

**Title:** An intergenerational reading of climate change-health concern nexus: A qualitative study of the Millennials' and Gen Z participants' perceptions

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**Reviewer's report:**

This study qualitatively examines if there are generational differences in the attitudes, beliefs, and knowledge of climate change and its relationship to health differ between Millennials and Gen Z. The authors found some differences between generations on the five dimensions that they measured: views of individual and community health; climate change knowledge; perceived health impacts of climate change; attitudes towards climate change; and behaviors related to climate change. Principally, the authors found that, across generations, participants struggled to make connections between the climate impacts they perceive/experience and the related health impacts of those impacts.

Previous research has shown that demonstrating the connection between climate change and health can be a useful way to engage people with the broader issue of climate change (e.g., Myers et al., 2012). Therefore, it is important to understand how people make these connections to their daily lives. Further, as the researchers note, generational differences in these understandings and perceptions matter—as younger generations like Millennials and Gen Z are likely to more impacted than older generations and the ones working to address the issue moving forward. Distinguishing between Millennial and Gen Z views of climate change and health can provide us with insights into where efforts are needed to educate and engage these groups with climate and health. The topic of this manuscript therefore addresses an important topic and contributes to shared knowledge by helping to open up the conversation about

While the paper addresses an important research question, there are several major places where the paper would benefit from improvement:

The flow of the literature review as it stands now is hard to follow. Principally, climate change is not thoroughly mentioned until later even though it is the primary topic of interest in the paper. I suggest reframing how you present the information in the literature review to discuss climate change first—tell us what the problem is and how it connects to human health—then transition into why perceptions of these impacts, beliefs, and attitudes may look different generationally and why differences between Millennials and Gen Z specifically are important to parse out and ending with how you intend to answer your EQ like you do currently. Climate change is the context within which you are examining generational differences, so discussing it first can help show your readers this.

The discussion of differences between Millennials and Gen Z is an important distinction to make, but pointing this discussion more towards why or how they may lead to differences in climate and health knowledge/attitudes/behaviors/etc. would be much more useful in the context of the paper instead of simply listing the differences. For example, what is the relevance of note about Gen Z being under management of Millennials at work? None of the interview data points to the relevance of this statement for this study, yet it is mentioned in several places in the paper, including the abstract and lit review.

The same issue arises in the discussion of climate and health in the literature review; it is more of just a list of impacts when it should likely include more about why making the climate-health connection matters for public education and engagement and how generational differences may relate to these differences.

Please include information about what country participants are from, as perceptions of climate and health likely differ between countries or the drivers of the perceptions may differ (e.g., Island nations may have more palpable experiences with climate change than landlocked countries, leading their perception of the climate impacts and their relationship to climate and health may differ). This may have important implications for how you use the sources you draw on in your discussion section, as many of the studies you cite are U.S.-centric.

How was the climate anxiety measure administered? Verbally or written? Also, did you evaluate differences in scores on the total scale and on the subscales proposed by Clayton (i.e., functional impairment, etc.)? The scale was designed to be combined as a full overall measure of climate anxiety, so leaving it as differences on just the individual items undermines the usefulness of employing a validated scale.

In the discussion, some of the explanations of the findings are not clear, and more so just restate the findings of other papers without taking the extra steps to draw clear connections between prior work and the findings in the current manuscript. Including

Overall, the reader is not left with a clear sense of the implications of the findings from the discussion section. What do the similarities and differences between generations tell us? How can we use those understandings to engage others? Do these generations need support in the climate and health space, like with addressing their anxiety about climate change? What are the implications of the differences? Do you believe they are constructive differences showing progress between generations, destructive differences that will inhibit our collective ability to address climate change, or a combination of both? Answering these types of questions will give the reader a much better understanding of why this study matters.

Consider combining the discussion and conclusion sections can be combined. They are a bit repetitive, and the paragraphs in the conclusion could be used to guide the structure of the discussion.

Other minor comments/suggestions:

Double check the Millennial and Gen Z year ranges. The ones you present are overlapping and some sources indicate Millennials as 1980-1996 and Gen-Z as 1997-2012 (e.g., Dimock, 2019).

Some of the figures/graphs are hard to read. Also be mindful of how the colors may look in black and white, should some readers print the article, or to those with colorblindness (blue-green may be hard to distinguish for some).

Define ambiguous terms like “motivational buttons”

In summary, the findings of this paper are interesting, but the setup for them in the literature and the discussion of them need to be strengthened to highlight their relevance and make clear

to readers how the findings advance our understandings of and ability to engage people in the climate and health conversation.

I thank the researchers for the time spent on this study.

#### References:

Dimock, M. (2019). Defining generations: Where Millennials end and Generation Z begins. Pew Research Center. Retrieved October 21, 2022, from <https://www.pewresearch.org/fact-tank/2019/01/17/where-millennials-end-and-generation-z-begins/>

Myers, T. A., Nisbet, M. C., Maibach, E. W., & Leiserowitz, A. A. (2012). A public health frame arouses hopeful emotions about climate change. *Climatic Change*, 113(3), 1105–1112. <https://doi.org/10.1007/s10584-012-0513-6>