

# Mental Health and Climate Change. The Birth of Eco-Anxiety in the Spanish-Language Press

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*In recent years we have witnessed a great deal of media interest in climate change, echoing the growing public concern about a complex phenomenon with daunting consequences. This paper examines the impact of concepts such as “eco-anxiety” and “solastalgia” in the Spanish and Latin American written and digital press. These neologisms attempt to explain the emotional effects of climate change on mental health. Between 2015 and 2019 the words “solastalgia” and “Nature Deficit Disorder (NDD)” slowly made their way into the media, until 2019, when the term “eco-anxiety” became relatively successful in the newspapers. In addition to analysing the factors in-*

*involved in the birth and evolution of this concept, the study describes the most frequently cited emotions, such as fear, anguish, stress, sadness and guilt. The results obtained indicate, on the one hand, that eco-anxiety is still a vague idea and not very present in the media, too often linked to negative emotions, in contradiction of clinical psychology advice. Meanwhile, emotions such as anger or indignation, which would enable a collective response to climate change, are often neglected.*

**Keywords:** *eco-anxiety, solastalgia, mental health, climate change, covid-19, emotions, press, news, content analysis.*

**A**lthough the presence of climate change in the public sphere has been impacted by COVID-19 (Pearman et al., 2021), we are witnessing a growing media interest in this phenomenon, as shown by the international research conducted by the Media and Climate Change Observatory (MeCCO) at the University of Colorado Boulder (Boykoff et al., 2021). Even in 2020, at the

peak of the pandemic, climate change topped the concerns of the European population, as reflects the Pew Research Center study (Poushter and Huang, 2020), and the July 2021 Eurobarometer, which reminds us that 93% of Europeans consider climate change to be a serious problem (European Commission, 2021).

This phenomenon is reflected in recent years in the emergence of specific terms referring to the effects of the concerns about climate change on mental health. For example, the term “solastalgia” was coined by the Australian philosopher Glenn Albrecht (2005) studying the complex relationship between current societies and nature. The term, which refers to “the pain and desolation that human beings suffer as they contemplate the degradation of the natural landscape with which they identify and which they consider part of their identity and life” (Albrecht, 2005, p. 44), began to be successful in the field of Australian clinical psychology (Albrecht et al., 2007). But in recent years other concepts are being used. Thus, the American Psychological Association (APA) defines eco-anxiety as “the chronic fear of environmental destruction” (Clayton et al., 2017, p. 68). Several investigations have delved into these concepts, trying to determine what they refer to. For instance, Ogunbode et al., (2021) have studied the relationship between negative emotions related to climate change and mental health in individuals from 25 countries, showing that negative emotions related to the climate are linked to insomnia symptoms in 72% of the countries studied. Stanley et al., (2021) recently showed eco-anger is not only a more adaptive and less harmful to health feeling than ecoanxiety or ecodpression: it also makes the search for solutions to climate change more likely (p. 5).

Although it is still necessary to dig deeper into those mental health problems behind concepts such as solastalgia or eco-anxiety, it seems convenient to introduce another important variable: the role of media in projecting these issues and raising awareness around them. Thus, Alice Poma (2018) points out that the challenge of climate change communication “is to reflect on the effects of the information reaching the public, and to think about how to raise alert and create concern without generating helplessness and fear” (p. 203). In her research, based on several in-depth interviews she conducted in Mexico, she concludes that the emotions around climate change (helplessness, frustration, fear of the future, guilt and distrust) influence the way the problem is faced: “As they are uncomfortable emotions, they cause people to avoid talking about them or the problem generating them, which in this case is climate change”. For this reason, she suggests that it is necessary to carry out emotional work strategies to transform these emotions into others that are useful to face the challenge of climate change.

Some proposals, however, go in a different direction. From a clinical or therapeutic point of view, it is advisable to disconnect from information on this subject, or at least to avoid it to a certain extent. One example is that of the Australian Psychological Society Handbook, which recommends taking a break from receiving information on climate change, in order to manage the feeling of distress: “Keeping up with a constant stream of information doesn’t actually solve the climate change problem. And it takes a huge psychological toll to be

constantly exposing yourself to this chronic, intangible, global environmental stressor” (Burke et al., 2017, p. 4).

This recommendation might be appropriate in the specific cases of people who are obsessed with searching for all kinds of information about climate change. But for the average person, avoiding information on climate change would be nothing more than an ostrich approach —I don’t want to see the problem, so I act as if it doesn’t exist— to try to escape from a reality that exists and must be faced. However, the frequency with which this recommendation is given is interesting, since it reflects the extent to which it is accepted that all information on climate change must be negative and distressing, taking for granted that there is no room for information that helps dealing with eco-anxiety.

