Sustainability and eco-anxiety: Strategies for addressing environmental concern

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Abstract

Although there is still no unanimous definition of eco-anxiety, this term is used to describe an emerging phenomenon which, in recent years, has attracted the attention of psychologists, sociologists and those involved in Public Health. It refers to a form of anxiety and worry related to climate change and for the future of the planet and its resources. This article explores how eco-anxiety can influence environmental awareness and sustainability practices, highlighting both challenges and opportunities it presents for promoting a sustainable future.

While these feelings towards the environment and climate change can generate anxiety, it can also act as a powerful driver of change and awareness in promoting sustainability. Therefore, it is crucial to develop strategies that transform eco-anxiety into positive action, supporting individuals, particularly more vulnerable, in their transition to more sustainable practices.

Keywords: climate change, concern, eco-anxiety, environment, sustainability

1. Introduction

In recent decades, climate change is a topic that's getting a lot of attention in various contexts; moreover, the increasing recurrence of extreme climatic events may have led to the modification of habits among populations that face and suffer them. These can be seen as incentives and disincentives that

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impact on the choices of certain groups of the population, influencing them and their health. There is an increasing number of scientific evidence on the negative effects that the current climate change is having on the individuals' health, especially among those who already have particular health conditions. Indeed, the ongoing climate crisis is not just caused harm to environment, but it is also having deep psychological effects on people worldwide. The health risks caused by climate change are largely linked to the direct effects of the anomalous heat recorded in the increasingly frequent heat waves worldwide, but also to the disastrous events related with climate change that impact the places in which we live.

The data currently available highlight the need for urgent actions involving different sectors. Public health systems, including the Italian one, are progressively adopting strategies to strengthen their surveillance and response systems to climate emergency.

The effects of climate change reach far beyond just harming the environment, since they have a direct impact on public health in both the short and long term; as temperatures increase, extreme weather events become more common, it could determine the spread of vector-borne diseases like malaria and dengue, and additionally, worsening air pollution and heat stress can lead to more respiratory and cardiovascular issues (World Health Organization, 2021). Moreover, climate-related food and water shortages raise the risk of malnutrition and waterborne diseases, particularly among vulnerable population. Finally, the mental health effects of climate change also add to the overall burden of disease, highlighting the urgent need for health systems that can support climate challenges and respond to psychological needs (Watts et al., 2021).

Therefore, public health organizations are increasingly urged to weave climate adaptation into their health policies, enhancing early warning systems, emergency preparedness, and community prevention efforts, for the safeguard of public health which becomes closely linked from the promotion of climate action and sustainability.

In Europe, Italy stands out as one of the most climate-vulnerable country, frequently facing extreme weather events like floods, droughts, and wildfires (ISPRA, 2023). These challenges have a significant impact on communities, agriculture and infrastructure, and causing both economic and psychological strain for those living there. (Cogo et al., 2021).

Climate Activism and movements such as "Fridays for Future" have rallied thousands of young Italians, sparking awareness and igniting a great attention on protection of the planet (Martiskainen et al., 2020). This increase in young participation demonstrates the influence of young voices on

122

shaping public discussions and policies, and also highlights the link between anxiety and proactive environmental leadership.

In this scenario, sustainability plays a fundamental role; managing responsibly our natural resources, to meet our present requirements, without endangering the ability of future generations to meet theirs own, it is a crucial notion when it comes to addressing the environmental issues we confront on a daily basis. Energy conservation, waste reduction, climate adaption, and the advancement of circular economies are only a few of the many diverse topics covered by sustainable practices (United Nations, 2023). Sustainable practices can improve social and economic well-being and reduce environmental impact in our daily lives.

Given climate change and the associated eco-anxiety, the pursuit of sustainability is particularly important. Research, show that people who take part in sustainable activities report feeling more environmentally effective, which can lessen the hopelessness that frequently accompanies eco-anxiety (Pihkala, 2020; Sampaio et al., 2023). Furthermore, community-based projects and sustainability education are essential for increasing environmental consciousness and enabling people to act as change agents; therefore, these issues should be incorporate into our government policies, business plans, and educational institutions.

