



Understanding Gen Z's Climate Anxiety: A Look at the Latest Research

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Abstract

Nowadays, the widespread availability of information on climate change has made up-to-date knowledge in this area more accessible to a broad section of society. At the same time, this information overload can potentially threaten psychological well-being. In particular, a specific form of anxiety, commonly known as climate (change) anxiety, is a substantial problem. Although climate anxiety terminology only became commonplace a few years ago, the phenomenon itself has older roots. It includes several responses to climate change, the complexity of which assumes more detailed knowledge. The fact that climate disasters are becoming more common may generate intense negative emotions such as fear, depression, tension, and rage. According to current studies, stress derived from climate change is most prevalent among Generation Z. This generation group is the focus of researchers due to their outstanding environmentally conscious approach. They are possibly expected to make the most important decisions in the future, and worries about climate change may significantly influence their decisions. Researchers need to analyze the multiple causes of this phenomenon and the actions they induce. This economic literature review aims to summarize the main observations from the international literature in this field.

Keywords

climate change, sustainability, climate anxiety, generation Z, psychology

1. Introduction

The terminology of climate anxiety was introduced only a few years ago, even though the phenomenon has been around for much longer and has a significant impact on individuals' climate attitudes and mental and physical health. This concept encompasses a wide range of climate change responses (*Clayton and Karasia, 2020*), the complexity of which requires an in-depth interpretation. The climatic disasters that frequently occur today have a serious impact on individuals' mental health (*Haines et al., 2006; Berry et al., 2010; Martiello and Giacchi, 2010; Xu et al., 2013*), as well as their physical condition (*Clayton and Karasia, 2020*). As a result, such disasters can be associated with strong negative emotions (for example, fear, sadness, anger, depression). Other negative effects of climate change include indecision to have children, threats to family security, scarce opportunities for access to various goods, or the belief that the future is hopeless and doomed to failure (*Hickman et al., 2021*).

According to the relevant literature so far, climate anxiety manifests itself most strongly among 16–30-year-olds (*Van Liere and Dunlap, 1980; Hines et al., 1987; Hawcroft and Milfont, 2010; Milfont, 2012; European Commission, 2017; Clayton and Karasia, 2020*). Intensive examination of this age group is warranted, as they are considered the key figures of the future with their environmentally conscious behaviour. They are expected to occupy decision-making positions and will face important decisions that can be significantly influenced by climate anxiety and concerns about negative ecological



changes. Beyond the complex global ecological system, it is necessary to examine the diverse causes behind climate anxiety and the actions triggered by it. This article aims to present the results of an international literature review.

2. History and concept of climate anxiety

First, we want to analyze the concept of climate anxiety and then present the definition most researchers accept. Böhm's 2003 article was the first to claim that an increasing proportion of people are feeling frustration, worry, and guilt about the effects of climate change (Böhm, 2003). Since the second half of the 2000s, research on the effects of climate change on mental health has gradually increased (Haines et al., 2006; Berry et al., 2010; Martiello and Giacchi, 2010; Xu et al., 2013). The term "eco-anxiety" was coined by Albrecht in 2011 (Albrecht, 2011).

Research shows that the problem of climate anxiety is mostly determined by the lack of measures to prepare for climate change and its effects on the present and future (Clayton and Karasia, 2020). Climate anxiety is defined in the Climate Psychology Handbook as the "increased emotional, mental or somatic anxiety in response to dangerous changes in the climate system" (CPA, 2020). According to the Cambridge Dictionary, climate anxiety is "when someone is frightened or very concerned about climate change, changes or damage to Earth's weather systems, and warming that may have been caused by human activity" (McIntosh, 2023).

3. Presentation of major research on climate anxiety

Many factors, such as geographic location, local climatic conditions, and socioeconomic conditions, can influence differences in climate anxiety levels. Climate anxiety often occurs in countries most affected by climate change, which experience severe weather events and disasters. This finding is supported by the fact that the anxiety rate due to high climate change among the young generation living in Portugal is also due to increased forest fires since 2017 (Hickman et al., 2021). Baby Boomers describes generations: Born between 1946 and 1964; Generation X: Between 1965 and 1980. Generation Y (Millennials): Born approximately from 1981 to 1996, Generation Z: Born between 1997 and 2012. These regions require immediate attention and resources to mitigate impacts and allay public concerns (Hickman et al., 2021; Ogunbode et al., 2022). Figure 1 shows the rate of climate anxiety in percentages in some European countries (Figure 1):

