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TO THE ISSUE OF STUDYING ECOLOGICAL EMOTIONAL EXPERIENCE

The global ecological crisis is one of the central problems of health care. Everyone experiences its consequences in their own way, which is reflected differently in pro-environmental behavior, psychological health and well-being. The article analyzes the scientific literature of the last 5 years regarding the most frequently researched ecological emotional experience and related syndromes, their role in pro-environmental behavior, psychological health and well-being, as well as methods of their research and treatment. It is determined that recently attention is focused on the study of such ecological emotional experience and related concepts as anxiety, grief, guilt, anger, worry, shame, fear, sadness, depression, despair, econostalgia, solastalgia, psychotheratic syndromes. At the same time, it is emphasized that the role of ecological emotional experience for pro-environmental behavior, psychological health and well-being remains uncertain due to the following reasons: 1) failure to take into account the possible multidimensionality of ecological emotional experience; 2) the study of specific ecological emotional experience is isolated from other ecological emotional experience; 3) a small number of empirical studies and existing limitations of a certain part of already existing studies, for example, their cross-sectional design, which do not allow us to talk about the presence of a causal relationship. Separately, the article considers the problem of methods for researching ecological emotional experience - reports on the insufficient number of methods and the need for psychometric testing of already existing ones on various cultural samples. Also, in this work, in the context of ecological emotional experience, attention is paid to vulnerable categories of the population, namely children, women, the elderly, people with significant health problems (in certain cases), indigenous people and eco-activists. Finally, considering the problem of treatment of ecological emotional experience, three approaches are conditionally distinguished - sociocultural, which takes into account social and cultural features; therapeutic, involving professional intervention; individual, where the emphasis is on the role of the individual.
Key words: *mental health. psychological well-being. eco-emotions. climate emotions. eco-anxiety. climate anxiety. stress. psychoterratic syndromes. pro-environmental behavior.*

Introduction. Can it be considered that if there is a problem of the existence of Ukrainians as a result of hostilities on the territory of our state, then everything related to ecology and climate, which may be less threatening at first glance, should take a back seat? The global ecological crisis is considered one of the most urgent problems related to the health sector (Stanley, Hogg, Leviston & Walker, 2021, p. 3). The threat to health in the 21st century is climate change, according to The International Psychoanalytical Association (Baudon & Jachens, 2021, p. 2). Maibach et al. emphasize climate stability as the most fundamental factor in our health. Moreover, the danger is highlighted not only for humans, but also for the entire planet (Stanley et al., 2021, p. 1). Therefore, even in the conditions of war, the problem of the ecological crisis does not disappear anywhere, and even intensifies. Indeed, the Intergovernmental Panel on Climate Change (IPCC) also talks about the numerical risks of the consequences of climate change, setting, adjusted for the level of global warming, the year 2040 as the starting point for feeling the results of these processes (Boluda-Verdú, Senent-Valero, Casas- Escolano, Matijasevich & Pastor-Valero, 2022, p.1). But what can we do about it and should we do anything at all? Feeling and understanding the consequences of the climate crisis, one gets the impression that we act at the same time as the cause and as helpless witnesses of large-scale ecological processes (Hickman, 2020, p. 414), unable to protect our place of residence and the residence of those dear to us people and animals.

Eco-scientists and eco-activists bravely challenge the unknown, trying to do something, however small at first glance, efforts to save the planet. At the same time, there is no information that could be taken as a model of correct pro-environmental actions in the history of mankind. No one has yet managed to overcome a climate and ecological crisis of this magnitude. Wairdrobe sees in this the temptation to resort to a feeling of passive hopelessness or the opposite, but no less harmful naive hope (Hickman, 2020, p. 415), which does not contain an activity basis, therefore will not lead to the necessary results. Given humanity's enormous leap in development since ancient times, such as in the fields of science and medicine, what was once thought impossible is now a reality. Therefore, by analogy, it can be assumed that the problem of the ecological and climate crisis can be solved by joint efforts.

It is known that the impact of ecological issues on our psychological health and well-being can be direct and indirect, with short-term and long-term consequences. A direct impact can be rapid (for example, extreme natural events) or slow (for

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example, a consistent change in temperature). Indirect impact may consist in reducing food products, creating harmful conditions for life (with dirt, dust, etc.). At the same time, any impact can be both acute (stress after a natural disaster, etc.) and chronic (as a result of the constant action of stressful factors, for example, constant changes in the landscape due to previous natural disasters, etc.) (Comtesse, Ertl, Hengst, Rosner & Smid, 2021, p.1). In any case, all of the above can lead to both minimal distress and clinical disorders such as acute stress disorder, organ damage, and so on. It should be noted that sometimes the effects of climate change on mental health can be delayed and appear even after several years (Cianconi et al., 2023, p. 212).