According to the Intergovernmental Panel on Climate Change (IPCC), global temperatures have increased about 1.1°C above pre-industrial levels, with serious effects not only for ecosystems but also to human societies (IPCC, 2023). All extreme weather events such as heatwaves, droughts, floods, landslides, and fires happening more often and with greater intensity, determining effects on food security, water availability, and in general on public health (World Health Organization, 2021). Moreover, the World Health Organization (WHO) projects that climate change could lead to around 250,000 extra deaths each year between 2030 and 2050, due to issues like malnutrition, malaria, diarrhea, and heat stress (WHO, 2021).

These environmental changes also could consequences on mental health. Indeed, lately the term eco-anxiety is increasingly used, to describe a feeling of fear and worry from climate change (Clayton, 2020). It refers to a form of anxiety and worry related to climate change and for the future of the planet and its resources. This concern has been gaining more attention, particularly among younger generations who often feel both at risk from climate impacts (Hickman et al., 2021). Sometimes eco-anxiety can inspire people to take action for the environment, but, at same time, it can also lead to psychological distress if individuals feel overwhelmed by the threat of climate change (Boluda-Verdú et al., 2022). This article explores how eco-anxiety can influence environmental awareness and sustainability practices,

123

highlighting both challenges and opportunities it presents for promoting a sustainable future, and how integrated approaches – governments, communities, and schools – can build both environmental and psychological resilience.

2. Eco-anxiety: definition and dimensions

Despite the lack of a universally accepted definition, eco-anxiety has gained popularity as a term to characterize a new and complex phenomenon, that has recently attracted the attention of public health professionals, psychologists, and sociologists (Clayton, 2020; Pihkala, 2020). Initially, eco-anxiety was primarily thought to be a worry associated with climate change, but nowit may also cause people to feel depressed, guilty, or anxious about the future (Clayton & Karazsia, 2020). Indeed, scientists have also highlighted its socio-political aspect, acknowledging that economic interests and the perceived inability of political leaders to adequately address the climate crisis sometimes intensify this phenomenon (Hickman et al., 2021). Interdisciplinary research has been prompted by this changing understanding, with contributions from environmental sociology, political ecology, and public health (Ojala, 2016; Pihkala, 2020). The need of climate-resilient health systems that can address the effects of environmental change on both physical and mental health is highlighted by the growing recognition of eco-anxiety in the area of public health as a component of a larger framework of climate-related health impacts (WHO, 2021).

According to research, eco-anxiety is frequently linked to mental health symptoms like anxiety, sadness,and insomnia (Boluda-Verdú et al., 2022); among adolescents and young adults, it has been associated with a higher incidence of suicidal thoughts especially in those who are already dealing with mental health issues (Lerolle et al., 2025). Additionally, when people believe that climate change is unavoidable and unpredictable, eco-anxiety can cause them to become emotionally paralyzed (von Gal et al., 2024).

However, there is strong evidence that pro-environmental action, such as climate activism, consuming less, and adopting an environmentally conscious lifestyle, is positively correlated with eco-anxiety (Ogunbode et al., 2022). This supports the idea that eco-anxiety is context-dependent and impacted by societal norms, perceived efficacy, and government action (Hickman et al., 2021). When people believe that their individual efforts are in vain, eco-anxiety can become worrying. Avoidance behaviors, disengagement from the environmental discourse and, finally, a decline in psychological well-being can result from this feeling of eco-paralysis. The

124

significance of providing structured pathways from awareness to action is underscored, as it ensures that concerns are transformed into meaningful and feasible engagement.

