Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 4 No. 3 (March) (2026)

Climate Change Related Future Anxiety and Psychological Well Being Among University Students in Pakistan: The Potential Roles of Environmental Helplessness and Psychological Flexibility

Muhammad Shan
Email: shanmsd1122@gmail.com

Iqra
Email: iiqra8706@gmail.com

Shakeel Ahmed
Email: shakeelqau01@gmail.com

Fatima Batool
Email: fatimabaatool62@gmail.com

ABSTRACT
Climate change is a source of material insecurity and a growing concern for mental health, yet its psychological effects cannot be reduced to a single diagnosis or level of worry. This critical narrative review examines what is known about climate-related future anxiety among young adults, with a particular focus on university students in Pakistan. It brings together international studies, a recent Pakistan based university study, evidence syntheses, and authoritative climate assessments to consider two possible explanatory processes: environmental helplessness and psychological flexibility. In a Pakistani university sample of 300 students, climate anxiety showed a small positive association with solastalgia ($r = .215$, $p < .001$). A wider meta-analysis of 94 studies involving 170,747 participants likewise reports an association between climate anxiety and reduced well-being, alongside a positive association with climate action. These findings suggest that climate concern may be distressing without always resulting in withdrawal. We argue that perceived inability to influence environmental outcomes may help explain when concern becomes psychologically burdensome, whereas psychological flexibility may help people live with uncertainty while continuing meaningful activity. These propositions have not been tested as a combined model in the studies reviewed here. The article identifies measurement and contextual issues, especially the risk of treating climate concern as illness or overlooking differences in hazard exposure and institutional support. It concludes with priorities for future secondary-data synthesis and empirical research in Pakistan.

Keywords: Climate Anxiety; Future Uncertainty; Environmental Helplessness; Psychological Flexibility; Psychological Well-Being; Pakistan; University Students

Introduction

For many university students, the future is discussed in practical terms, finishing a degree, finding reliable work, contributing to household income, or planning where to live. Climate change can enter these decisions without arriving as a single dramatic event. News about floods or extreme heat, worries about the costs of living, and uncertainty about the safety of familiar places can all change how the future feels. The

ISSN Online: 3007-3154
ISSN Print: 3007-3146

psychological question is not simply whether students are worried. It is how they interpret the threat, what they believe they can do, and whether concern begins to interfere with ordinary life.

Pakistan illustrates why these questions matter. The official post-disaster assessment of the 2022 floods reported that approximately 33 million people were affected, with estimated physical damages exceeding US$14.9 billion and economic losses of about US$15.2 billion (Government of Pakistan et al., 2022). These figures describe national exposure and loss; they do not provide an estimate of climate anxiety among university students. Nevertheless, they establish the material background against which concerns about education, livelihood and personal security may be formed. The IPCC (2022) identifies increasing health and well-being risks in Asia from extreme weather and related climate hazards.

Anxiety about climate change must be interpreted with care. Concern may be an understandable reaction to genuine threats rather than evidence of psychopathology. A 10-country survey of 10,000 young people aged 16–25 documented extensive climate worry and concerns about governmental responses (Hickman et al., 2021). Pakistan was not included in that survey, so its country-specific percentages cannot be applied to Pakistani youth. The survey does, however, show that anticipation of future environmental loss is an important dimension of young people's experiences.

Pakistani research is emerging but does not yet settle the question of psychological mechanisms. Abbas et al. (2025) studied climate anxiety and solastalgia among 300 university students and reported a small positive correlation ($r = .215$, $p < .001$). Akhtar (2025) identified helplessness and concerns about future plans in a mixed-methods study of urban youth. Shujaat et al. (2024) examined eco-anxiety, eco-grief, and environmental attitudes. These studies raise important questions about perceived agency and psychological coping but do not establish a causal mediation or moderation model.

Review Design and Evidence Boundaries

This critical narrative review synthesizes published secondary evidence rather than collecting new survey data or reanalysing individual-level datasets. The literature focus is 2020–2025, with particular attention to climate anxiety, psychological well-being, environmental helplessness, psychological flexibility, and Pakistani students or young adults. The review compares original studies, systematic syntheses, conceptual work, and institutional assessments (Boehme et al., 2024; Cosh et al., 2024; Kühner et al., 2025). The approach is purposive and interpretive, not a systematic search: no claim is made about exhaustive database coverage, PRISMA screening, or formal risk-of-bias assessment.