People experience different emotions about climate change, which in turn make different contributions to well-being and mental health (Ágoston et al., 2022, p. 1). A growing body of research suggests that this relationship is close (Pihkala, 2022b, p. 2). Many people suffer from the emotional consequences of an expected or actual change in the environment (Comtesse et al., 2021, p.1). However, despite the interest in recent years in ecological emotions (Ágoston et al., 2022, p. 2) and emotions related to climate change, their role for psychological health, well-being and pro-environmental behavior remains unresolved.

Barrett et al. and Scarantino indicate that the study of emotions occurs using different terms, for example, "feeling", "mood" or "affect". There are cases of using the term "feelings" for a broader coverage of the investigated phenomena related to the emotional sphere (Pihkala, 2022b, p. 2). For the same purpose in order to cover a wider range of phenomena related to the emotional sphere the term "ecological emotional experience" will be used in this work.

The purpose of this work was to analyze the scientific literature on ecological emotional experience and related syndromes over the past 5 years and to determine the data available today on their role in pro-environmental behavior, mental health and well-being, as well as methods of their research and treatment.

Research results. Cianconi et al. (2023, p. 213) mentioned that sometimes the terms "ecological emotions" and "climatic emotions" are used synonymously in the scientific environment. However, "ecological or eco-emotions" can be defined as emotions associated with the ecological crisis, and "climate emotions or climate change emotions" as those associated with the climate crisis (Voşki, Wong-Parodi & Ardoin, 2023, p. 7). The same can be extended to the concept of ecological emotional experience (Figure 1)

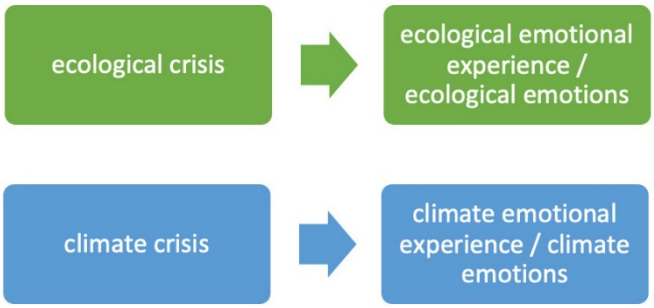

Figure 1. The difference between ecological emotional experience and climate emotional experience based on the separation of ecological and climate emotions mentioned in the work of Voşki et al. (2023, p. 7)

Recently, such ecological emotional experience and related concepts as *anxiety, grief, guilt, anger, worry, shame, fear, sadness, depression, despair, econostalgia, solastalgia, psychotheratic syndromes* have been in the focus of scientists' attention.

Ecological emotional experience and pro-environmental behavior, mental health and well-being

According to Kurth, *anxiety* can exist in the form of an emotion and in the form of a mental state (Pihkala, 2022b, p. 2). It is eco-anxiety that is cited most often by scientists. Clayton et al. define eco-anxiety as a chronic fear that occurs before an ecological disaster. (Kałwak, & Weihgold, 2022, p. 5). Scientists also mention such definitions of eco-anxiety as anxiety arising in response to ecological crises; as well as anxiety associated with worsening ecological conditions (Coffey, Bhullar, Durkin, Islam & Usher, 2021, p. 1). Thus, "eco-anxiety" is used to denote any anxiety related specifically to the ecological crisis. Eco-anxiety can be both a problem if it paralyzes activity and a resource if it prompts action (Pihkala, 2021, p. 121). And although this emotion in itself is not a disorder, in certain cases its intensity requires the maintenance of psychological health (Pihkala, 2021, p. 121). Although cases of equating eco-anxiety and climate anxiety are reported (Pihkala, 2020, p.3), climate anxiety, which can also be called climate change anxiety, is considered a type of eco-anxiety (Cianconi et al., 2023, p. 216). Climate anxiety can be defined as anxiety that arises mainly as a response to anthropogenic climate change (Pihkala, 2021, p. 122-123).