3. The role of sustainability in managing eco-anxiety

When properly presented, sustainability initiatives can empower people, encouraging significant action. Particularly important in converting eco-anxiety into constructive participation through community initiatives that promote collaborative environmental action, build a connection with nature, and integrate creative expression (Thomson et al., 2025). In particular, projects that prioritize concrete and local environmental improvements, provide people a sense of efficacy by showing how simple initiatives can lead to bigger solutions. This approach fosters a feeling of community and shared responsibility, reinforcing the concept that environmental stewardship begins within communities. Moreover, programs that prioritize intergenerational collaboration cultivate a feeling of continuity and optimism, which are essential elements in combating hopelessness associated with climate uncertainty.

In the literature, people who have a high level of collective effectiveness, the belief that their governments and communities can effectively tackle climate change has had less eco-anxiety (Hickman et al., 2021). On the other hand, the perception of government inactivity tends to increase eco-anxiety, especially among young people who believe that their future is neglected (Hickman et al., 2021). This underlines how crucial it is to combine responses at individual, community and political levels to ensure that environmental concerns are addressed in practice.

4. Strategies for addressing eco-anxiety

Educational programs need to shift their focus away from alarming narratives and towards solution-oriented thinking. Research on nursing students demonstrates that eco-anxiety and climate change awareness are related, but it also emphasizes how critical it is to give students the tools they need to participate in mitigation and adaptation initiatives (Baykara Mat & Yilmaz, 2024). In order to assist people place their worries within larger systemic issues and find concrete chances for action, climate literacy initiatives should prioritize both scientific information and psychological coping abilities (Sampaio et al., 2023).

It is essential to incorporate eco-anxiety into mental health treatment, especially for young people and disadvantaged groups. Climate-aware treatment can assist people in processing their feelings without repressing them, and eco-anxiety should be acknowledged as a real worry (Boluda-Verdú et al., 2022). Promising therapeutic approaches include eco-emotion control techniques and acceptance and commitment therapy (Pihkala, 2020). Furthermore, group-based therapies that integrate collective action planning with emotional expression have been successful in promoting environmental agency and psychological resilience.

Anxiety can be transformed into action by making more accessible possibilities, such climate activism, community, or environmental volunteer work (Sampaio et al., 2023). Research indicates that peer-led programs work especially well with young people, who find comfort in group efforts and approval from others (Ogunbode et al., 2022).

Programmes that promote connection with nature and creative expression, such as eco-art therapy or nature immersion experiences, can alleviate discomfort by strengthening emotional bonds with the environment (Thomson et al., 2025). Such programs help individuals redefine their relationship with nature from one of fear and loss to one of care and reciprocity. Creative interventions also allow the symbolic elaboration of eco-anxiety, allowing a constructive emotional expression.

Finally, governments and institutions need to recognize that transparency and responsiveness are key to reducing eco-anxiety. Young people who perceive their governments as a crucial climate action report less ecological anxiety and greater confidence in democratic processes (Hickman et al., 2021). Policies that actively involve young people in climate decision-making, combined with clear climate action plans, can restore confidence and reduce negative feelings (Hickman et al., 2021). The Italian government and local institutions have introduced several climate policies, including incentives for renewable energy, green infrastructure projects and emission reduction targets (ISPRA, 2023). However, the implementation of these policies is often difficult.

Schools play a crucial role in forming young people's understanding of climate change and in improving their ability to respond to environmental challenges. Recent studies show that integrating environmental education into curricula not only improves climate literacy, but also provides students with the emotional tools to process eco-anxiety (Ojala, 2016). Effective environmental education goes beyond the transmission of facts about climate change; it actively involves students in problem-solving activities, promotes climate communication skills and encourages participatory learning through projects directly linked to local environmental issues (Lawson et al., 2019).

Educational institutions are increasingly incorporating climate action projects, where students collaborate on sustainability initiatives within their schools and communities. Such experiential learning improves self-efficacy-a key protective factor against eco-anxiety-and reinforces the belief that personal and collective actions can drive positive environmental change (Stevenson et al., 2021). In addition, interdisciplinary approaches combining science, ethics and psychology help students grasp both the ecological and emotional dimensions of climate change, making them better equipped to deal with uncertainty and stress (Rousell & Cutter-Mackenzie-Knowles, 2020).