Evidence is discussed with attention to study population, design, and transferability. Published statistical results are attributed to their original authors; none is presented as a new result from this review. A key limitation is that the same label—climate anxiety—may refer to climate-related worry, persistent distress, or functional impairment across different measures (Clayton & Karazsia, 2020; Cosh et al., 2024).

What the Existing Evidence Shows

Table 1 summarises selected studies relevant to the framework. All findings belong to the original studies. Their designs and sampling frames limit causal or population-wide interpretations (Abbas et al., 2025; Akhtar, 2025; Hickman et al., 2021; Kühner et al., 2025).

Dialogue Social Science Review (DSSR)
www.thedssr.com

ISSN Online: 3007-3154
ISSN Print: 3007-3146

DIALOGUE SOCIAL SCIENCE REVIEW

Vol. 4 No. 3 (March) (2026)

Table 1

Selected empirical evidence on climate anxiety and psychological responses

Source / setting	Design / sample	Reported findings	Key limitation
Abbas et al. (2025), Pakistan	Cross-sectional, 300 university students	Small positive anxiety–solastalgia association ($r = .215$, $p < .001$)	Association is not causation, university sample
Akhtar (2025), Pakistan	Mixed methods, 300 urban youth	Worry, helplessness, and disrupted future plans reported	Urban youth sample, caution with prevalence claims
Hickman et al. (2021), 10 countries	Survey, 10,000 people aged 16–25	Climate worry and dissatisfaction with government responses	Pakistan not sampled
Kuhner et al. (2025), international	Meta-analysis, 94 studies; 170,747 participants	Anxiety negatively associated with well-being and positively with action	Heterogeneity, not proof of a causal pathway

The available research does not support a simple claim that climate concern always damages mental health or always encourages action. Cosh et al. (2024) found links between eco-anxiety and several forms of psychological distress while emphasising differences in methods and measurement. Kuhner et al. (2025), synthesising 94 studies involving 170,747 adults in 27 countries, reported negative associations with well-being and positive associations with climate action. Pakistani student and urban-youth studies add local context, but their mostly observational designs cannot determine whether anxiety causes later distress (Abbas et al., 2025; Akhtar, 2025; Shujaat et al., 2024).

Climate-Related Future Anxiety

Climate-related future anxiety refers to worries about how environmental change might shape education, employment, health and family security. The large international survey by Hickman et al. (2021) documented the extent to which climate concerns can affect young people's expectations of the future. Pihkala (2024) argues that climate emotions may be intertwined with developmental transitions, identity and loss. These findings motivate study of future-oriented anxiety in Pakistan without assuming that Western measures have identical meanings in Pakistani universities.

Measurement is especially important in Pakistan. A person affected by an actual flood may report fear in response to immediate material hardship, while a university student elsewhere may worry primarily about predicted future events. Both responses deserve attention, but the same questionnaire score may conceal different experiences. Review authors should avoid presenting either kind of anxiety as a national prevalence estimate without representative sampling and clear definitions.

Environmental Helplessness

Environmental helplessness refers here to a perceived inability, individually or collectively, to influence environmental outcomes. It is proposed as a possible explanatory process, not an empirically confirmed mediator among Pakistani students. Akhtar (2025) reported themes of frustration and helplessness in urban youth interviews.

ISSN Online: 3007-3154
ISSN Print: 3007-3146

More broadly, anxiety can coexist with engagement, as illustrated by the meta-analysis of Kühner et al. (2025). Whether helplessness has a distinct role in Pakistani students remains an empirical question.

Two students may read the same forecast about extreme weather yet respond differently. One may see opportunities to prepare, organise or demand action. The other may interpret the threat as uncontrollable and conclude that preparation is pointless. The second appraisal could plausibly amplify distress, but it would be incorrect to say that helplessness mediates the relationship between climate anxiety and well-being until a study measures those variables and tests the relevant temporal assumptions.

Such feelings cannot be interpreted in isolation from institutions and resources. Pakistan's 2022 floods caused extensive economic and social damage, and official assessments called for large-scale rehabilitation and reconstruction (World Bank, 2022). An individual's low perceived control may therefore partly reflect real structural limits, not merely an irrational cognitive response. Mental-health responses should be linked to credible information and practical adaptation support (World Health Organization, 2022).