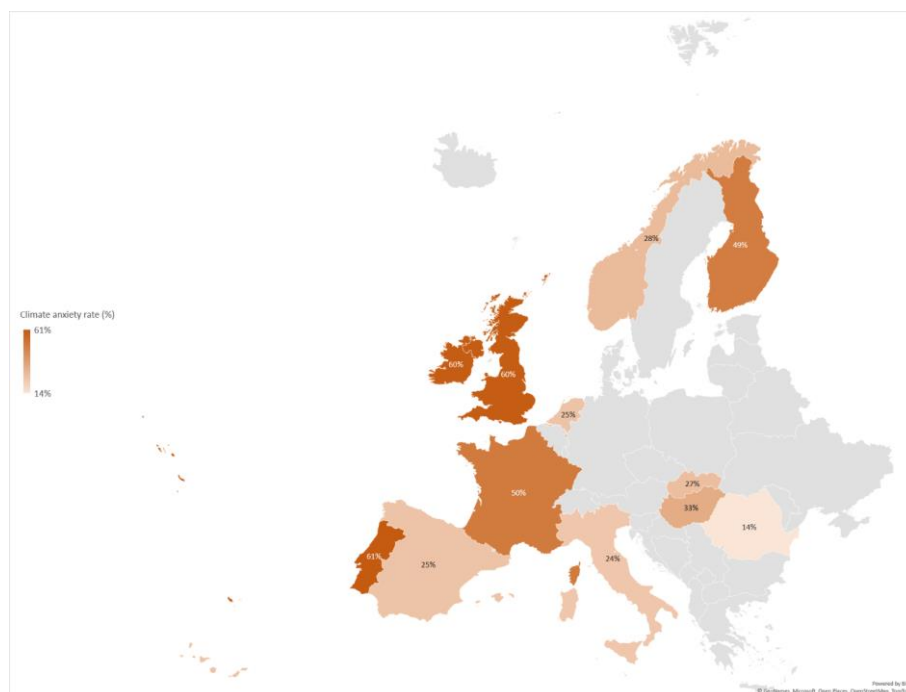


Figure 1: Results of European countries on climate anxiety within Gen Z.

Source: Own elaboration on the source of Hickman et al. (2021); UNESCO (2021); Ogunbode et al. (2022), UNICEF (2022)

Based on the data provided in Figure 1, the United Kingdom (60%, $N = 1000$), Ireland (60%, $N = 1200$), and Portugal (61%, $N = 1000$) have the highest levels of climate anxiety among Gen Z, with at least 60% climate anxiety in all three



countries, compared to 50% in France ($N = 1000$). According to the results of research conducted in Hungary (33%, $N = 2007$), about a third of respondents and a quarter of respondents in the Netherlands (25%, $N = 415$), Italy (24%, $N = 294$), Spain (25%, $N = 590$), and Slovakia (27%, $N = 258$) felt the strong negative impact of climate change on mental health. Based on Ogunbode et al. (2022), interestingly, in the case of Russia (5%, $N = 477$), the rate of climate anxiety is much lower than in the case of other European countries studied. Russia's extremely low climate anxiety rate likely results from a combination of factors, including the political situation and the ongoing war. For young Russians, current conflicts may become more dominant in their daily lives, so concerns about climate change may fade into the background. Based on this, it can be concluded that the situation regarding the negative mental state caused by climate change is not the same in all countries.

The Climate Anxiety Scale (CAS) was developed by Clayton and Karasia in 2020. This scale is based on 13 questions and evaluates respondents' degree of climate anxiety on a 7-point Likert scale ranging from 1 to 7. These questions aim to assess the level of extremely strong emotions in individual and social environments and to identify signs of anxiety affecting everyday life. Clayton and Karasia identified a positive correlation between general and climate anxiety in a US survey using the elaborated scale. However, this anxiety does not necessarily lead to behavioural changes. In addition, they found no clear difference in the degree of climate anxiety between men and women, contrary to most findings in the literature. The researchers also found that environmental attitudes are strongly correlated with behavioural engagement and significantly correlate with climate change experiences. The research suggests that those who identify more strongly with nature respond more strongly to climate change (Clayton and Karasia, 2020). Overall, the study concluded that climate change anxiety is common, especially among younger adults, and points out that the specific nature of the worry has a significant impact on an individual's life. At the same time, he showed that although it is closely related to emotional reactions, climate anxiety is not associated with changes in people's behaviour.

Leung and colleagues partnered with Orygen Youth Mental Health to produce the 2022 Mission Australia Youth Survey Report, which surveyed approximately 18,800 Australian youth aged 15 to 19. According to the research, 25.5% of respondents are "very worried" or "extremely worried" about the climate crisis. Among those who expressed concern about climate change, 51% said environmental protection was one of their top concerns. The survey also found that young people who feel concerned about climate change often rate their mental health as "poor or moderate" (Leung et al., 2022). These findings highlight that climate concerns have a significant impact on the mental health of young Australians.