As José Antonio Corraliza points out, the most worrying thing is that the individual adopts an ecosaturation posture in the face of climate change, i.e. “I don’t want to see, hear or talk about it”. This position, as well as ecofatigue, ecofatalism or ecoindifference, is an expression of denial, as the climate problem is seen as overwhelming or devastating. Given that from a passive attitude it is not possible to endure for a too long period an irresolvable concern or pain, the alternative to ignoring the problem is to actively confront it (Ibaibarriaga, 2019).

## THEORETICAL FRAMEWORK

The media are actively involved in the public debate on climate change. According to Boykoff and Luedecke (2016), they shape perceptions, opinions and influence the spectrum of response to climate change. Several studies, such as those by Brulle et al. (2012) and Sampei and Aoyagi-Usui (2009) make a connection between increased reporting on climate change in the media with a significant increase in public concern about the issue. But perhaps the most ambitious project in this regard is the research coordinated by the Media and Climate Change Observatory (MeCCO) of the University of Colorado Boulder, with monthly monitoring of climate change news in 120 media outlets in 54 countries around the world (Boykoff et al., 2021). The analysis of climate change coverage worldwide and over so many years allows us to observe how the presence of this topic has fluctuated, influenced by a multitude of factors, including the different social and health crises we have experienced.

Therefore, content analysis, which has been the most widely used method in Spanish communication research for decades (Martínez Nicolás, 2020), allows us to approach the connection between climate change and mental health in two ways. On the one hand, the media show the way in which issues of interest to society are talked about, but they also intervene in public opinion by disseminating these perspectives on the issue. However, we understand that it is necessary to move beyond the “descriptivism” (Martínez Nicolás, 2020, p. 385) that accompanies a good part of the studies that use media content analysis, in order to provide an exploratory diagnosis of a phenomenon that is still incipient and uncertain. In this sense, we consider that combining quantitative analysis with a qualitative review of the most interesting cases provides a deeper insight

into “their latent content and the social context in which the message develops” (Andréu, 2000, p. 22).

The Spanish General Council of Psychology (2019) points out that it is necessary to devote efforts to gain knowledge on “the acute and chronic effects that climate change has on mental health, including anxiety, stress, trauma, post-traumatic stress, depression and substance abuse”. Other international psychological societies have pointed to the same direction. The Australian Psychological Society, which has published a manual with information and recommendations on how to manage anxiety and stress caused by climate change (APS, 2019). It notes that the reality of climate change is indeed frightening, with worse prognoses if the current situation continues, as there is a high percentage of people who feel distress in the face of climate change. Another example is that of the Canadian Association of Doctors for the Environment, whose president, Courtney Howard, considers that the intersection between climate emergency and mental and physical health will become one of the biggest global problems (Ibaibarriaga, 2019).

In this sense, this study proposes an exploratory approach, through content analysis in the Spanish press, to a topic that is still in its infancy but in which the media play a particularly important role. However, Nó Sánchez and Muñiz Velázquez (2013) point out that Spanish research on communication must improve “the predictive capacity to which all science must aspire” (p. 129). For this reason, in this research we have proposed a probabilistic methodological perspective, developing a quality sample corpus from which we can make general assumptions with epistemological value.

## OBJECTIVES

The main objective of this research is to analyse the media impact of those new concepts addressing the effects of climate change on mental health, such as eco-anxiety or solastalgia, and to document their birth and evolution in the Spanish-language press in recent years. Therefore, some of the specific objectives we set ourselves in this work are:

- To identify which terms have been the most successful in addressing the implications of climate change on people’s mental health. In this sense, it seems relevant to compare the conceptual differences in the use of these terms and the different contexts in which they are used.
- Describe the type of journalistic content (media, section) in which the information on this issue is framed and the type of approach taken.
- To identify the personalities and institutions that are linked to the implications of climate change on people’s health, given that this information can explain the context in which the terms studied here are constructed. The aim is also to determine whether the media attention given to these issues reflects the social concern they generate and their impact on the population.

- To identify the role of the media in projecting emotions and attitudes towards climate change, and particularly those uncomfortable emotions (Norgaard, 2009) that lead to a deterioration of people's mental health. Connected to this, we analyse the proactive role the media in Spanish have as agents that seek to help solving a social problem by providing information.