There is conflicting evidence regarding the importance of eco-anxiety and climate anxiety for human psychological health and pro-environmental behavior. Ogunbode et al. find that countries with higher prosperity show a closer connection between climate anxiety and pro-environmental behavior (Voşki et al., 2023, p. 6). At the same time, as noted by Stanley et al., eco-anxiety predicts lower participation in joint actions regarding climate protection (Coffey et al., 2021, p. 3). A number of studies mentioned in the work of Boluda-Verdú et al. (2022, p. 12-13) talks about the connection of eco-anxiety with health problems: depression, stress, lower self-esteem of mental health, etc. At the same time, Verplanken et al., in contrast to the aforementioned Stanley and his colleagues, report a connection between eco-anxiety and pro-environmental behavior. Importantly, the studies have a number of limitations, including a cross-sectional design that does not allow for causal inference, so interpretation should be done with caution. The data provided by Higham et al. can be attributed to a compromise position. The researchers argue that although feeling anxious

was not sufficient to engage in pro-environmental behavior per se, in a study of air travel among Australian tourists, it did lead to certain behavior to offset carbon dioxide emissions during flights (Crossley, 2020, p. 6). The ambiguity of the results can be explained as follows. Both climate anxiety (Hickman et al., 2021, p. 863) and eco-anxiety can be associated with many emotions. So, for example, in addition to anxiety as such, it is known about the presence of cases of fear, anger, exhaustion, grief, phobias and despair, helplessness, powerlessness together with eco-anxiety (Baudon & Jachens, 2021, p. 2). Therefore, eco-anxiety should be studied alongside other emotions, so as not to make a mistake regarding its role for pro-environmental behavior [Stanley et al., 2021, p. 4], psychological health and well-being. The same may apply accordingly to anxiety with about climate change. It should be noted that research on eco-anxiety has mostly been conducted using qualitative interviews or specialized surveys (Comtesse et al., 2021, p. 4). Eco-anxiety depends on social factors that can be its cause in general (Pihkala, 2020, p. 6), which requires further study.

Also, there is an opinion that eco-anxiety is a more complex construct than just an emotion, and contains both an emotional and a cognitive component, existing not just as an emotional reaction, but the relationship between this reaction and the understanding that we have become a determinant of the threat (Hickman, 2020, p. 414). Ágoston et al. (2022, p. 6, 11) offer 6 components of eco-anxiety: 1) anxiety for the future in general and for future generations in particular; 2) empathy; 3) conflicts with family, friends, or colleagues; 4) being disturbed due to a change in the surrounding environment; 5) symptoms of mental health corresponding to symptoms of anxiety disorders; 6) helplessness, frustration. According to them, the multifactorial nature of eco-anxiety should be taken into account in future research.

The connection between anxiety and *grief* is profound. It is the latter, if unrecognized or complicated, that can manifest itself through symptoms of anxiety, while at the same time anxiety itself can be part of the experience of grief (Pihkala, 2020, p. 9). Ecological grief can be defined as the grief felt due to the loss or expectation of loss of favorite places, ecosystems, species, landscapes, as a result of acute or chronic changes in the environment (Ojala, Cunsolo, Ogunbode & Middleton, 2021, p. 37; Ágoston et al., 2022, p. 2; Cunsolo et al., 2022, p. 35). The emotion of grief is usually associated with struggle, but at the same time it can be both adaptive and maladaptive (Ojala et al., 2021, p. 37-38), as the intensity can range from intense grief to sad moods (Pihkala, 2022a, p. 4). If we have lost what is most important to us, grief can help us survive (Pihkala, 2021, p.126). But still, data on the impact of ecological grief on mental health is still lacking (Comtesse et al., 2021, p. 2), just as there is not enough data on long-term consequences (Cunsolo et al., 2020, p. 2). On the one hand, if ecological grief is silenced and ignored, it can cause disruption in the spheres of psychological health and human activity. In addition, even if traumatic events are experienced, it can cause mental disorders such as depression or post-traumatic stress disorder, especially in the case of a cumulative effect; it can also hinder coping with traumatic events (Comtesse et al., 2021, p. 6). On the other hand, Butler, Cunsolo, and Landman argue that ecological grief provides an opportunity for action and healing (Cunsolo, 2020, p. 33). This can motivate pro-environmental behavior. As indicated by Helm et al., some amount of stress may be beneficial in relation to environmental challenges because it may result in better psychological coping and adaptation. But in any case, it is possible to predict this or that behavior in connection with grief only by taking into account many factors, for example, personality characteristics, attitudes towards the object, the circumstances of the loss, social and cultural factors (Comtesse et al., 2021, pp. 5-6).

