

PERSPECTIVE ARTICLE

The role of education in empowering young people to cope with climate change-induced mental health challenges in developing countries

 Usoro Udousoro Akpan^{1*}, Ibrahim Khalil Ja'afar¹, and Sinclair Eke²
¹Warwick Medical School, University of Warwick, Coventry, United Kingdom

²Department of Public Health, School of Health, Social and Community Work, University of Derby, Derby, United Kingdom

Abstract

Climate change exacerbates mental health issues among young individuals, making education a crucial tool for providing knowledge, resilience, and coping strategies. By integrating discussions on emotions, mental health, and coping mechanisms into climate change education, educational initiatives can foster resilience and support young people in navigating these challenges. Educational programs that focus on environmental literacy, sustainability, and innovative teaching methods are essential for equipping youth with the necessary skills to address the complex interplay between climate change and mental well-being. However, implementing such programs in developing countries faces challenges such as resource limitations and cultural barriers. Successful models have overcome these challenges through partnerships, cultural sensitivity, and community engagement. Ultimately, education can act as a catalyst for positive change by fostering resilience, promoting environmental literacy, and empowering young individuals to contribute to sustainable development. By investing in inclusive educational endeavors, developing nations can equip youth with the skills needed to confront climate change-induced mental health challenges effectively.

Keywords: Climate change; Young people; Mental health; Education

Academic editor:

Mihajlo Jakovljevic M.D. Ph.D. MAE

*Corresponding author:

 Usoro Udousoro Akpan
 (Usoro.akpan@warwick.ac.uk)

Citation: Akpan, U.U., Ja'afar, I.K., & Eke, S. (2025). The role of education in empowering young people to cope with climate change-induced mental health challenges in developing countries. *Global Health Econ Sustain*, 3(4):74-77. <https://doi.org/10.36922/GHES025110020>

Received: March 10, 2025

Revised: April 15, 2025

Accepted: April 28, 2025

Published online: May 13, 2025

Copyright: © 2025 Author(s).

This is an Open-Access article distributed under the terms of the Creative Commons Attribution License, permitting distribution, and reproduction in any medium, provided the original work is properly cited.

Publisher's Note: AccScience Publishing remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

1. Introduction

Education plays a crucial role in empowering young people to cope with the mental health challenges induced by climate change, especially in developing countries. The intersection of climate change and mental health in young individuals has garnered attention due to the increasing recognition of the impact of climate-related disasters on mental well-being (Ramadan & Ataallah, 2021). The current global challenges, including climate change, have exacerbated mental health issues faced by children and young people (Cefai *et al.*, 2022). As young people are particularly vulnerable to the harmful effects of climate change, education can equip them with knowledge about the impact of climate change on human health.

Integrating discussions about emotions, mental health, and coping strategies within climate change education can serve as a gateway to broader discussions about mental health, supporting children and young people in the face of rising mental health needs (Vay *et al.*, 2024). Furthermore, involving young people in conversations and education about climate change has been identified as a protective factor for mental health and a motivator for action. Educational initiatives that focus on climate change can prepare young individuals for unpredictable futures and empower them to contribute to sustainable development.

Empowering young people through education involves not only providing knowledge about climate change but also fostering resilience and coping skills. This approach can help young individuals pursue educational and employment goals despite challenging circumstances. In addition, supporting young people in learning about and acting on climate change can benefit their mental health. By engaging young people in climate change education, educators can contribute to building a supportive environment that promotes well-being and prevents mental illness.

2. The intersection of education and mental health resilience

Education plays a crucial role in building resilience against mental health challenges, particularly in the context of climate change. Young people, especially those in developing countries, are increasingly vulnerable to mental health risks due to the impacts of climate change (Hayes & Poland, 2018). Initiatives aimed at building resilience are essential as they empower youth to take an active role in addressing climate-related mental health challenges (Gislason *et al.*, 2021). By providing education that enhances understanding of the mental health impacts of climate change, young individuals can develop coping strategies to effectively navigate these challenges. Educational programs are significant in equipping young people with the necessary knowledge and skills to comprehend and cope with the mental health implications of climate change. Understanding distressing encounters related to climate change is crucial for promoting mental health and designing effective policies and services to alleviate distress. In addition, integrating mental health discussions into climate change education can help foster resilience among youth, enabling them to proactively address mental health issues exacerbated by climate change. In the context of Indigenous communities, education plays a vital role in addressing mental health challenges associated with climate change. A systematic review emphasized the importance of understanding

climate-related pathways of mental health risks to identify vulnerable groups and promote resilience, particularly in the Arctic region (Lebel *et al.*, 2022). Similarly, educational initiatives in the Pacific region are essential for enhancing resilience and reducing vulnerability to climate change-induced mental health impacts.