## METHODOLOGY

This work is based on quantitative content analysis combined with qualitative interpretation of some specific cases (Andréu, 2000) from a probability sample of 199 news items. For the elaboration of the sample, a first search of digital and printed articles published in Spanish between 2015 and 2021 was carried out on the platform MyNews, using the expressions "mental health" and "climate change". As this search offers millions of results, we carefully read the first 30 according to the "relevance" criterion in order to select some keywords contained in these texts. The professional platform MyNews, "pioneering product of press document management in Spain" (Grau and Guallar, 2004, p. 476), has been widely used since the 1990s in academic research, including in the field of climate change communication (Fernández Reyes and Jiménez Gómez, 2019).

In a second search, we used the 10 keywords with the greatest presence in the selected texts, to conduct searches with them and their possible variants. For example:

- "eco-anxiety", "climate anxiety", "climate change anxiety"....
- "ecostress", "climate stress", "climate change stress"...
- "nature deficit disorder", "NDD",...

We then sifted through the 1365 news and articles collected in this second search, discarding repeated texts and articles that only included keywords for website management purposes ending up with an outcome of 412 news stories and articles. Finally, we created a statistically significant sample from this group of news for a confidence level of 99%, under the assumption that  $p=q=50\%$  and for a maximum permissible error of  $\pm 5\%$ . The sample consists of 199 randomly selected news items. A limitation of the study is that while MyNews can be considered a representative platform of the content published by the Spanish press, possibly its reach is not the same in the Latin American press, so it is necessary to take the results with reservations as far as these media are concerned.

Out of this group of selected texts, 132 (66.33%), were digital news published on the media outlet's website. Therefore, only 33.67% of the news items in the sample were from print newspapers. The sample includes news and articles from 88 different media, 27 of which are Latin American. As shown in Table 1, *El País* is the newspaper that stands out for the highest number of news items in the sample, followed by *El Mundo*, *ABC* and *El Correo*. Media such as *Infobae.com* (Argentina), *El Mostrador* (Chile) or *El Tiempo* (Colombia) are also highlighted.

**Table 1. News in the sample according to the newspaper**

| Media                | No. | %      |
|----------------------|-----|--------|
| EL PAÍS              | 18  | 9,05 % |
| EL MUNDO             | 8   | 4,02 % |
| ABC                  | 7   | 3,52 % |
| EL CORREO            | 6   | 3,02 % |
| EL PERIÓDICO         | 6   | 3,02 % |
| INFOBAE.COM (AR)     | 6   | 3,02 % |
| LA RAZÓN             | 6   | 3,02 % |
| LA RIOJA             | 6   | 3,02 % |
| EL MOSTRADOR (CL)    | 4   | 2,01 % |
| EL NORTE DE CASTILLA | 4   | 2,01 % |
| EL TIEMPO (CO)       | 4   | 2,01 % |
| ELDIARIO.ES          | 4   | 2,01 % |
| IDEAL                | 4   | 2,01 % |
| PÚBLICO              | 4   | 2,01 % |

Source: Own elaboration.

The final analysis sheet includes the following categories: News title [Title in Spanish]; Year [Year of publication]; Medium [Name of the newspaper]; Digital media [Yes, No]; Country of the newspaper [Spain or Latin American country]; Newspaper's sections [Society, Opinion, Health, etcetera]; Type of approach [Discursive, Descriptive, Propositive, Word]; Terms about mental health and climate change [Eco-Anxiety, Solastalgia, etcetera]; Emotions linked to climate change [Fear, Stress, etcetera]; Names and institutions cited [FundéuRAE, APA, etcetera].

The quantitative analysis of the words and expressions collected from each article was carried out using the Python programming language, with the aim not only of providing statistical results but also of detecting trends and anomalies in the material collected. The qualitative analysis of the highlighted cases was carried out in detail by the three authors following a previously agreed codebook.

## RESULTS

### THE APPROACH TO NEWS ON MENTAL HEALTH AND CLIMATE CHANGE

The section of the media where the news item is published gives us a first idea of the priority a media outlet gives to each of its contents. But on top of that, it offers us an opportunity to analyse the approach given to a specific topic (García Delgado, 2016). As can be seen in Table 2, in the sample analysed, sections such

as Society (20.10%) or Opinion (16.08%) stand out. The latter vindicates the role of guest writers and columnists in introducing topical content in their texts. However, the op-eds analysed in this study not only deal with the subject by highlighting its novelty, but also sometimes serve as a kind of personal testimony. For example, Ricardo Trotti (2015) explains in the Colombian newspaper *El Universal* that he suffers from solastalgia and that it was not diagnosed by a doctor: “I discovered my illness when I read about global warming and the Paris Summit. Although climate change is on my agenda, I am overwhelmed, frustrated and worried about not knowing what to do” (Trotti, 2015). However, it is also in this section that 18 news items were published —9.05% of the total— that deny, criticize or even ridicule eco-anxiety. For example, Chapu Apaolaza says in *La Razón*, “There are people who are so sensitive and aware that they feel eco-anxiety when they look at the ducks in El Retiro Park” (Apaolaza, 2021, p. 6).

