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Climate Information, Disaster Experience, and Eco-Anxiety in Uganda: The Mediating Role of Perceived Government Response

¹E.O., Oladunmoye, ²Bukola Fausat Lawal, ³Samod Oluwasegun Adegunle, ⁴Ernest Ochuko Okpako

¹Department of Applied Psychology, Kampala International University, Uganda.
oladunmoyetomenoch@gmail.com, <https://orcid.org/0000-0002-2721-2391>

²Department of Counselling and Human Development Studies, University of Ibadan, Nigeria
Lawalbukolaturmitin@gmail.com

³Department of Counselling and Human Development Studies, University of Ibadan, Nigeria,
adegunlesamod@gmail.com, <https://orcid.org/0009-0004-5626-3456>

⁴Department of Counselling and Human Development Studies, University of Ibadan, Nigeria,
ernest.kelvin26@gmail.com

Abstract

This study investigated the interactions between climate-change information, personal experience of climate disaster, perceived government response and eco-anxiety in the people living in climate-disaster-affected regions (CDAAs) in Uganda. Data were collected with the help of multistage random sampling of 459 participants belonging to highly vulnerable districts with the help of the correlational design and path analysis. This study adopted four validated scales (whereby the Cronbach alpha of every scale exceeded 0.7); exposure to climate-change information, experience disaster, perceived government response, and eco-anxiety. Findings showed that the proposed model offered great fit (CFI = .965, TLI = .952, RMSEA = .058, SRMR = .042). Information exposure ($\beta = .394$, $p = .002$) as well as personal experience ($\beta = .236$, $p = .047$) had significant direct influences on eco-anxiety. The role of perceived government response ($\beta = .262$, $p = .021$) also played a positive but less significant role in causing the relationship between information exposure and eco-anxiety ((indirect) $\beta = .096$, $p = .001$). The combination of the predictors accounted 58.8 percent of the variance in eco-anxiety and 38.5 percent in perceived government response. These results point to the fact that the triadic influences of informational, experiential, and institutional factors determine eco-anxiety in Uganda. High levels of exposure to crisis-focused climate data and frequent exposure to disasters increase distress, and low trust in the effectiveness of governmental intervention increases the levels of psychological vulnerability. The study highlights the importance of a balanced approach in the environmental communication, credible governance and conceptual psychosocial support in climate-adaptation initiatives in Africa.

Keywords: Eco-anxiety, Climate change information, Personal experience, Perceived government response, Uganda, Path analysis

1. Introduction

Climate-change disaster can be conceptualized as a hazardous event where the occurrence, the intensity, or the frequency is strongly connected to the anthropogenic climate change that causes severe

disruptions to the human, ecological, and economic systems (Intergovernmental Panel on Climate Change [IPCC], 2022). However, the physical devastation, trauma of climate change and the

dreadful natural disasters cannot be seen as the sole causes but as the catalysts of a long-lasting flow of indirect effects, culminating in overstrained resources and broken communities (Akpan et al., 2025; Marks et al., 2021; Ramadan et al., 2023). Such catastrophes are floods, droughts, heatwave, and landslides, whose magnitude and frequency are exacerbated by global warming. In the climate disaster-affected areas (CDAAs) of Africa, these occurrences aggravate underlying vulnerabilities weak infrastructure, poverty, and vulnerable ecosystems therefore triggering chronic-related stress, uncertainty, and emotional burnout among the populations in the areas (Akpan et al., 2025; Ramadan et al., 2023). These extended environmental stressors among the youth lead to the emergence of eco-anxiety among the youths, which is a type of psychological distress resulting of climate changes and is highly impactful on the emotional and mental health of the youth.

The phenomenon of eco-anxiety (also described as climate anxiety) refers to the psychological burden associated with the global climate crisis. It has been defined by the American Psychological Association (APA) as “a chronic fear of environmental doom”. (American Psychological Association & ecoAmerica, 2017, as cited in Clayton et al., 2021). More broadly, eco-anxiety can be conceptualised as “persistent feelings of worry, anxiety, dread, or doom regarding environmental degradation and the impacts and implications of climate change on our planet as a whole” (Mugeere, Barford, & Magimbi, 2021).

Eco-anxiety in CDAAs is commonly accompanied by severe emotional reactions and is often accompanied by first-hand trauma. They can be subjected to panic, anxiety, depression, and an overwhelming feeling of helplessness or hopelessness (Runkle et al., 2025). The impact is particularly sharp among directly exposed populations such as the ones whose livelihood relies on the land the loss of ecology, disruption of the cultural or knowledge systems, and future harm anticipation can all play a role in increasing distress (Cunsolo et al., 2020, as cited in Bourban, 2023). Post-traumatic stress disorder (PTSD), depression, and eco-anxiety are some of the most common

CDAAs mental-health sequelae, with long-term consequences (Gasparri et al., 2022, as cited in Akpan et al., 2025).

Climate-worry is being reported at very high rates all over the world and more so among the youth. An example is a cross-sectional study spanning many countries and conducted among adolescents who indicated that 60 percent of them worry about climate change, which is very or extremely serious (Marks et al., 2021, as cited in Goldberg et al., 2025; Runkle et al., 2025). In Uganda, 64% of the young people interviewed were anxious about environmental change and 57% counterparts of climate change thought that it would have great significance on them and their families (Barford, et al., 2021). The effects of eco-anxiety among the Ugandan CDAAs are dire: climatic-related events are connected with a higher risk of trauma, anxiety disorders, depression, and the ideation of suicide (Atwoli et al., 2022). At the same time, the crisis increases poverty, food and water insecurity, and even causes childhood malnutrition and displacement in the most vulnerable areas, including Kotido District and Karamoja (UNICEF, 2021).