As with anxiety, the multifactorial nature of grief must be considered. Summarizing the above, Ágoston et al. (2022, p. 8) suggest 2 components of this emotion: 1) loss of physical environment and species; 2) expected future losses. In addition to being a universal and natural response, grief consists of emotional (e.g., feeling of longing), cognitive (e.g., diminished identity), and behavioral responses (e.g., failure to take social action) (Comtesse et al., 2021, p. 4). Further, there is a focus of research mainly on the study of certain types of grief, such as acute, chronic, gradual. However, through Inuit research, the study of cascading ecological grief, which appears as sequential, interconnected, and lasting forms of grief, becomes promising (Cunsolo et al., 2020, p. 52).

In the framework of the ecological crisis, there is often an intersection of *guilt* and grief with mutual complication (Pihkala, 2021, p. 125). Ecological guilt can be defined as guilt arising from awareness or feeling of concern about one's own environmentally harmful behavior (Mkono & Hughes, 2020, p. 1). Considering guilt as a multidimensional construct, Ágoston, C et al. (2022, p. 7) offer the following components: 1) Prophetic individual responsibility; 2) Self-criticism, self-examination, self-blame; 3) Guilt/individual responsibility criticism; 4) Dissatisfaction with one's actions; 5) Feeling guilty about one's past; 6) System maintenance fault; 7) Dilemma of harm; 8) Guilt for one's existence. Ecological guilt can lead to pro-environmental behavior or intentions to engage in it. It helps to realize our involvement in environmental changes and the need to compensate for damages (Pihkala, 2021, p. 12). There is evidence that collective guilt is even more effective in this context than ecological anxiety (Ágoston et al., 2022, p. 2). However, this emotion is associated with feeling of distress, so further research is needed, particularly on its role in psychological health and well-being.

An emotion similar to guilt is *shame*. Despite a certain degree of similarity, there are a number of differences between them, namely: 1) guilt is directed at others, shame at oneself; 2) guilt refers to our actions, shame to our self; 3) guilt is associated with internal assessment, shame - with external; 4) guilt refers to moral beliefs, shame - social condemnation (Aaltola, 2021, p. 6). It is assumed that, unlike guilt, which can lead to corrective action, shame is associated with avoidance of struggle and detachment from the consequences of one's wrongdoing. It is more painful than guilt because it concerns the individual rather than specific behavior. At the same time, social order is ensured with the help of shame. In certain cases, shame is necessary to change one's attitude and behavior (Mkono & Hughes, 2020, p. 2). The scientific literature mostly talks about the negative effects of shame on psychological health and well-being, including problems in self-management, low activity,

etc. As for climate shame, its negative contribution to pro-environmental behavior is predicted due to taking a defensive position, which will reduce the ability to correct actions. At the same time, there is an opinion that in certain cases shame can be useful. For this, it is necessary to distinguish types of shame, namely - *shame of identity* - a "primitive type of shame" that arises due to minor factors, for example, appearance, and *moral shame*, which focuses on moral norms. The opinion is expressed that it is moral climate shame that can be useful for pro-ecological changes (Aaltola, 2021, p. 10-11, 18-19). It is also important to take into account the cultural factor. For example, there is evidence that Japanese culture, in contrast to Western culture, is more sensitive to certain types of guilt and to shame of identity, in contrast to Western culture, where shame in general is given more space. All of these can motivate actions to protect the environment in different ways (Mkono & Hughes, 2020, p. 3).

The energy for necessary change can be gained through *anger* and outrage. As noted by Stanley et al., anger is associated with more active pro-environmental individual and collective behavior. According to them, eco-anger in itself can contribute to a decrease in well-being. But in combination with other emotions (eco-anxiety and eco-depression were included in the mentioned study), in certain cases, on the contrary, it can increase it (Stanley et al., 2021, p. 4). At the same time, the amount of research on the topic of eco-anger still remains insufficient (Pihkala, 2020, p. 10).

As for *fear*, it is known that it helps to orient oneself to the danger that is possible. Its strong connection with anxiety is emphasized, which can also be considered as a manifestation of eco-fear, because the latter either does not occur or is more vague than the usual emotion of fear (Pihkala, 2021, p. 124, 126). But *worry* is defined as a more complex construct derived from fear and anxiety. It is defined as repeated thoughts about negative future events that are uncertain, with the presence of a similar anxiety-like affect of negative coloring. Non-clinical worry has been reported to be constructive for adaptive behavior if the situation is perceived to be under control, otherwise it may result in stress and poor well-being. Watkins also described two types of worry - adaptive and maladaptive. It should be taken into account that the problem of the ecological and climate crisis can cause ecological *sadness*. According to Lazarus, this emotion can lead to passivity (Ojala et al., 2021, p. 38). In parallel with this, there is contrary evidence that sadness and guilt served as a motivation for activity in a sample consisting of French respondents (Ágoston et al., 2022, p. 2).