3. Educational strategies for climate resilience and mental well-being

To empower young people in coping with climate change-induced mental health challenges, educational strategies and curricula play a pivotal role. Integrating climate change education with mental health support, promoting environmental literacy, and fostering adaptive coping mechanisms are essential components of empowering youth in this context. Environmental literacy education in schools can significantly contribute to enhancing students' understanding of environmental issues and their ability to make informed decisions. Studies have highlighted the importance of incorporating environmental literacy into curricula to support adolescents in making informed choices related to food and the environment. In addition, evaluating the environmental literacy of undergraduate students can inform policy discussions and curriculum development to enhance environmental education at higher education levels. Empirical evidence suggests that environmental education can increase awareness of environmental and renewable energy technologies, contributing to the development of environmental literacy among individuals (Edsand & Broich, 2019). Furthermore, utilizing innovative approaches such as virtual reality technology in environmental education can enhance environmental ethics and literacy, providing new perspectives for educators and researchers.

Education for environmental sustainable development offers a valuable approach to enhancing environmental literacy in science education, providing students with insights into environmental issues and sustainable practices (Wilujeng *et al.*, 2019). In addition, leveraging environmental print in emergent literacy can help children gain valuable knowledge about their surroundings and foster environmental awareness from a young age. Cultivating awareness of environmental matters in science classrooms has been identified as a predictor of science learning outcomes, emphasizing the importance of integrating environmental education into academic disciplines (Lee, 2023). Understanding the demand for environmental education and assessing environmental literacy among citizens in sustainable urban construction settings can guide the development of targeted educational initiatives.

4. Challenges and opportunities in implementing educational programs

Implementing educational programs in developing countries faces challenges such as resource limitations, cultural factors, and the necessity for multi-sector collaboration. These barriers can impede the effective delivery and sustainability of educational initiatives. However, successful examples and models exist that have overcome such challenges, providing valuable insights for future implementations. Resource limitations pose a significant barrier to implementing educational programs in developing countries. Lack of funding, trained teaching staff, and educational infrastructure are common challenges (Vindrola-Padros *et al.*, 2017). To address this, successful models have focused on leveraging partnerships with international organizations, local non-governmental organizations, and private sector entities to secure funding, expertise, and resources for program implementation. By establishing collaborations with diverse stakeholders, educational programs can access additional resources and expertise, enhancing their effectiveness and sustainability. Cultural factors also play a crucial role in the implementation of educational programs. Sociocultural norms, beliefs, and practices can influence the acceptance and effectiveness of educational initiatives.

5. Conclusion

The pivotal role of education in empowering young individuals to navigate the mental health challenges posed by climate change is crucial. Education acts as a potent tool for providing youth with the necessary knowledge, skills, and resilience to tackle complex societal issues. The convergence of education, mental health, and environmental literacy emerges as a significant focal point for empowering young people, particularly in developing nations. In the realm of mental health challenges induced by climate change, innovative educational strategies are imperative to cultivate adaptive coping mechanisms and enhance mental well-being. Collaborative endeavors involving multi-sector partnerships are vital for surmounting resource constraints and cultural obstacles, ensuring the efficient implementation and sustainability of educational schemes. By engaging with a diverse array of stakeholders, such as international organizations, local non-governmental organizations, and private sector entities, educational initiatives can access additional resources and expertise to amplify their impact. Cultural sensitivity and community involvement are fundamental components of educational programs designed to empower young individuals. By honoring local norms, beliefs, and practices, educational initiatives can augment their

pertinence and efficacy. Successful models underscore the significance of integrating cultural considerations into program development and delivery, thereby transcending cultural barriers and fostering meaningful community engagement.