**Table 2. Media Sections where news items were published**

| Newspaper's sections  | No. | %       |
|-----------------------|-----|---------|
| Society               | 40  | 20,10%  |
| Opinion               | 32  | 16,08%  |
| Health                | 22  | 11,06%  |
| Culture               | 20  | 10,05%  |
| Environment           | 18  | 9,05%   |
| Letters to the Editor | 9   | 4,52%   |
| National              | 9   | 4,52%   |
| Local                 | 8   | 4,02%   |
| Science               | 4   | 2,01%   |
| Interviews            | 4   | 2,01%   |
| International         | 4   | 2,01%   |
| Backpage              | 3   | 1,51%   |
| People                | 3   | 1,51%   |
| Fashion               | 3   | 1,51%   |
| Economy               | 2   | 1,01%   |
| Leisure               | 2   | 1,01%   |
| Trends                | 2   | 1,01%   |
| Education             | 1   | 0,50%   |
| Politics              | 1   | 0,50%   |
| Others                | 12  | 6,03%   |
|                       | 199 | 100,00% |

Source: Own elaboration.

The element on mental health is a priority in the articles of the sample and reflects in the prominent presence of news items in the section Health (11.06%). The relevance of this section is unusual and even non-existent in some of the media analysed. Among the news items published in this section, we can find those under subsections such as Life, Good Life, or Wellbeing, spaces where mental health tends to have not only a descriptive but also a propositional approach, trying to provide support to readers.

Meanwhile, the prominence of the section Culture (10.05%), with a larger share than Environment (9.05%), is partly explained by the fact that “ecoansiedad” (the Spanish term for “eco-anxiety”) was nominated in 2021 as a candidate for the *FundéuRAE* word of the year, an award with considerable media projection. In fact, up to 11.06% of the news items in the sample deal with this issue. In addition, several articles talk about newly published or re-published books that deal with the subject, especially through interviews with their authors. Of particular note are “Ecoanxious” by Irene Baños, “And what do I do now” by Andreu Escrivá, “Ecoheroes” by Carlos Fresneda, “Zero Waste for girls in a hurry” by Claudia Barea and Georgina Gerónimo, and “Stop and learn!” by Heike Freire. The presence of these writers in 10% of the news items in the sample could suggest the will of the publishing world to bet on and innovate in themes that are still not very successful among the public.

One of the great contributions of the media analysed is the capacity to incorporate a good number of specialists from different disciplines into the debate on the repercussions of climate change on mental health. Some 12.06% of the texts analysed are interviews with experts who in one way or another talk about this issue and are even the ones who bring to the debate terms such as “eco-anxiety”, “solastalgia” or “Nature Deficit Disorder”. One example is the interview in *Noticias de Navarra* by Nekane Lauzirika with Carlos Duarte, winner of the Award Frontiers of Knowledge in Conservation Biology, where he explains that there is a growing syndrome “in our youth, eco-anxiety”. Because “they feel powerless to solve the problems in a positive way and this generates apathy” (Lauzirika, 2021). In another interview with CSIC researcher Fernando Valladares, a short diagnosis is even made on the subject:

From the point of view of the psychology of the phenomenon, we have to incorporate what we learn from this and see how we can reach other sectors of society without making them anxious, in a way in which they want to learn from this [...] What kind of anger, what kind of surprise, moves people. That is the question (Martínez, 2019).

Despite the fact that news items and articles explicitly signed by an author account for 77.89% of the sample, news agencies are the authors of a not negligible 14.07% of the total, which tells us about the role of these agencies in offering the media new topics of interest.