Smith and Leiserowitz point out that worry should be prioritized over other emotions as a support factor for climate change mitigation policies. It is relevant to identify the stimuli that cause this emotion in people (Gregersen, Doran, Böhm, Tvinnereim & Poortinga, 2020, p. 2). Media representations of the current situation can play a role in people's perception of risk and contribute to the determination of worry (Clayton, 2020, p 3.), however, it must be borne in mind that this will not necessarily be the case, since everyone will interpret what they see according to their own views and experiences (Ojala et al., 2021, p. 42).

Ecological depression has been reported to be unrelated to personal pro-environmental behavior. Its contribution to psychological health and well-being can be negative as it can be debilitating (Stanley et al., 2021, p. 4). *Despair* can arise as a natural emotion, which is not necessarily associated with the loss of free will or meaning, unlike hopelessness (Pihkala, 2020, p. 10). The attention of researchers is also attracted by *eco-nostalgia*, which can be defined as an emotion that occurs when people return to a familiar place that has been changed completely in their absence due to climate change (Ágoston et al., 2022, p. 2).

Albrecht introduced the concept of "*solastalgia*". With it, he described chronic stress felt in connection with negative changes in the surrounding environment (Clayton, 2020, p. 2). With solastalgia, in response to the loss of an important place, a person feels loneliness, detachment and sorrow, and all this is similar to homesickness. Galway et al. define solastalgia as a distress that arises in response to unwanted changes in landscapes dear to a person, which has a cumulative effect on mental, emotional and spiritual health (Comtesse, 2021, p. 3). So, the main feature of this construct is the orientation to the place, which distinguishes it from other concepts. The main predictors of solastalgia can include war, extreme weather events, climate change, resource extraction, etc. (Galway, Beery, Jones-Casey, & Tasala, 2019, p. 1, 6). However, there is a problem of a lack of empirical data on the direct relationship between solastalgia and mental health, as research has mainly been conducted using qualitative interviews, special surveys or using the solastalgia subscale of the Environmental Distress Scale (Comtesse et al, 2021, p. 3-5) and did not investigate cause-and-effect relationships.

Separately, it should be noted that there is such a concept as "*psychotherratic syndromes*" described by Albrecht - existential in origin, which can be defined as a combination of effects on mental health related to damage and changes in the surrounding environment. These syndromes included solastalgia, ecological anxiety, environmental paralysis (consisting in the inability to respond to ecological problems due to the feeling of their internal localization) and environmental nostalgia. (Clayton, 2020, p. 2). Because of these syndromes, there is a threat to mental health as a consequence of the disconnection of a person with their home/territory (Cianconi et al., 2023, p. 213), but the data on this is not yet sufficient.

Based on a literature review, Pihkala proposed a taxonomy of climatic emotions together with emotional states close to them: 1) Surprise-related (for example, trauma); 2) Threat-related (for example, worry); 3) Sadness-related (for example, solastalgia); 4) Strong anxiety-related (for example, strong anxiety); 5) Strong depression-related (for example, strong depression); 6) Related to guilt and shame (for example, regret); 7) Related to indignation (for example, moral outrage); 8) Disgust-related (for example, aversion); 9) Anger-related (for example, rage); 10) Envy-related (for example, amdiration); 11) Hostility-related (for example, contempt); 12) Kinds of positive emotions (for example, optimism) (Pihkala, 2022b, p. 7-8). It may be promising to create a classification of eco- and climatic emotions according to the criterion of stenicity and asthenicness, which, of course, requires more empirical data.

Methods for researching ecological emotional experience

The problem of measuring ecological emotional experience today is particularly acute. The number of

reliable and valid methods for measuring ecological emotional experience is still insufficient. At the same time, the need for psychometrically confirmed discrete indicators of emotions and the importance of assessing a wide range of emotions are indicated by Voşki et al. (2023, p. 5). The already small amount of research on ecological emotional experience is further limited by the fact that, for example, ecological anxiety is measured as a single construct in some studies and as a multidimensional construct in others (Sampaio, 2023, p. 2). Existing methods also need additional verification. So, for example, one study provided data to confirm psychometric indicators of the Climate Change Worry Scale by Clayton and Karazsia (Stewart, 2021, p. 19), and in another, which used a German sample and tested the Climate Anxiety Scale by Clayton and Karazsia, - there were problems with the reproduction of the initial factor structure (Wullenkord, Tröger, Hamann, Loy & Reese, 2021, p. 18).