The existing interventions that target environmental-related anxiety in the populations impacted by disasters have suggested holistic community-based practices such as disaster response systems, specialised youth-focused services, and resilience-building programmes (Akpan et al., 2025). Other researchers have noted environmental activism as a possible preventive measure against climate-related distress (Schwartz et al., 2023) and the need to build self-efficacy against climate-related distress with the help of environmental education (Halmee et al., 2024). In past studies, awareness of climate change and the perception of governmental inaction were also among the major influencing factors (Tosam et al., 2015), and the demographic factors, i.e., socio-economic status and gender, had a role to play (Goldberg et al., 2025). There is a serious knowledge gap: to a large extent, the existing literature is based on WEIRD (Western, Educated, Industrialised, Rich, and Democratic) environments and does not focus much on the non-WEIRD ones,

including Africa (Aziz and Anjum, 2024; Goldberg et al., 2025).

Therefore, it is imperative to explore the interplay between exposure to climate-change information, personal disaster experience, and perceived government response in shaping eco-anxiety in Uganda's disaster-affected areas. These variables reflect the conjunction of subjective awareness, direct impact, and institutional trust all of which are fundamental to climate adaptation and mental-health outcomes today.

In the literature, exposure to climate-change information is commonly operationalised in several ways. One definition refers to self-reported exposure to climate-change-related content via traditional media (e.g., television) and digital platforms (e.g., social networks) (Vrselja et al., 2024). Alternately, exposure may be defined by measuring the weekly duration individuals spend informing themselves about climate change (Beckord et al., 2025). People with high information exposure often report time spent beyond typical thresholds (Beckord et al., 2025). One characteristic consequence of extensive exposure is the pervasiveness of climate-news coverage contributing to feelings of anxiety and being overwhelmed (Runkle et al., 2025). In contrast, individuals with low exposure characterised, for example, by 0–30 minutes per week of climate information-seeking may self-identify as neutral or even sceptical about climate change (Beckord et al., 2025). A consequence of high information consumption is its indirect detrimental effect on mental health: increased worry, anxiety and pre-traumatic stress especially when information signals inadequate progress or heightened danger (Clayton, 2020; Schwaab et al., 2022). Exposure to climate-change information is known to influence eco-anxiety by triggering distress-laden emotions such as hopelessness and impending doom (Clayton et al., 2021; Moser et al., 2007). A Bangladesh adolescent study found that climate-change awareness was associated with higher odds of anxiety symptoms (adjusted odds ratio [OR] = 1.86, $p = 0.024$) compared to those without awareness (Goldberg et al., 2025). Additionally, media

coverage was found to exacerbate emotional responses in U.S. texters reporting climate-distress, underscoring the media's influence on psychological burden (Runkle et al., 2025).

Personal experience of climate disasters refers to direct, lived exposure to extreme weather events and climate-related catastrophes, which are known to precipitate conditions such as PTSD and depression (Clayton, 2021; Gebhardt et al., 2023; Lawrance et al., 2022). Another dimension emphasises that the most severe mental-health outcomes occur among those directly exposed to severe climate impacts, including PTSD, depression and suicidal ideation (Cunsolo et al., 2020, as cited in Bourban, 2023). Individuals with high personal experience are those directly impacted such as victims who lost homes, employment, or safe ground in recently affected neighbourhoods (Akpan et al., 2025; Bourban, 2023). They report acute stress, trauma and various mental-health conditions (Hwong et al., 2022). In contrast, individuals with low personal experience may be geographically or socio-economically buffered from direct impacts and instead primarily encounter the crisis indirectly via media or generalised worry (Fernandez-Urbano et al., 2025). A documented consequence of high personal experience is a marked increase in mood-disorder rates above pre-event baselines, particularly in low-income districts (International Journal of Environmental Sciences, 2025). The severity of personal loss emerges as a robust predictor of later mental-health decline (O'Brien et al., 2014). Personal experience influences eco-anxiety by increasing the salience of climate change, intensifying emotional responses, and heightening perceptions of personal vulnerability (Demski et al., 2017). For instance, one study found that three months after a wildland–urban interface fire, 33% of adults seeking assistance exhibited evidence of major depression and 24% had PTSD (Marshall et al., 2007, as cited in Arcanjo, 2019). Moreover, young adults in the Global South where climate-disaster victims are heavily concentrated experience more severe psychosocial functioning effects compared to peers in high-income countries (Marks et al., 2021).

In the climate-change context, risk-exposure relates to the likelihood of experiencing stressors that threaten an individual's well-being. One conceptualisation equates relative risk to the probability of exposure to climate-related stressors compared to individuals in climatically "healthy" zones (White et al., 2023). Alternatively, risk-exposure may be operationalised geographically (e.g., classifying a location as high-flood-risk or low-flood-risk) (Goldberg et al., 2025). Individuals in high climate-risk settings endure both direct effects of extreme weather events (leading to acute mental-health conditions) and indirect effects (such as livelihood disruption and food insecurity), compounding the overall burden of poverty (Goldberg et al., 2025; Hwong et al., 2022). High risk-exposure is defined as the location of the residents whose climatic related exposures are leading to the severe socioeconomic impacts (Goldberg et al., 2025). A highly increased level of anxiety and depressive symptoms has been reported as one of the effects of high risk-exposure (Goldberg et al., 2025). In contrast, low risk-exposure defines the populations of geographically and socio-economically less vulnerable sites (which are often control groups), which are not directly affected by the climate hazards (Goldberg et al., 2025). Although the issues that low-exposure populations raise remain eco-anxiety they are more general, mediated by media exposure than by acute personal vulnerability (Clayton, 2020; Runkle et al., 2025). A cross-sectional study of Bangladesh-adolescent lives clearly shows the differential effects of exposure to risks on eco-anxiety: adolescents living with a higher flood exposure would be much more likely to have an anxiety (adjusted OR = 1.94; $p < 0.0001$) and depressive symptoms (adjusted OR = 3.52; $p < 0.0001$) than those living with a lower exposure did in Dhaka (Goldberg et al., 2025). This increased susceptibility in combination with cognitive overload in severe floods imply some implications, including temporal discounting, which can become a threat to long-term resilience against climate change (Goldberg et al., 2025).