Hickman and co-authors published the results of their first global climate anxiety survey in 2021. The research showed that negative emotions among 10,000 young people aged 16 to 25 were strongly correlated with climate change. Survey participants live in Australia, Brazil, Finland, France, India, Nigeria, the Philippines, Portugal, the United Kingdom and the USA. According to the results, most respondents fear climate change (59% are extremely worried). Over 50% reported feeling sad, anxious, angry, helpless, and guilty about the ecological crisis. More than 45% said their feelings about climate change negatively affect their daily lives and actions. Anxiety about climate change is closely related to the perception of a lack of government responses and the resulting sense of betrayal. The researchers concluded that the level of concern about climate change is related to the frequency of negative thoughts. The survey showed that 39.1% of respondents are unsure and prefer not to have children. The findings also show that climate anxiety caused by climate change affects individuals' current and future actions and negatively affects social relationships. 92% of participants are not confident and feel that humanity is doomed. According to them, 55% believe they will have fewer opportunities than their parents, especially regarding job and natural environment prospects. 55% of the participants in the study claimed that the objects, tools, and places they consider important could be destroyed (Hickman et al., 2021).

Research conducted by Stanley et al. (2021) finds that the COVID-19 crisis has not changed the level of concern about global warming. In contrast, a study by Noth and Tonzer (2022) claims that young people's concern about climate change has decreased compared to pre-pandemic times. Several factors can explain this decrease. One factor is that Gen Z tends to live in the present and think short-term, so they are more responsive to current information from the media and their social environment. In addition, air quality improved in several countries during the pandemic, raising hopes for improving the climate (Noth and Tonzer, 2022).

Based on a survey conducted by Ogunbode and colleagues in 32 countries, researchers found that GDP positively correlates with the relationship between climate anxiety and environmentally friendly behaviour. However, GDP showed no significant relationship with the link between climate anxiety and mental health nationally. The significant links between



climate anxiety and environmental activism were mainly confined to relatively wealthy Western countries. In 31 out of 32 countries, climate anxiety was inversely related to mental well-being (*Ogunbode et al., 2022*).

At the same time, it is noticeable that climate anxiety can have not only negative but also positive effects. According to Cunsolo et al., climate anxiety is a feeling that, with appropriate support, can persuade individuals to take proactive, positive actions, including those related to combating climate change (*Cunsolo et al., 2020*). According to Ray, our actions on climate issues stem from our emotions rather than our rational selves. Therefore, the more effectively and quickly we can connect the two ways of thinking, the more effective it can be in protecting the planet from the harmful effects of climate change (*Ray, 2020*).

4. Discussion and conclusion

This article summarized the general findings of a literature review on climate anxiety. We claim that the most important conclusion is to explain the possible role of individual and social actions in addressing the problem.

Considering the actors and roles, it is important to use the theory of subsidiarity, thus taking responsibility and action at the smallest, even individual, level. The study of USC can strengthen the idea that addressing climate anxiety is not only the responsibility of governments and corporations. Individuals and communities also have a role to play in alleviating climate anxiety. Many individual and social actions can address climate change and climate anxiety. For example, cooperation with local authorities can increase the uptake of sustainable modes of transport. It is important to emphasize that decision-making should be dominated by political and financial considerations and real sustainability (*USC Sustainability, 2020*).

At the institutional level, it is also worth making expectations not only for the government, as it is much clearer to identify and address problems at the local government level. However, very importantly related to this is what *Hickman et al. (2021)* write: for young people, government inaction does not only cause moral damage but also violates the satisfaction of basic human needs. Governments need to recognize and understand the causes of climate anxiety and take active action to protect mental health and well-being. A deeper understanding and addressing climate change concerns is critical (*Hickman et al., 2021*).

Climate change concerns decreased during the COVID-19 pandemic (*Noth and Tonzer, 2022*). However, it would be advisable to raise media attention to the adverse effects of climate change, at least at pre-pandemic levels. The reason is that several messages, including encouraging proactive environmental actions, can be conveyed through the media to a wide range of young people belonging to Generation Z. Although fear drives climate action in the short term, belief in positive change is the most motivating factor in the long term. The faith and hope attributed to success generate additional activities that improve the state of the planet and reduce feelings of climate anxiety regarding the mental state of young people (*Kleres-Wettergren, 2017*). Other solutions to support long-term sustainability include active, dialogue-based science education, developing critical thinking skills, and deepening shared visions of a sustainable future (*Kelly et al., 2022*).

These findings from the literature confirm the special role of the media and education in addressing this problem. These two “social activities” cannot be ignored since, as stated at the beginning of this article, climate anxiety is the strongest among 30-year-olds. This age group has a strong presence in the education system (teachers, parents), and social media use is also a feature of individuals in this age group. Within media use, communication, and information, the reliability of information is a key issue, which is why we deliver information to Generation Z.

We believe that the role of education is unquestionable, be it in the 16–30 age group at secondary or higher education level, but also in the world of adult education or post-graduate training, where there is a place for the transmission and reception of relevant and reliable information. The openness of individuals to the subject, both in their roles as teachers and as students, is a decisive factor.

In addition to roles, defining activities is also an important task. We think climate anxiety is a feeling that, with appropriate support, can persuade individuals to take proactive, positive actions that can work. However, providing appropriate information and communicating about it is also important. Overcoming anxiety can motivate, but reliable communication of the positive environmental effects is essential.



Comprehensive change can only happen if people understand that climate change requires an immediate response, and action must be taken at the individual level. Global thinking and local action have the potential to reduce climate anxiety.

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