However, given that one of the main objectives of this study is to delve deeper into the discursive and argumentative approach with which concepts such as “solastalgia” or “eco-anxiety” are used, we have classified the news items of the sample into three main categories (see Table 3), plus the category “Word”, which



includes an unexpected volume of news items on the nomination of the word “eco-anxiety” as the FundéuRAE’s word of the year 2021. This award is particularly relevant because FundéuRAE’s words of the year reflect the importance of a topic of public interest, but also society’s capacity to adapt or generate new meanings that allow us to talk about new realities. In this sense, the nomination of the word “eco-anxiety” connects two different worlds that cause social alarm and concern: climate change and COVID-19.

**Table 3. News in the sample classified depending on the discursive and argumentative approach of the terms “eco-anxiety” and “solastalgia”**

| Type of approach | No. | %       |
|------------------|-----|---------|
| Discursive       | 119 | 59,80 % |
| Descriptive      | 97  | 48,74 % |
| Propositive      | 43  | 21,61 % |
| Word             | 22  | 11,06 % |
| Total            | 281 |         |

Source: Own elaboration.

The results indicate that the discursive approach, in which words such as eco-anxiety or solastalgia are used as part of a discourse with other thematic objectives, is the predominant one, with 59.80% of the total number of articles analysed. Meanwhile, the descriptive approach, which focuses on explaining the concept and incorporates a degree of pedagogical character, is present in 48.74% of the news items. Finally, the propositional approach, which deals with possible solutions, is present in 21.61% of the total sample.

A majority of experts in clinical psychology recommend active involvement in dealing with mental health problems, something Fernando Valladares reflects in one of the articles of the sample: “It is necessary to work on it using scientific reasons so as not to fall into depression. Even psychologists try to help their patients with positive thinking” (Ibáñez, 2021, p. 43). Hence the special importance of the propositional approach in the press. Among those articles analysed combining this approach with a more didactic tone (descriptive + propositive), there are texts typical of celebrity magazines. For example, an article published by *Hola* in 2018 explains, “When you discover that the places where you were happy no longer exist and that you will never be able to return to them, you are immersed in a sadness that psychology is starting to name” (Soria, 2018). The propositional approach of the news is apparent in the form of clear and synthetic advice, usually presented in an easily recognizable list.

The propositional approach argues that abandoning passivity would be the way to overcome the negative psychological impact (anxiety, fear, helplessness, guilt...) caused by climate change. From this perspective, an article entitled “Reactions to the IPCC report: between eco-anxiety and opportunities for

transformation” in *El Mostrador* encourages “not to minimize the importance of the problem”, but “to shift the focus to the great opportunities that the climate emergency also contains”, “take care of the place where we live, participate in social or community organizations that address these issues, and demand more ambitious and effective responses from the authorities to tackle climate change” (Sapiains et al., 2021).

## WORDS REFERRING TO MENTAL HEALTH AND CLIMATE CHANGE

By far the most frequently used concept in the sample to refer to the effect of climate change on mental health is “eco-anxiety”, present in 77.89% of the articles analysed. As shown in Table 4, it is followed quite far behind by “solastalgia” (18.59%), “nature deficit disorder” (17.59%) and “climate anxiety” (15.08%). The rest of the concepts in the table (environmental stress, ecological pain, ecological anxiety, eco-trauma and ecological sadness) appear in a residual way in the texts. Given the similarity of some of these variants, such as “climate anxiety”, the media success of the word “eco-anxiety” is evident.

**Table 4. Most commonly used terms about mental health and climate change in the sample**

| Most used terms               | No. | %       |
|-------------------------------|-----|---------|
| Eco-Anxiety                   | 155 | 77,89 % |
| Solastalgia                   | 37  | 18,59 % |
| Nature Deficit Disorder (NDD) | 35  | 17,59 % |
| Climate Anxiety               | 30  | 15,08 % |
| Environmental Stress          | 7   | 3,52 %  |
| Ecological Pain               | 6   | 3,02 %  |
| Ecological Anxiety            | 5   | 2,51 %  |
| Ecotrauma                     | 2   | 1,01 %  |
| Ecological Sadness            | 1   | 0,50 %  |
| Total                         | 278 |         |

Source: Own elaboration.

Furthermore, Table 5 shows us that the success of the term “eco-anxiety” is recent, only from 2019, when “solastalgia” and “Nature Deficit Disorder” already in use. 94.24% of the mentions examined are in articles published in the last three years of the sample, from 2019 to 2021, which tells us not only of the freshness of all these terms, but also of the lack of knowledge around these concepts until then. Manuel Rivas said in an article published in 2019 in *El País*, “Ecological pain, environmental sadness, solastalgia do not appear in surveys on the state of health” (Rivas, 2019).