A key research gap is apparent: much of the current literature originates from WEIRD (Western, Educated, Industrialised, Rich, and Democratic)

settings, neglecting psychological responses in non-WEIRD contexts such as Africa (Aziz & Anjum, 2024; Goldberg et al., 2025; Renzaho et al., 2018). Thus, this study is timely and necessary. It examines CDAA's of Uganda a context where poverty, limited resources and high relative risk intertwine (Goldberg et al., 2025). To properly investigate the complex interplay between exposure to climate-change information, personal experience, and perceived government response in influencing eco-anxiety, a path-analytic approach is needed (Stanley et al., 2021). Eco-anxiety is a complex construct whose specific predictors and conceptual foundations remain insufficiently clarified (Boluda-Verdu et al., 2022; Coffey et al., 2021; Koder et al., 2023).

1.1 Purpose of the Study

The primary purpose of this study was to examine how exposure to climate-change information, personal experience of climate disasters, and perceived government response jointly and separately predict eco-anxiety among individuals living in climate disaster-affected areas (CDAAs) of Uganda.

1.2 Research Questions

1. How well does the proposed path model fit the observed data among residents of climate disaster-affected areas in Uganda?
2. What are the direct effects of exposure to climate-change information, personal experience of climate disasters, and perceived government response on eco-anxiety?
3. Does perceived government response mediate the relationship between exposure to climate-change information and eco-anxiety?
4. What are the total combined effects of exposure to climate-change information and personal experience of disasters on eco-anxiety?
5. How much of the variance in eco-anxiety and perceived government response is explained by the model variables?

2. Materials and Methods

2.1 Research Design

The research design was based on the quantitative method of the correlational research design and the

main method of analysis was the path analysis. The fact that it can be used to simultaneously estimate numerous predictive relationships between observed variables, such as direct, indirect, and mediated relationships, was the reason behind this choice of design (Kline, 2023).

Participants

The target population consisted of the people in the climate disaster vulnerable districts in Uganda, especially those prone to floods, droughts and extended dry seasons (Kotido, Napak and Karamoja sub-regions). A stratified sampling procedure was used. To begin with, purposive sampling was made on three disaster-impacted districts. In every district, a sub-county had to be picked at random and the participants selected using systematic random sampling of community registers that the local councils kept. The survey was filled in by 459 participants (those who were adults, aged 18-60 years). The sample size was compatible with the recommended criteria in the path analysis, which presupposes a ratio of 10-20 participants per parameter estimated (Tabachnick and Fidell, 2019).

Measures

The instrument consists of five sections, the section A consist of the demographic variables (gender, age, marital status and education) while section B-E measured various of the study.

Section B- Climate-Change Information Scale Exposure: Independent measure assessed by self-report on a self-reported adaptation of Vrselja et al. (2024), frequency and intensity of exposure to news about climate on television, radio, and social media. The items were rated using a 5-point Likert scale of 1 =Very rarely to 5=Very often. The scores were higher which implied higher exposure of information. The scale reported a Cronbach alpha value of 0.78.

Section C- Personal experience of climatic disasters scale: Based on the Environmental Stress and Disaster Experience Scale (Clayton, 2020). The respondents were asked to report on the level of direct impact that they or their families had suffered losses or disruption as caused by floods, droughts or other extreme events. The scores were higher, which indicated the increased exposure to experience. The scale revealed a Cronbach alpha value of 0.87.

Section D- Perceived Government Response Scale: Assessed on the basis of items modified by Tosam and Mbih (2015), the assessment of trust, satisfaction, and perceived adequacy of governmental measures in climate adaptation, early warning, and post-disaster relief. The items were rated on a 5 point agreement scale (1 = Strongly disagree to 5 = Strongly agree). The scale showed a reliable Cronbach alpha value of 0.79.

Section E- Eco-Anxiety Scale: Evaluated on the basis of the Climate Anxiety Scale (Clayton and Karazsia, 2020), which has cognitive-emotional questions, including worry, hopelessness, and physiological tension about climate change. Increased composite scores were indicative of an increased eco-anxiety. The scale reported a Cronbach alpha value of 0.88.

2.2 Method of Data Analysis

Data were analyzed using Psychtrix Web (2025) and confirmed through SPSS-AMOS for structural modelling. Preliminary analyses included descriptive statistics and bivariate correlations. Path analysis was employed to test the hypothesized direct, indirect, and total effects, as well as model fitness indices (χ^2 , CFI, TLI, RMSEA, SRMR). Significance was evaluated at $p < .05$. The magnitude of relationships was interpreted using standardized regression coefficients (β). Model fit was assessed following Hu and Bentler's (1999) recommendations: CFI/TLI $\geq .90$ for acceptable fit, RMSEA $\leq .08$ for reasonable error, and SRMR $\leq .08$ for good fit.

