a balanced approach to environmental education. Eco-anxiety should not simply be suppressed because a certain degree of

environmental concern may motivate responsible behaviour. However, environmental concern should be accompanied by environmental hope, perceived efficacy and practical opportunities for action. In this way, environmental education can help students move from fear and concern toward hope and action.

The stronger predictive contribution of environmental hope in the analysis further suggests that positive environmental emotions may be particularly important for sustaining environmentally responsible behaviour. Young adults need to believe that their actions matter and that environmental improvement is possible. Universities can support this process by creating practical opportunities for students to participate in environmental conservation, sustainable waste management, climate-action programmes and other sustainability initiatives.

In the context of Cross River State, this finding strengthens the argument for integrating emotional and behavioural dimensions into environmental education. The environmental education and conservation studies of Sam and colleagues provide evidence of the importance of awareness, education, participation and conservation consciousness. The present study adds that environmental emotions particularly eco-anxiety and environmental hope should also be considered when explaining sustainable behaviour among young adults.

Overall, the study suggests that the pathway from environmental concern to sustainable behaviour is not necessarily straightforward. Eco-anxiety can create awareness of environmental threats, while environmental hope can provide the psychological confidence needed to respond constructively. When these emotional responses are supported by environmental education and opportunities for meaningful action, they can contribute to stronger sustainable behaviour among young adults.

Conclusion

The study concluded that eco-anxiety and environmental hope are important predictors of sustainable behaviour among young adults in universities in Calabar Metropolis, Cross River State, Nigeria. Eco-anxiety significantly predicted sustainable behaviour, indicating that concern about environmental degradation can motivate young adults to adopt environmentally responsible practices when such concern is accompanied by a sense of personal and collective capacity to act.

The study also concluded that environmental hope significantly predicted sustainable behaviour and made a stronger individual contribution than eco-anxiety. This suggests that young adults who believe that environmental problems can be addressed and that their actions can contribute to positive environmental outcomes are more likely to engage in sustainable practices.

Furthermore, eco-anxiety and environmental hope jointly made a significant contribution to explaining sustainable behaviour. The findings therefore demonstrate that young adults' responses to environmental problems involve both negative and positive emotional dimensions. Environmental concern may draw attention to environmental threats, while environmental hope can transform that concern into constructive and sustained action.

The study concludes that universities should move beyond environmental education approaches that focus mainly on knowledge and awareness. Environmental education should also recognize students' emotional responses to environmental challenges and provide opportunities for practical environmental action. Strengthening environmental hope while helping students manage eco-anxiety constructively can contribute to the development of environmentally responsible young adults capable of supporting sustainable development in Calabar Metropolis and beyond.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. Universities should integrate eco-anxiety education into environmental education programmes to help students understand and manage emotional responses to climate change and other environmental problems.
2. Environmental hope should be strengthened through action-oriented learning. Universities should provide students with practical opportunities such as recycling, tree planting, energy conservation and environmental campaigns.
3. Universities should establish and support student-led environmental clubs to encourage collective environmental action and strengthen students' confidence that their efforts can produce positive environmental outcomes.
4. Environmental educators should balance information about environmental threats with practical solutions. This can reduce feelings of helplessness while encouraging students to respond constructively to environmental challenges.
5. Government and environmental agencies should collaborate with universities to organize regular climate-awareness, conservation and sustainable-living programmes targeted at young adults.
6. Universities should strengthen campus sustainability policies, particularly in waste management, water conservation, energy use and reduction of single-use materials, so that students can practise sustainable behaviour within the university environment.