Furthermore, advocating for increased investment and innovation in educational methodologies within developing countries is imperative for addressing the intricate challenges faced by young people. Through partnerships, embracing cultural diversity, and promoting environmental literacy, educational programs can empower youth to effectively navigate the mental health repercussions of climate change. Augmented funding, training opportunities, and collaborative endeavors can propel positive transformations and empower young individuals to spearhead sustainable development initiatives. Envisioning the future, a scenario materializes where education assumes a central role in empowering young people to confront global challenges. By investing in inclusive and empowering educational endeavors, developing nations can equip youth with the requisite knowledge and skills to navigate the complexities of mental health challenges induced by climate change. Through collaborative actions, cultural sensitivity, and innovative methodologies, education can act as a catalyst for positive change, fostering resilience, promoting environmental literacy, and empowering young individuals to forge a sustainable and equitable future.

Acknowledgments

None.

Funding

None.

Conflict of interest

The authors declare no competing interests.

Author contributions

Conceptualization: Usoro Udousoro Akpan

Writing – original draft: Usoro Udousoro Akpan, Ibrahim Khalil Ja'afar

Writing – review & editing: All authors

Ethics approval and consent to participate

Not applicable.

Consent for publication

Not applicable.

Availability of data

Not applicable.

References

- Cefai, C., Camilleri, L., Bartolo, P., Grazzani, I., Cavioni, V., Conte, E., *et al.* (2022). The Effectiveness of a school-based, universal mental health programme in six European countries. *Frontiers in Psychology*, 13, 925614.
<https://doi.org/10.3389/fpsyg.2022.925614>
- Edsand, H.E., & Broich, T. (2019). The impact of environmental education on environmental and renewable energy technology awareness: Empirical evidence from Colombia. *International Journal of Science and Mathematics Education*, 18(4), 1-24.
<https://doi.org/10.1007/s10763-019-09988-x>
- Gislason, M.K., Kennedy, A.M. & Witham, S.M. (2021). The interplay between social and ecological determinants of mental health for children and youth in the climate crisis. *International Journal of Environmental Research and Public Health*, 18(9), 4573.
<https://doi.org/10.3390/ijerph18094573>
- Hayes, K., & Poland, B. (2018). Addressing mental health in a changing climate: Incorporating mental health indicators into climate change and health vulnerability and adaptation assessments. *International Journal of Environmental Research and Public Health*, 15(9), 1806.
<https://doi.org/10.3390/ijerph15091806>
- Lebel, L., Paquin, V., Kenny, T.A., Fletcher, C., Nadeau, L., Chachamovich, E., *et al.* (2022). Climate change and indigenous mental health in the circumpolar north: A systematic review to inform clinical practice. *Transcultural Psychiatry*, 59(3), 312-336.
<https://doi.org/10.1177/13634615211066698>
- Lee, A. (2023). The importance of cultivating awareness of environmental matters in science classrooms: A cross-regional study. *Australian Journal of Environmental Education*, 39(4), 1-25.
<https://doi.org/10.1017/ae.2023.7>
- Ramadan, A.M.H., & Ataallah, A.G. (2021). Are climate change and mental health correlated? *General Psychiatry*, 34(6), e100648.
<https://doi.org/10.1136/gpsych-2021-100648>
- Vay, J.N.L., Cunningham, A., Soul, L., Dave, H., Hoath, L., & Lawrance, E.L. (2024). Integrating mental health into climate change education to inspire climate action while safeguarding mental health. *Frontiers in Psychology*, 14, 1298623.
<https://doi.org/10.3389/fpsyg.2023.1298623>
- Vindrola-Padros, C., Mertnoff, R., Lasmarias, C., & Gómez-Batiste, X. (2017). Palliative care education in Latin America: A systematic review of training programs for healthcare professionals. *Palliative and Supportive Care*, 16(1), 107-117.
<https://doi.org/10.1017/S147895151700061X>
- Wilujeng, I., Dwandaru, W.S.B., & Rauf, R.A. (2019). The effectiveness of education for environmental sustainable development to enhance environmental literacy in science education: A case study of hydropower. *Journal Pendidikan IPA Indonesia*, 8(4), 521-528.
<https://doi.org/10.15294/jpii.v8i4.19948>