Model Specification

The model proposes that Exposure to Climate-Change Information (EXP) and Personal Experience of Climate Disasters (PEX) are exogenous predictors. Perceived Government Response (PGR) and Eco-Anxiety (EA) are endogenous outcomes. EXP and PEX are allowed to covary. EXP and PEX predict PGR, and all three (EXP, PEX, PGR) predict EA; thus, PGR partially mediates the effect of EXP on EA.

2.3 Structural equations (path model; all variables observed)

Let ζ_1 and ζ_2 be structural disturbances (residuals) for PGR and EA, respectively.

$$PGR = \gamma_1 \cdot EXP + \gamma_2 \cdot PEX + \zeta_1$$

$$EA = \beta \cdot PGR + \gamma_3 \cdot EXP + \gamma_4 \cdot PEX + \zeta_2$$

Covariances:

$EXP \leftrightarrow PEX$ (free)

$\zeta_1 \perp \zeta_2$ (residuals uncorrelated in recursive model)

Indirect effect of EXP on EA through PGR:

$$IE_EXP \rightarrow EA = (\gamma_1 \cdot \beta)$$

Total effects:

$$TE_EXP \rightarrow EA = \gamma_3 + (\gamma_1 \cdot \beta)$$

$$TE_PEX \rightarrow EA = \gamma_4 + (\gamma_2 \cdot \beta)$$

3. Results and Discussion

3.1 Results

RQ1: What are the direct effects of exposure to climate change information, personal experience of climate disasters, and perceived government response on eco-anxiety and on each other?

Table 1: showing Standardized Direct Path Coefficients of exposure to climate change information, personal experience of climate disasters, and perceived government response on eco-anxiety and on each other

Predictor → Outcome	B (Unstd.)	β (Std.)	SE	T	p	Sig.
Exposure → Eco-Anxiety	0.191	0.394	0.031	4.423	.002	**
Personal Experience → Eco-Anxiety	0.386	0.236	0.034	5.587	.047	*
Exposure → Perceived Gov't Response	0.592	0.424	0.034	4.053	.008	**
Personal Experience → Perceived Gov't Response	0.187	0.522	0.031	4.786	.010	**
Perceived Gov't Response → Eco-Anxiety	0.278	0.262	0.041	4.867	.021	*

Table 1 reveals the standardized direct path coefficients among exposure to climate-change information, personal experience of climate disasters, perceived government response, and eco-anxiety (See fig. 1 below). The model revealed that exposure to climate-change information had a significant positive direct effect on eco-anxiety ($\beta = .394$, $t = 4.42$, $p = .002$), indicating that higher exposure to climate-related information was associated with greater levels of anxiety concerning environmental threats. Similarly, personal experience of climate disasters significantly predicted eco-anxiety ($\beta = .236$, $t = 5.59$, $p = .047$), suggesting that individuals with firsthand exposure to disaster events reported stronger emotional distress and worry about climate change.

With regard to antecedent relationships, exposure to climate-change information also exerted a significant direct effect on perceived government response ($\beta = .424$, $t = 4.05$, $p = .008$), while personal experience showed an even stronger direct association with perceived government response ($\beta = .522$, $t = 4.79$, $p = .010$). These findings imply that both informational and experiential factors influence how individuals evaluate government efforts to manage climate crises. While Perceived government response demonstrated a significant positive direct effect on eco-anxiety ($\beta = .262$, $t = 4.87$, $p = .021$). This result suggests that increased awareness of or engagement with government actions was associated with heightened eco-anxiety; possibly reflecting skepticism regarding the adequacy of institutional interventions.

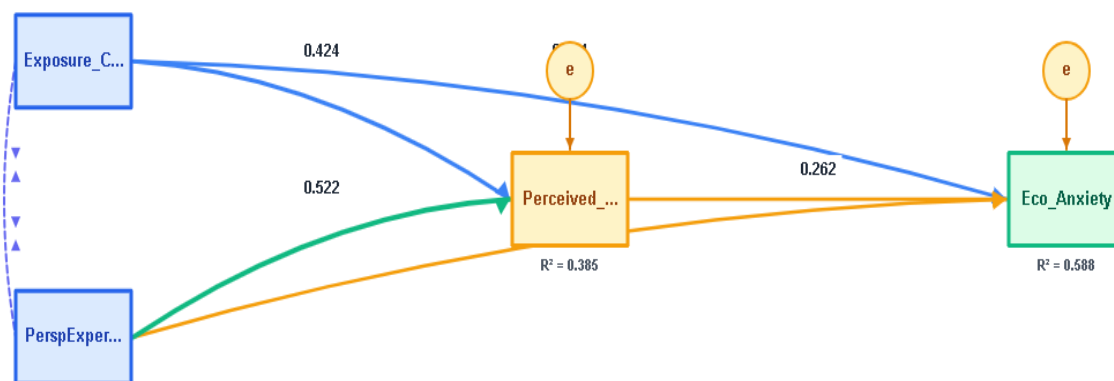


Fig 1: Path Model explaining Eco-anxiety among climate-disaster-affected areas

RQ2: Does perceived government response mediate the relationship between exposure to climate change information and eco-anxiety?

Table 2: showing Indirect and Mediation Effects of exposure to climate change information and eco-anxiety through perceived government response

Pathway	Indirect (ab)	EffectSE	95% CI	P	Mediation Type
Exposure → Perceived Gov't Response → Eco-Anxiety	0.096	0.025	[0.046, 0.146]	.001	Partial
Direct Effect (c')	0.217	—	—	—	—
Total Effect (c)	0.313	—	—	—	—
Sobel z	3.851	—	—	.001	—
Proportion Mediated	30.7 %	—	—	—	Partial

Table 2 shows that perceived government response partially mediated the effect of exposure on eco-anxiety (Sobel $z = 3.85$, $p = .001$). Approximately 31 % of the total relationship was transmitted through perceptions of government response, confirming that individuals' trust in institutional climate action modulates how information exposure translates into eco-anxiety.