Cianconi et al. (2023, p. 220) conducted a literature review of existing tests aimed at researching ecological emotions and related psychoterratic syndromes, and identified the following: 1) The Inventory of Climate emotions; 2) Climate Change Worry Scale; 3) Climate Change Anxiety Scale; 4) Eco-Anxiety Scale; 5) Eco-Anxiety Questionnaire; 6) Eco-guilt Questionnaire; 7) Ecological Grief Questionnaire; 8) Environmental Distress Scale; 9) Scale of Solastalgia; 10) Climate Change Distress and Impairment Scale; 11) Disaster Psychosocial Assessment and Surveillance Toolkit. As can be seen, the study of positive eco-emotions is not given enough attention, in contrast to negative ones. Pihkala also speaks about the insufficient study of positive emotions (Voşki et al., 2023, p. 6).

Ojala et al. (2021, p. 39) note that when developing quantitative scales, it is necessary to follow the sequence in the formulation of questions about emotions, otherwise it can affect the answers of respondents (as an example scientists mention the confusion of the concepts of "climate change" and "global warming"). When adapting existing methods to other languages, translation difficulties arise: as Jackson et al. point out, in Persian it is easy to confuse grief with regret, but in Dargwa grief will be confused with anxiety. Focusing mostly on Western countries in the study of ecological emotions also does not allow for unequivocal conclusions (Voşki et al., 2023, p. 6).

Treatment for ecological emotional experience

In order to cope with negative experiences related to the ecological and climate crisis, people can use *psychological defense mechanisms*. They can be divided into 1) literal denial (denial of the existence of a problem); 2) interpretative denial (distortion of individual facts; 3) implicative denial (denial of consequences) (Pihkala, 2020, p. 3). The result can be both not feeling certain ecological emotions, and not reporting them, for example, during a survey. Other scientists report such types of psychological defenses related to the eco- and climate crisis, such as incapability, denial of responsibility, indifference, negative evidence, and alienation. All this, in turn, can provoke the emergence of further negative emotions, which can reduce the level of friendly behavior for the environment (Kao & Du, 2020, p. 3).

Not everyone can feel the consequences of eco- and climate emotions. The greatest impact on psychological health is felt by marginalized and vulnerable sections of society (Pihkala, 2021, p. 128). Among scientists, there is an opinion that eco-emotions are felt mostly by younger people (Mento et al., 2023, p. 10). The vulnerable category also includes women, children, the elderly (Ojala et al., 2021, p. 45), indigenous people, sometimes people with significant health problems (Clayton, 2020, p. 1) and eco-activists (Ágoston et al., 2022, p. 1) (Figure 2).

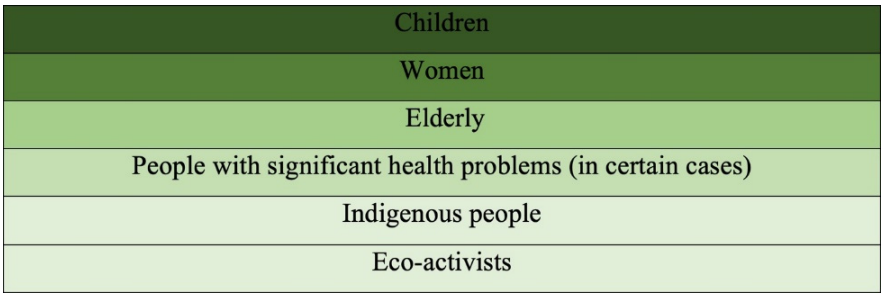

Figure 2. The list of population categories vulnerable to eco- and climate emotions according to the literature review

Such vulnerability can be explained by the lack of resources to counter relevant stressors, both external (income levels, social status, legal capacity, and so on) and/or internal (personal maturity, autonomy, necessary knowledge, etc.), as well as attachment to place, being dependent on him.

According to the analyzed scientific literature, conventionally, approaches to treatment of ecological emotional experience can be divided into *sociocultural* - attention is focused on sociocultural norms, *therapeutic* - emphasis on professional intervention, *individual* - focus on the role of the individual (Figure 3).