Psychological Flexibility: Living with Uncertainty Without Giving Up

Psychological flexibility concerns the capacity to respond openly to difficult thoughts and emotions while continuing actions consistent with personal values. Williams and Samuel (2024) discuss this process in relation to climate distress through acceptance and commitment therapy (ACT). Their work offers a conceptual and clinical rationale; it does not establish that flexibility moderates the association between climate anxiety and well-being in Pakistani students. The present model therefore treats flexibility as a proposition for subsequent empirical investigation.

The distinction matters in practice. A student can remain concerned about climate impacts while also studying, supporting family members and engaging in realistic environmental initiatives. The goal need not be removal of concern. It may be reducing the extent to which worry becomes immobilising. Any proposed response, however, must complement climate adaptation and material assistance rather than relocate responsibility for collective hazards onto individual students.

Proposed Conceptual Model

The framework proposes that climate-related future anxiety may be associated with lower psychological well-being; perceived environmental helplessness may partly account for that association; and psychological flexibility may alter how strongly uncertainty is linked to impaired well-being. The first association is consistent with existing synthesis (Cosh et al., 2024; Kühner et al., 2025), whereas the proposed mediator and moderator remain untested in the specific combined Pakistani model. These are conceptual pathways, not statistical estimates.

A more precise future model should choose one moderation pathway in advance and distinguish a measure of ordinary climate concern from a measure of functional impairment. It should also separate direct disaster exposure from media-based awareness, and consider whether psychological flexibility and helplessness represent distinct constructs in Pakistani cultural and linguistic settings.

Discussion

The distinctive question is not whether Pakistani students experience climate anxiety, local studies already address it (Shujaat et al., 2024; Abbas et al., 2025; Akhtar, 2025). Rather, the evidence reviewed leaves open whether future-oriented worry affects well-

ISSN Online: 3007-3154
ISSN Print: 3007-3146

being through perceived environmental helplessness, and whether flexibility can support meaningful functioning under uncertainty. These mechanisms must be distinguished from general distress and measured with attention to cultural and linguistic context (Clayton & Karazsia, 2020; Williams & Samuel, 2024).

The 2022 floods also demonstrate why context matters. National damage statistics reveal broad exposure but do not tell us how students form beliefs about future opportunities. Some students may have experienced direct losses and others may have learned about hazards mainly through family and news. Their responses may be influenced by economic security, access to counselling, trust in institutions and perceived ability to act collectively. Treating all Pakistani students as a single climate-affected population would obscure these differences.

Interpreting concern only as pathology would miss its social and motivational dimensions. The meta-analysis by Kuhner et al. (2025) found climate anxiety associated with both psychological strain and climate action, while Cosh et al. (2024) highlight inconsistencies and measurement limitations. For Pakistani universities, the practical question is how serious environmental worries can be acknowledged without obscuring unequal exposure, material insecurity or opportunities for collective action (World Bank, 2022; World Health Organization, 2022).

Implications and Future Research

Pakistani universities could acknowledge climate-related worry in student support services without treating all concern as a disorder. Credible information, practical disaster preparedness, and referrals for students whose functioning is affected may be useful alongside material adaptation support (World Health Organization, 2022). Psychological-flexibility approaches are worthy of careful evaluation, but conceptual support for ACT should not be presented as evidence of effectiveness in Pakistani campus populations (Williams & Samuel, 2024).

A stronger next stage review could use a registered systematic search across PsycINFO, Scopus, Web of Science and regional academic databases, with explicit inclusion criteria and appraisal of study quality. A genuine quantitative secondary-data study would require access to datasets containing comparable climate-anxiety, helplessness, flexibility and well-being measures. It would not be scientifically acceptable to derive mediation coefficients from unrelated published summary tables. Prospective longitudinal work could then assess whether helplessness precedes later declines in well-being and whether flexibility alters that association.

Limitations

This narrative review uses a purposive selection of literature and does not claim comprehensive database coverage, pooled effects or new survey results. Pakistani evidence discussed here is often cross-sectional and cannot determine direction of influence. The conceptual pathways remain proposals, and source heterogeneity, context differences and variation in climate-anxiety measures restrict generalisation (Cosh et al., 2024; Kühner et al., 2025).