RQ3: What are the total combined effects of the predictors on eco-anxiety and perceived government response?

Table 3: Path analysis showing total effects of the predictors on eco-anxiety and perceived government response

Predictor → Outcomes	Total Effect (β)	SE	p	Sig.
Exposure → Eco-Anxiety	0.345	0.050	.046	*
Personal Experience → Eco-Anxiety	0.621	0.053	.027	*
Exposure → Perceived Gov't Response	0.385	0.052	.019	*
Personal Experience → Perceived Gov't Response	0.504	0.036	.001	**
Perceived Gov't Response → Eco-Anxiety	0.579	0.044	.040	*

Table 3 reveals that the largest total effect was found for personal experience on eco-anxiety ($\beta = .621$), emphasizing that lived exposure to climate disasters exerts the most pronounced psychological impact. Both exposure and perceived government response also had meaningful total effects, underscoring the multi-pathway nature of eco-anxiety.

RQ4: How much variance in eco-anxiety and perceived government response is explained by the model?

Table 4: Explained Variance (R^2 Values)

Dependent Variable	R^2	% Variance Explained	Interpretation
Eco-Anxiety	0.588	58.8 %	Substantial
Perceived Gov't Response	0.385	38.5 %	Substantial

On the table 4, the predictors accounted for 58.8 % of the variance in eco-anxiety and 38.5 % in perceived government response, indicating a strong explanatory capacity of the model. These results confirm that both informational and experiential factors, moderated by perceived institutional

response, significantly predict psychological outcomes in climate disaster-affected populations.

RQ5: How well does the proposed path model of exposure to climate change information, personal experience, perceived government response, and eco-anxiety fit the observed data?

Table 5: Model Fit Indices for the Proposed Path Model

Fit Index	Observed Value	Criterion	Interpretation
$\chi^2(18)$	45.23, $p = .001$	—	Acceptable
Comparative Fit Index (CFI)	0.965	$\geq 0.95 = \text{Excellent}$	Excellent fit
Tucker–Lewis Index (TLI)	0.952	$\geq 0.95 = \text{Excellent}$	Excellent fit
Root Mean Square Error of Approximation (RMSEA)	0.058 [90% CI = 0.038–0.077]	$\leq 0.08 = \text{Good fit}$ Acceptable	Good fit
Standardized Root Mean Square Residual (SRMR)	0.042	$\leq 0.08 = \text{Good}$	Good fit
Goodness-of-Fit Index (GFI)	0.945	$\geq 0.90 = \text{Acceptable}$	Acceptable

Source: Psychtrix Web Path Analysis Report (2025).

Table 5 reveals that the indices indicate an excellent model fit (CFI = .965, TLI = .952, RMSEA = .058, SRMR = .042). This demonstrates that the hypothesized relationships among exposure to climate change information, personal experience, perceived government response, and eco-anxiety closely approximate the observed data. The fit indices satisfy the recommendations of Hu and Bentler (1999) for structural models (CFI/TLI $\geq .95$, RMSEA $\leq .06$, SRMR $\leq .08$).

3.2 Discussion of Findings

Research Question 1: What is the goodness of fit of the proposed path model to the observed data?

The model of hypothesis had exceptional fit measures, including CFI = .965, TLI = .952, RMSEA = .058 and SRMR = .042. These findings

suggest that the model was sufficient in the determination of associations among exposure to climate-change information, personal experience, perceived government response, and eco-anxiety in Uganda in climate disaster-impacted regions. Hu and Bentler (1999) state that values above .95 of CFI and TLI and below .06 RMSEA indicate the excellent fit, which validates the internal consistency of the structural model.

This observation is corresponding to Clayton et al., (2021) and Goldberg et al., (2025), who in their respective studies indicated that previous path-analytic studies had established that multifactor climate-mental-health models can account for a significant amount of emotional outcomes (Goldberg et al., 2025). Previously, other models also concentrated on individual predictors (e.g., exposure or experience), but those could often be

fitted poorly (Lawrance et al., 2022). The existing findings consequently support the fact that eco-anxiety is multidimensional, based on informational, experiential, and institutional determinants, and a multi-path model offers a better theoretical explanation of non-WEIRD settings, namely, Uganda.

Research Question 2: How does direct exposure to climate-change information, personal experience, and perceived government response have a direct impact on eco-anxiety?

There was a positive direct influence of exposure to climate-change information on eco-anxiety ($b = .394$, $p = .002$). This result is aligned with the previous research, which demonstrated that greater use of climate-related news and social-media products can increase the level of anxiety and feelings of helplessness in people (Clayton, 2020; Runkle et al., 2025). Similar tendencies were observed by Marks et al. (2021) in a study of adolescents around the world with 60 percent of them being very or extremely concerned about climate change. The existing evidence in Uganda is therefore in agreement with the results around the world but highlights their applicability in African disasters.

Nonetheless, this finding is unlike Passmore et al. (2022, cited in Jain et al., 2024) who postulated that exposure sometimes causes adaptive engagement due to environmental activism gained through awareness. This difference can also be due to contextual factors, in which the information exposure in Uganda tends to be crisis-driven (i.e., flood warnings, famine news) and not solution-driven, thus exerting negative impact on distress instead of reducing efficacy.