References

- Clayton, S. (2020). Climate anxiety: Psychological responses to climate change. *Journal of Anxiety Disorders*, 74, 102263. <https://doi.org/10.1016/j.janxdis.2020.102263>
- Clayton, S., & Karazsia, B. T. (2020). Development and validation of a measure of climate change anxiety. *Journal of Environmental Psychology*, 69, 101434. <https://doi.org/10.1016/j.jenvp.2020.101434>
- Coffey, Y., Bhullar, N., Durkin, J., Islam, M. S., & Usher, K. (2021). Understanding eco-anxiety: A systematic scoping review of current literature and identified knowledge gaps. *The Journal of Climate Change and Health*, 3, 100047. <https://doi.org/10.1016/j.joclim.2021.100047>
- Offiong, A. E. A., Asuquo, M. N., Egbung, Sam, I. E., Okon, E. R.-E., Bullem, A. G., Obeten, O. O., Isokon, B., Kutjon, P., Angiagieye, U. P., Acha, J. O., & Ubuh, K. J. (2026). Utilizing structural equation modelling (SEM) to examine students' attitudes, environmental knowledge, and sustainable behaviour at the University of Calabar in Nigeria. *Pegem Journal of Education and Instruction*, 16(1), 2760–2777.
- Ojala, M. (2017). Hope and anticipation in education for sustainable development. *Futures*, 94, 76–84.
- Özer, D. (2026). Hope for the future: Associations between eco-anxiety, pro-environmental behaviors, and hope among young adults in Türkiye. *Public Health Nursing*, 43(3), 521–532. <https://doi.org/10.1111/phn.70079>
- Pihkala, P. (2020a). Anxiety and the ecological crisis: An analysis of eco-anxiety and climate anxiety. *Sustainability*, 12(19), 7836. <https://doi.org/10.3390/su12197836>
- Pihkala, P. (2020b). Eco-anxiety and environmental education. *Sustainability*, 12(23), 10149. <https://doi.org/10.3390/su122310149>

- Pihkala, P. (2022). The process of eco-anxiety and ecological grief: A narrative review and a new proposal. *Sustainability*, 14(24), 16628. <https://doi.org/10.3390/su142416628>
- Rana, S. S. J. B., et al. (2026). A systematic review and meta-analysis on the relationship of eco-emotions on the mental health and wellbeing of young adults. *Applied Psychology: Health and Well-Being*. <https://doi.org/10.1111/aphw.70157>
- Sam, I. E., Akpanke, B. J. A., Ekarika, C. B., & Idem, E. E. (2026). Climate justice for all: Including disability conservation initiatives. *Global Nexus Journal of Multidisciplinary Research*, 1(1), 203–210.
- Sam, I. E., Ephriam, I. E., & Oham, S. B. (2025). Raising environmental conservation consciousness through ecotourism and mass awareness campaign in Akamkpa Local Government Area, Cross River State, Nigeria. *International Journal of Contemporary Social Science Education*, 6(1).
- Sam, I. E., Onnoghen, U. N., & Addo, D. (2021). Environmental education strategies for sustainable waste management. In A. C. Omoogun (Ed.), *Selected themes in environmental education studies* (pp. 154–166). Baye Communications.
- Sam, I. E., Onnoghen, U. N., & Asuquo, E. E. (2018). Environmental educational approaches and socioeconomic benefits of biodiversity conservation in Akamkpa Local Government Area of Cross River State, Nigeria. *Education for Today, Faculty of Education Journal*, 14, 2 (97-104).
- Sam, I. E., Onnoghen, U. N., & Etefia, T. E. (2018). Influence of African traditional religion and practices on sustainable conservation of natural resources in Akamkpa Local Government Area of Cross River State, Nigeria. *Prestige Journal of Education*, 2, 2, (216-224).
- Sam, I. E., Onnoghen, U. N., Asuquo, E. E., & Etefia, T. E. (2019). Influence of religious beliefs on the conservation of natural resources in Akamkpa Local Government Area of Cross River State, Nigeria. *Prestige Journal of Education*, 2, 2, (216-224).
- Sam, I. E., Ukanga, I. P., & Otukpa, M. O. (2025). Community environmental services as tools for environmental education and sustainable development in Akpabuyo Local Government Area, Cross River State, Nigeria. *International Journal of Sustainable Education and Development*.