The inclusion of environmental education at all levels of education, from primary schools to universities, is increasingly seen as a vital climate adaptation strategy, which increase climate resilience and empowers future generations to become agents of sustainable change.

Being well informed about environmental problems and available solutions can significantly reduce feelings of impotence and promote a pro-active mindset. Access to reliable information enhances individuals' sense of autonomy and encourages constructive engagement, turning fear into informed action (Ojala, 2016; Lawson et al., 2019).

Environmental education through reliable media sources, educational campaigns and digital platforms can bridge the gap between climate science and public understanding (Lawson et al., 2019). When individuals receive concrete information on how they can contribute to adaptation efforts, they are more likely to adopt sustainable behaviors and engage in collective action (Stevenson et al., 2021). In addition, promoting critical media literacy helps young people assess the accuracy of climate-related content, countering misinformation that can exacerbate eco-anxiety (Rousell & Cutter-Mackenzie-Knowles, 2020).

According to literature, stories that provide hope and answers rather than just difficult situations are crucial for empowering people rather than immobilizing them (Ojala, 2016). Positive social norms and the belief that change is achievable can be promoted by presenting real examples of successful environmental activities. The combination of knowledge, action and optimism promotes a sense of control and purpose in addressing climate concerns by converting eco-anxiety into eco-effectiveness.

5. Interconnection between eco-anxiety and sustainability

Eco-anxiety and sustainability are closely related. On the one hand, the experience of eco-anxiety can encourage people to adopt more

environmentally friendly habits (Clayton, 2020), people can alleviate feelings of powerlessness by taking practical steps to restore their sense of effectiveness and control (Ojala, 2016); however, excessive eco-anxiety can lead to environmental paralysis, a condition in which people completely stop worrying about environmental concerns because they believe that their efforts are useless due to systemic inaction (Boluda-Verdú et al., 2022). These aspects underline how crucial it is to provide unambiguous channels for positive interaction, in order to ensure that eco-anxiety will motivate action rather than prevention.

Community involvement and social support networks play a crucial role in transforming eco-anxiety into collective empowerment. Studies indicate that participation in community sustainability projects helps people feel supported and part of a broader movement, against climate-related challenges (Sampaio et al., 2023). Social connections promote shared responsibility, validate environmental concerns and provide practical avenues for collaborative action, strengthening both psychological resilience and environmental commitment (Thomson et al., 2025).

Education is a powerful mediator between eco-anxiety and sustainability. Educational programmes that empower rather than alarm students have been shown to reduce climate distress by promoting pro-environmental behaviour (Lawson et al., 2019). Effective environmental education combines health literacy, critical thinking and emotional coping skills, enabling students to understand complex climate issues, with optimism (Ojala, 2016). Educational initiatives that highlight solutions, showcase successful environmental actions and encourage youth participation in climate governance improve both environmental effectiveness and psychological well-being.

6. Conclusion

Eco-anxiety is a growing phenomenon that highlights the deep interconnection between environmental health and the psychological well-being of individuals. To contrast eco-anxiety, systematic environmental activity that considers public concern is required. By integrating climate knowledge with policy reform, societies may turn this feeling into a force for resilience and personal empowerment, for a sustainable and hopeful future. Its increasing prevalence serves as a reminder of the phenomenon's seriousness as well as the potential for revolutionary change with the right approach. People's experiences and feelings should be taken into consideration when governments and institutions develop environmental

strategies for the future of the planet. This might encourage a collaborative approach that improves a feeling of belonging and shared accountability. Moreover, eco-anxiety may be transformed into a driving factor for resilience and populations self-determination. Education, which encourages individuals to actively engage in sustainability initiatives, can help achieve this objective.

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