The outcome also suggested that personal experience showed a strong direct influence on eco-anxiety ($b = .236$, $p = .047$). This is in line with a study by Cunsolo and Ellis (2018), who referred to ecological grief as a psychological impact of the immediate loss of the environment. The same associations have been reported in research of Australian wildfire survivors and Bangladeshi flood victims (Marshall et al., 2007; Goldberg et al., 2025). However, the outcome with a Ugandan

population points to a different approach that suggests that cumulative exposure of repetitive climate events and persistent poverty can exacerbate stressors as compared to those in richer countries. In contrast to research in high-income contexts where the distress is alleviated by well-established institutional recovery mechanisms (Clayton et al., 2021), respondents in Uganda might experience a stronger feeling of helplessness and keep the level of anxiety.

To a greater extent, result obtained a moderate positive impact on eco-anxiety ($b = .262$, $p = .021$). Ironically, the more the people were aware of the government action, the more anxious they were. This is in line with Tosam and Mbih (2015) who discovered that citizens, in most African countries, tend to perceive government interventions as ineffective or symbolic. Therefore, instead of alleviating the concern, visible but inadequate answers can increase the irritation and distrust of the population. This is in opposition to the European contexts, where the perceived competence of the government alleviates the eco-anxiety (Halmee et al., 2024). The disparity highlights the importance of the credibility of governance when institutional trust is low perceived efforts can actually contribute to the emotional load instead of reducing it.

Research Question 3: Does perceived government response mediate the association between exposure on climate-change information and eco-anxiety?

The mediation analysis showed that the perceived government response was partially mediating the effect of exposure to climate-change information on eco-anxiety (indirect = 0.096, $p = .001$; 30.7% mediated). This observation corresponds to psychological theories that focus on the importance of institutional trust that influences the development of emotional responses to environmental information (Clayton et al., 2021; Stanley et al., 2021). People who receive much information on climate tend to measure the responsiveness of state; when government response is seen to be too slow or inadequate, distress escalates.

This agrees with Halmee et al. (2024) who concluded that climate knowledge moderates their

adaptive engagement through the perception of responsive governance. Nevertheless, the mediation in CDAs of Uganda was biased, which means that even when institutions are trusted by citizens, the mere scale of environmental threat on its own prompts anxiety. This is contrary to the results reported in the North America, where effective communication and disaster-relief systems play a full mediator role (Runkle et al., 2025). Thus, the Ugandan data show a two-fold dynamic; exposure to information increases eco-anxiety both directly with the cognitive overload and indirectly with undermined trust in the governmental ability.

Research Question 4: How do the combined effects of predictors have total effects on eco-anxiety and perceived government response?

The total-effects analysis also revealed that personal experience had the most significant overall impact on eco-anxiety ($b = .621$, $p = .027$), then exposure ($b = .345$) and perceived government response ($b = .579$). Such a chain of command proves that experiential closeness to calamities is the strongest source of climate-related angst (Cunsolo et al., 2020, as cited in Bourban, 2023). This is in line with the results of Australia and Philippines where direct disaster victims are more anxious, depressed, and manifest PTSD than non-disaster controls (O'Brien et al., 2014). It also goes in favor of Fernandez-Urbano et al. (2025), who decided that firsthand experience enhances the sense of risk and personal vulnerability. But contrary evidence in Europe (Clayton, 2021) indicates that chronic information exposure has emerged as a more powerful predictor than experience as a result of being digital. This split signifies contextual variation--in media-saturated cultures information anxiety is the order of the day whereas experiential trauma is the order of the day in places such as Uganda where physical exposure is a painful routine and resources are scarce.

Research Question 5: To what extent is the model able to explain the variance in eco-anxiety and perceived government response?

The model explained quite a lot of variance in the eco-anxiety 58.8 and 38.5 in the perceived government response, which is a strong indicator of the meaning of the explanatory ability. A similar

study on the population of youth around the world has attributed around 45-60 percent of climate anxiety changes (Marks et al., 2021; Goldberg et al., 2025). Therefore, the explanatory power of the Ugandan model falls in the higher percentage of international results. This large variance indicates that most eco-anxiety reactions can be predicted by informational, experiential and institutional variables which confirms the multi-path theoretical framework. It is different to previous studies in Africa (Barford, et al., 2021) which only used descriptive analyses and, hence, under-represented the interactive effects between constructs. The success of the current model is indicative of the strength of structural path approaches to non-WEIRD contexts, where eco-anxiety in Africa is better explained using an intersectional combination of cognition, experience, and trust as opposed to one-variable formulations.

4. Conclusion & Recommendation

This study examined how exposure to climate-change information, personal experience of climate disasters, and perceived government response predict eco-anxiety in Uganda's climate disaster-affected areas. The path model showed excellent fit ($CFI = .965$, $TLI = .952$, $RMSEA = .058$) and explained 58.8 % of the variance in eco-anxiety.

Findings revealed that both information exposure and personal experience significantly heighten eco-anxiety, while perceived government response partly mediates this relationship (30.7 %). Thus, psychological reactions to climate change are shaped by what people *see*, *experience*, and *believe* about government action. The results affirm earlier studies (Clayton et al., 2021; Marks et al., 2021) yet highlight that anxiety in Uganda is intensified by repeated disasters, poverty, and weak institutional trust. Eco-anxiety is therefore a multifactor phenomenon requiring coordinated psychological, communicative, and policy responses.

Recommendations

1. Policy and Governance: Integrate mental-health services into disaster-response frameworks and ensure transparent, participatory communication to rebuild public trust.