Sociocultural approach. Kalwak & Weihgold (2022, p. 6) propose an approach called "A relational counternarrative". According to them, the appeal to ecological emotions needs to take into account social and cultural features. This means that efforts should be directed not only at improving psychological education and intervention, but also at creating a common methodology for knowledge production. Thanks to this, the creation of a collective experience that regulates the symptoms associated with ecological emotions will occur. Indeed, the formation of positive ideas in children about achieving a future with low or no carbon emissions in order to promote psychological well-being has been identified as one of the perspectives for further research in the context of combating ecological anxiety (Léger-Goodes et al., 2022, p. 14). Hickman believes that suffering, despite the reality of some of it, can be understood precisely within the framework of the model of happiness adopted in one or another culture

(Hickman, 2020, p. 419). Other scholars also emphasize the importance of social constructions, because although the ecological crisis is very real, its impact is carried out through the prism of the interpretation of these events (Pihkala, 2022a, p. 1). Therefore, the importance of increasing the level of reflection in relation to emotions, as well as a critical understanding of cultural norms, is increasing (Pihkala, 2021, p. 126).

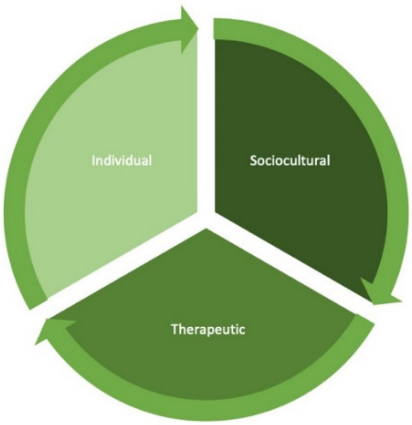

Figure 3. Classification of approaches to the treatment of ecological emotional experience according to a literature review

Therapeutic approach. Works devoted to eco-anxiety and other related emotions can serve as a vivid example. Baudon & Jachens (2021, p. 6-8) analyzed the literature on existing approaches to the treatment of ecological anxiety and highlighted the following: 1) counseling, narrative therapy – interventions related to, for example, meanings, optimism, self-expression; 2) conservation psychology – mostly concerns cognitive social-emotional support; 3) ecopsychology – in addition to socio-emotional support, a person is involved in certain groups and organizations with the aim of encouraging environmental actions; 4) ecotherapy – emphasis on the combination of man and nature; 5) environmental education – cognitive assistance in the form of reducing the negative vision of ecological problems; 6) gestalt approach - support is provided, for example, with the help of groups and rituals; 7) jungian depth psychology – for example, interventions focusing on the study of dreams; 8) marriage and family therapy - for example, direction to inner work and awareness of ecological emotion; 9) psychoanalysis – for example, identifying the difference between ecological and ordinary emotions; 10) not identified – to this category, scientists assigned a number of works related, for example, to work in groups, but which could not be attributed to any of the directions mentioned above. Raile suggests using psychodrama to treat eco-anxiety (Raile, 2023, p. 8), and Ferrarello talks about the possibility of providing remote social support to people suffering from solastalgia, for example, via Skype (Ferrarello, 2023, p. 156). However, a unified opinion regarding the effectiveness and expediency of using certain therapeutic methods in specific situations has not yet been developed, which is indicated, for example, by the presence of not identified methods and the lack of empirical data confirming the effectiveness of methods for the treatment of ecological emotional experience.

Individual approach. Using eco-anxiety as an example, there is a position that, in general, eco-anxiety is an emotion that needs to be felt in order to improve the well-being of the planet (Kurth & Pihkala, 2022, p. 11). Raile indicates that ecological anxiety serves as a natural response to an existing threat, so the goal of treatment should not be to completely eliminate it, but only to reduce it to a level that can be lived with (Raile, 2023, p. 8). Such a position has a rational grain, but I would like to add that in this context it makes sense to reduce eco-anxiety and similar eco-emotions to a level that will not interfere not only with everyday life, but also with psychological well-being.

Pihkala cautions against relying solely on action as an antidote to anxiety. Developing the opinion, the scientist points out that for the treatment of ecological grief, for example, both individual and social support is important. He offers a three-dimensional model of countering eco-anxiety and grief: action + grieving + distancing, emphasizing the need to develop each of the components (Pihkala, 2022a, p. 25, 28). Clayton notes that the use of certain cognitive-behavioral therapy strategies in the treatment of eco-anxiety may have short-term consequences, since the ecological problem itself will remain (Clayton, 2020, p. 4). Hickman considers the possibility of reframing ecological anxiety in the more positive context of eco-empathy, eco-compassion or eco-concern. So far, he suggests reducing eco-anxiety at the individual and local level, for example through food selection and waste recycling (Hickman, 2020, p. 416-417).