Conclusion

Climate-related future anxiety may be a useful lens for understanding psychological well-being among Pakistani university students, but climate worry and mental disorder should not be equated. Evidence from Pakistan establishes the relevance of eco-anxiety and environmental loss (Shujaat et al., 2024; Abbas et al., 2025), while international

ISSN Online: 3007-3154
ISSN Print: 3007-3146

syntheses underscore varied consequences for well-being and action (Cosh et al., 2024; Kühner et al., 2025). Environmental helplessness and psychological flexibility offer a coherent agenda for future empirical testing, not an already demonstrated causal model.

References

Abbas, S., Ghaffar, R., & Abid, A. (2025). Exploring the relationship between climate anxiety and solastalgia among university students in Pakistan: A study of environmental distress and psychological well-being. Journal of Asian Development Studies, 14(2), 440–452. https://doi.org/10.62345/jads.2025.14.2.35

Akhtar, M. (2025). Understanding climate anxiety among urban youth in Pakistan: A mixed-methods study across Lahore, Karachi, and Islamabad. Magna Carta: Contemporary Social Science, 4(2), 56–67. https://journal.50sea.com/index.php/MC/article/view/1542

Boehme, B. A. E., Kinsman, L. M., Norrie, H. J., Tessier, E. D., Fleming, S. W., & Asmundson, G. J. G. (2024). Climate anxiety: Current evidence and future directions. Current Psychiatry Reports, 26, 670–677. https://doi.org/10.1007/s11920-024-01538-9

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

Cosh, S. M., Ryan, R., Fallander, K., Robinson, K., Tognela, J., Tully, P. J., & Lykins, A. D. (2024). The relationship between climate change and mental health: A systematic review of the association between eco-anxiety, psychological distress, and symptoms of major affective disorders. BMC Psychiatry, 24, Article 833. https://doi.org/10.1186/s12888-024-06274-1

Government of Pakistan, Asian Development Bank, European Union, United Nations Development Programme, & World Bank. (2022). Pakistan floods 2022: Post-disaster needs assessment. https://www.worldbank.org/en/news/press-release/2022/10/28/pakistan-flood-damages-and-economic-losses-over-usd-30-billion-and-reconstruction-needs-over-usd-16-billion-new-assessment

Hickman, C., Marks, E., Pihkala, P., Clayton, S., Lewandowski, R. E., Mayall, E. E., Wray, B., Mellor, C., & van Susteren, L. (2021). Climate anxiety in children and young people and their beliefs about government responses to climate change: A global survey. The Lancet Planetary Health, 5(12), e863–e873. https://doi.org/10.1016/S2542-5196(21)00278-3

Kühner, C., Gemmecke, C., Hüffmeier, J., & Zacher, H. (2025). Climate change anxiety: A meta-analysis. Global Environmental Change, 93, 103015. https://doi.org/10.1016/j.gloenvcha.2025.103015

Pihkala, P. (2024). Climate anxiety, maturational loss, and adversarial growth. The Psychoanalytic Study of the Child, 77(1), 369–388. https://doi.org/10.1080/00797308.2023.2287382

Shujaat, M., Shan, Z., Shah, I., Zia, K., & Khan, N. (2024). Exploring climate change's psychological association, between eco-anxiety, eco-grief and attitude towards environment. CARC Research in Social Sciences, 3(3), 323–330. https://doi.org/10.58329/criss.v3i3.149

Williams, M. O., & Samuel, V. M. (2024). Acceptance and commitment therapy as an approach for working with climate distress. The Cognitive Behaviour Therapist,

ISSN Online: 3007-3154
ISSN Print: 3007-3146

Vol. 4 No. 3 (March) (2026)

17, Article e35. https://doi.org/10.1017/S1754470X23000247

World Bank. (2022, October 28). Pakistan: Flood damages and economic losses over USD 30 billion and reconstruction needs over USD 16 billion—New assessment. https://www.worldbank.org/en/news/press-release/2022/10/28/pakistan-flood-damages-and-economic-losses-over-usd-30-billion-and-reconstruction-needs-over-usd-16-billion-new-assessment

World Health Organization. (2022). Mental health and climate change: Policy brief. https://www.who.int/publications/i/item/9789240045125