2. Education and Community Action: Introduce climate-resilience education and community peer-support programs to channel anxiety into constructive engagement.
3. Media and Communication: Encourage balanced, solution-focused climate reporting to reduce fear amplification.
4. Further Research: Replicate this model in other African contexts and include longitudinal and qualitative designs to capture evolving psychological impacts.

5. References

- [1] Akpan, U. U., Ja'Afar, I. K., & Eke, S. C. (2025). Addressing the psychological impact of climate-induced disasters on young people in Africa: Challenges and pathways forward. *Cambridge Prisms: Global Mental Health*, 12(e50), 1–4. <https://doi.org/10.1017/gmh.2024.77>
- [2] Atwoli, L., Muhia, J., & Merali, Z. (2022). Mental health and climate change in Africa. *BJPsych International*, 19(4), 86–89. <https://doi.org/10.1192/bji.2022.14>
- [3] Aziz, M., & Anjum, G. (2024). Advancing equity in cross-cultural psychology: Embracing diverse epistemologies and fostering collaborative practices. *Frontiers in Psychology*, 15:1368663. <https://doi.org/10.3389/fpsyg.2024.1368663>
- [4] Barford, A., Olwell, R. H., Mugeere, A., Nyiraneza, M., Magimbi, P., Mankhwazi, C., & Isiko, B. (2021). Living in the climate crisis: young people in Uganda.
- [5] Beckord, J., Gebhardt, N., Nikendei, C., Krakowczyk, J. B., Skoda, E.-M., Teufel, M., & Bäuerle, A. (2025). Correlates of climate change distress: The difference to general distress. *International Journal of Clinical and Health Psychology*, 25(3), 100613. <https://doi.org/10.1016/j.ijchp.2025.100613>
- [6] Boluda-Verdú, I., Senent-Valero, M., Casas-Escolano, M., Matijasevich, A., & Pastor-Valero, M. (2022). Fear for the future: Eco-anxiety and health implications, a systematic review. *Journal of Environmental Psychology*, 84, 101904. <https://doi.org/10.1016/j.jenvp.2022.101904>
- [7] Bourban, M. (2023). Eco-anxiety and the responses of ecological citizenship and mindfulness. In J. Kassiola & T. W. Luke (Eds.), *The palgrave handbook of environmental politics and theory* (pp. 65–88). Springer International Publishing.
- [8] Clayton, S. (2020). Climate anxiety: Psychological responses to climate change. *Journal of Anxiety Disorders*, 74, 102263.
- [9] Clayton, S. (2021). Climate change and mental health. *Current Environmental Health Reports*, 8, 1–6. <https://doi.org/10.1007/s40572-020-00303-3>
- [10] Clayton, S., & Karazsia, B. T. (2020). Development and validation of a measure of climate change anxiety. *Journal of Environmental Psychology*, 69, 101434.
- [11] Clayton, S., Manning, C., Krygsman, K., & Speiser, M. (2021). *Mental health and our changing climate: Impacts, implications, and guidance*. American Psychological Association & ecoAmerica.
- [12] Clayton, S., Manning, C., Speiser, M., & Hill, A. N. (2021). Mental health and our changing climate: Impacts, inequities, responses. American Psychological Association, and ecoAmerica.
- [13] 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>
- [14] Cunsolo, A., & Ellis, N. R. (2018). Ecological grief as a mental health response to climate change-related loss. *Nature Climate Change*, 8(4), 275–281. <https://doi.org/10.1038/s41558-018-0092-2>
- [15] Cunsolo, A., Harper, S. L., Minor, K., Hayes, K., Williams, K. G., & Howard, C. (2020). Ecological grief and anxiety: The start of a healthy response to climate change? *The Lancet Planetary Health*, 4(7), e261–e263. [https://doi.org/10.1016/s2542-5196\(20\)30144-3](https://doi.org/10.1016/s2542-5196(20)30144-3)
- [16] Demski, C., Capstick, S., Pidgeon, N., Sposato, R. G., & Spence, A. (2017). Experience of extreme weather affects climate change mitigation and adaptation responses. *Climatic Change*, 140, 149–164. <https://doi.org/10.1007/s10584-016-1837-4>
- [17] Fernandez-Urbano, R., Bulut, H., & Samuel, R. (2025). The impact of eco-anxiety and extreme weather proximity on young people's happiness and life satisfaction. *Journal*