Conclusions. Thus, it has been established that among ecological emotional experience and related syndromes, the most attention has recently been paid to the study of anxiety, grief, guilt, anger, worry, shame, fear, sadness, depression, despair, econostalgia, solastalgia, psychoterratic syndromes. Their specificities have been examined with an emphasis on the role for pro-environmental behavior, psychological health and well-being, which have been appeared to be ambiguous. The reasons may be the following: firstly, as was discovered from the literature analysis, different approaches are used to study ecological emotional experience - some scientists study them as a unidimensional construct, others as a multidimensional one. Secondly, in some cases the simultaneous connection of the studied ecological emotional experience with other ecological emotional experience is taken into account, in others they are considered in isolation, which affects the conclusion. Thirdly, at present there is not enough empirical data to draw a clear conclusion on this matter, especially since much of the available data does not

allow us to talk about a cause-and-effect relationship. A gap in the number of valid and reliable psychometric methods for measuring ecological emotional experience has also been identified and the need to study ecological emotional experience as multidimensional constructs has been identified too. In addition, most researchers focus on negative ecological emotional experience, and the topic of positive ecological emotional experience in the context of the ecological crisis is less developed. It is also relevant to re-check the psychometric properties of existing methods for different cultural samples, as was shown on the example of the Climate Anxiety Scale by Clayton and Karazsia.

Finally, the issue of treatment of ecological emotional experience has been considered: based on a literature review, data on vulnerable categories of the population were analyzed, which have been turned out to be children, women, elderly, people with significant health problems (in certain cases), indigenous people and eco-activists; sociocultural, therapeutic, and individual approaches have been highlighted, emphasizing sociocultural norms, professional intervention, and the role of the individual, respectively, although each of these approaches needs further improvement. In view of the above, further empirical research on the role of ecological emotional experience for pro-environmental behavior, psychological health and well-being, the development and improvement of methods for their research and treatment, using the recommendations identified in this article, will allow us to get closer to solving the problem of the global ecological crisis, improving psychological health and well-being.

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ДО ПИТАННЯ ВИВЧЕННЯ ЕКОЛОГІЧНИХ ЕМОЦІЙНИХ ПЕРЕЖИВАНЬ

Глобальна екологічна криза є однією з центральних проблем охорони здоров'я. Кожен по-своєму відчуває його наслідки, що по-різному відображається на проекологічній поведінці, психологічному здоров'ї та благополуччі. У статті аналізується наукова література за останні 5 років щодо найбільш часто досліджуваних екологічних переживань та пов'язаних із ними синдромів, їх ролі для проекологічної поведінки, психологічного здоров'я та благополуччя, а також методів їх дослідження та лікування. Визначається, що останнім часом увага акцентується на дослідженні таких екологічних переживань та пов'язаних із ними понять, як тривога, горе, вина, гнів, занепокоєння, сором, страх, печаль, депресія, відчай, еконостальгія, соластальгія, психотератичні синдроми. При цьому підкреслюється, що роль екологічних переживань для проекологічної поведінки, психологічного здоров'я та благополуччя залишається невизначеною через наступні причини: 1) невраховування можливої багатовимірності екологічних переживань; 2) дослідження конкретних екологічних переживань ізольовано від інших екологічних переживань; 3) невелика кількість емпіричних досліджень та наявні обмеження певної частини вже існуючих досліджень, наприклад, їх перехресний дизайн, що не дозволяють говорити про наявність причинно-наслідкового зв'язку. Окремо у статті розглядається проблема методів дослідження екологічних переживань – повідомляється про недостатню кількість методик та необхідність психометричної перевірки вже існуючих методик на різних культурних вибірках. Також у даній роботі в контексті екологічних переживань увага приділяється вразливим категоріям населення, а саме дітям, жінкам, людям похилого віку, людям зі значними проблемами зі здоров'ям (у певних випадках), корінним жителям та еко-активістам. Нарешті, розглядаючи проблему лікування екологічних переживань, умовно виділяються три підходи - соціокультурний, який враховує соціальні та культурні особливості; терапевтичний, що передбачає професійне втручання; індивідуальний, де акцент робиться на ролі особистості.

Ключові слова: *екологічні емоції, екологічна тривожність, психологічне здоров'я, психологічне благополуччя, екологічні переживання*

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