- of Happiness Studies. (Advance online publication).
- [18] Feters, M. D., Curry, L. A., & Creswell, J. W. (2013). Achieving integration in mixed methods designs-principles and practices. *Health Services Research*, 48, 2134–2156.
- [19] Gasparri, G., Tcholakov, Y., Gepp, S., Guerreschi, A., Ayowole, D., Okwudili, É.-D., Uwandu, E., Sanchez Iturregui, R., Amer, S., Beaudoin, S., & Sato, M. (2022). Integrating youth perspectives: Adopting a human rights and public health approach to climate action. *International Journal of Environmental Research and Public Health*, 19(8), 4840. <https://doi.org/10.3390/ijerph19084840>
- [20] Goldberg, L., Luby, S., Shuchi, N. S., Sen, T., Hossen, N., Parodi, G. W., ... & Jahan, F. (2025). Adolescent psychological health, temporal discounting, and climate distress under increased flood exposure in Bangladesh: a mixed-methods cross-sectional study. *The Lancet Planetary Health*, 9(7).
- [21] Halmee, N. S. M., Ma'rof, A. A., Nashorddin, N. A., & Yusof, N. K. A. M. (2024). The Role of Political Trust, Perceived Government Efforts, Peer Influence, and Eco-Anxiety in Climate Change Adaptation among Johor Youth in Malaysia. *INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS AND SOCIAL SCIENCES*, 14(12).
- [22] Hu, L.-T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis. *Structural Equation Modeling*, 6(1), 1–55.
- [23] Hwong, A. R., Wang, M., Khan, H., Palermo, T., & Field, E. (2022). Climate change and mental health research methods, gaps, and priorities: A scoping review. *The Lancet Planetary Health*, 6, e281–e291.
- [24] Intergovernmental Panel on Climate Change. (2022). *Climate Change 2022: Impacts, adaptation, and vulnerability* (Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change). Cambridge University Press.
- [25] Jain, V., Jose, A., Eldhose, N. J., & John, D. (2024). Exploring eco-anxiety and eco-coping in young adults in India. *The International Journal of Indian Psychology*, 12(3), 3329–3343. <https://doi.org/10.25215/1203.324>
- [26] Kline, R. B. (2023). *Principles and practice of structural equation modeling*. Guilford publications.
- [27] Lawrance, E. L., Thompson, R., Le Vay, N., Page, J., & Jennings, N. (2022). The impact of climate change on mental health and emotional wellbeing: A narrative review of current evidence, and its implications. *International Review of Psychiatry*, 34(5), 443–498. <https://doi.org/10.1080/09540261.2022.2128725>
- [28] Marks, E., Hickman, C., Pihkala, P., Clayton, S., Lewandowski, E. R., Mayall, E. E., ... & Van Susteren, L. (2021). Young people's voices on climate anxiety, government betrayal and moral injury: A global phenomenon. *Government betrayal and moral injury: A global phenomenon*.
- [29] Mishra, N., Ahmed, M., & Rohilla, S. (2025). Assessing the mental health impacts of climate-related disasters. *International Journal of Environmental Sciences*, 11(2), 534–541.
- [30] Moser, S. C., & Dilling, L. (Eds.). (2007). *Creating a climate for change: Communicating climate change and facilitating social change*. Cambridge University Press.
- [31] Mugeere, A., Barford, A., & Magimbi, P. (2021). Climate change and young people in Uganda: A literature review. *The Journal of Environment & Development*, 30(4), 344–368. <https://doi.org/10.1177/10704965211047159>
- [32] OBrien, L. V., Berry, H. L., Coleman, C., & Hanigan, I. C. (2014). Drought as a mental health exposure. *Environmental Research*, 131, 181–187.
- [33] Ramadan, R., Randell, A., Lavoie, S., Gao, C. X., Manrique, P. C., Anderson, R., McDowell, C., & Zbukvic, I. (2023). [23] Empirical evidence for climate concerns, negative emotions and climate-related mental ill-health in young people: A scoping review. *Early Intervention in Psychiatry*, 17(6), 537–563. <https://doi.org/10.1111/eip.13374>
- [34] Rees, N. (2021). The Climate Crisis Is a Child Rights Crisis: Introducing the Children's Climate Risk Index. *UNICEF*.
- [35] Runkle, J. D., Herbst, K., Ryan, S., Sewell, K., Mallare, A., Berry, I., Getz, E., McKee, A., Thompson, M. P., & Sugg, M. M.

- (2025). Eco-anxiety, climate concern, and fatalistic outlooks: Insights from U.S. crisis text conversations on climate distress. *The Journal of Climate Change and Health*, 22, 100419. <https://doi.org/10.1016/j.joclim.2025.100419>
- [36] Schwaab, L., Gebhardt, N., Friederich, H.-C., & Nikendei, C. (2022). Climate change related depression, anxiety and stress symptoms perceived by medical students. *International Journal of Environmental Research and Public Health*, 19(15), 9142. <https://doi.org/10.3390/ijerph19159142>
- [37] Schwartz, S. E. O., Benoit, L., Clayton, S., Parnes, M. F., Swenson, L., & Low, S. R. (2023). Climate change anxiety and mental health: Environmental activism as buffer. *Current Psychology*, 42(20), 16708–16721.
- [38] Stanley, S. K., Hogg, T. L., Leviston, Z., & Walker, I. (2021). From anger to action: Differential impacts of eco-anxiety, eco-depression, and eco-anger on climate action and wellbeing. *The Journal of Climate Change and Health*, 1, 100003. <https://doi.org/10.1016/j.joclim.2021.100003>
- [39] Tabachnick, B. G., & Fidell, L. S. (2019). *Using multivariate statistics* (7th ed.). Pearson.
- [40] Tosam, M. J., & Mbih, R. A. (2015). Climate change, health, and sustainable development in Africa. *Environment, Development and Sustainability*, 17(4), 787–800. <https://doi.org/10.1007/s10668-014-9575-0>
- [41] Vrselja, I., Pandžić, M., Lotar Rihtarić, M., & Ojala, M. (2024). Media exposure to climate change information and pro-environmental behavior: The role of climate change risk judgment. *BMC Psychology*, 12(1), 262. <https://doi.org/10.1186/s40359-024-01771-0>
- [42] Vrselja, I., Pandžić, M., Rihtarić, M. L., & Ojala, M. (2024). Media exposure to [31] climate change information and pro-environmental behavior: the role of climate change risk judgment. *BMC psychology*, 12(1), 262.
- [43] White, B. P., Breakey, S., Brown, M. J., Smith, J. R., Tarbet, A., Nicholas, P. K., & Viamonte Ros, A. M. (2023). Mental health impacts of climate change among vulnerable populations globally: An integrative review. *Arts & Global Health*, 89(1), 66. <https://doi.org/10.5334/aogh.4105>