**Table 5. Evolution in the use of mental health and climate change concepts**

| Most used terms               | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | Total |
|-------------------------------|------|------|------|------|------|------|------|-------|
| Eco-Anxiety                   | 0    | 0    | 0    | 1    | 31   | 36   | 87   | 155   |
| Solastalgia                   | 5    | 2    | 0    | 2    | 10   | 4    | 14   | 37    |
| Nature deficit disorder (NDD) | 0    | 2    | 1    | 2    | 14   | 5    | 11   | 35    |
| Climate anxiety               | 0    | 0    | 0    | 1    | 7    | 2    | 20   | 30    |
| Environmental stress          | 0    | 0    | 0    | 0    | 6    | 1    | 0    | 7     |
| Ecological pain               | 0    | 0    | 0    | 0    | 2    | 0    | 4    | 6     |
| Ecological anxiety            | 0    | 0    | 0    | 0    | 1    | 0    | 4    | 5     |
| Ecotrauma                     | 0    | 0    | 0    | 0    | 2    | 0    | 0    | 2     |
| Ecological sadness            | 0    | 0    | 0    | 0    | 1    | 0    | 0    | 1     |
| Total                         | 5    | 4    | 1    | 6    | 74   | 48   | 140  | 278   |

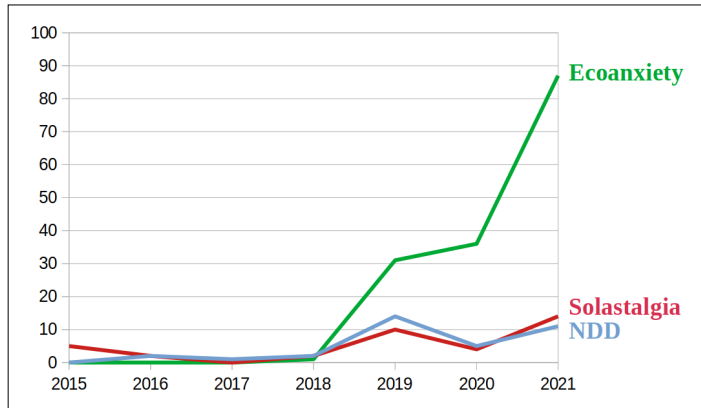
Source: Own elaboration.

Nature Deficit Disorder or NDD, coined by Richard Louv in 2008, appears in the sample since 2016, usually associated with the mental health of children and young people. For example, in an article for *El País*, Javier Rico notes, “Experts in environmental psychology and experts in pedagogy say that children are increasingly suffering from nature deficit disorder” (Rico, 2016). But the concept is generally presented as something novel, as in an article published in *La Vanguardia* in 2018 entitled “Did you know that nature deficit syndrome exists?” (Carmona, 2018) in which the negative consequences of such a deficit are provided: “obesity, attention difficulties, cardiovascular diseases and, the most important, because it is widespread: depression” (Carmona, 2018).

Also in the first years of the sample we find the most imprecise and inaccurate use of concepts, as in a news item in *El Economista* which states that the State Meteorological Agency (AEMET) has found a market niche in “the weather anxiety of Holy Week”, as the changing weather conditions can always prevent some of the religious processions from going out (*El Economista*, 2018). Esther Lastra points out in another news item that company brands feel solastalgia after Brexit: “Driven by their enthusiasm for change, brands pursue (sometimes like mad) innovation, but in view of the Brexit (not yet consummated) that looms on the horizon, they must also arm themselves to the teeth to cope with the desolation” (Lastra, 2016).

Graph 1, focusing only on “eco-anxiety”, “solastalgia” and “Nature Deficit Disorder” shows the positive evolution of the three terms from 2019 onwards, especially “eco-anxiety”, which reaches a milestone in 2021.

**Graph 1. Evolution of the use of “eco-anxiety”, “solastalgia” and “Nature Deficit Disorder (NDD)”**



Source: Own elaboration.

Given the evolution shown in Graph 1, it is possible that the word “eco-anxiety” has ended up partly inheriting the use given to “solastalgia” or “Nature Deficit Disorder (NDD)”, as combinations of these terms rarely appear: only 6.03% of the articles in the sample speak simultaneously of eco-anxiety and solastalgia, while only 7.54% speak of eco-anxiety and Nature Deficit Disorder. However, none of the texts in the sample elaborate on the conceptual distinction or suggest that the origin of one term is supported by others. On the contrary, in most of the articles, these words are used as if they referred to virtually the same thing. In none of the texts where only “eco-anxiety” is mentioned, there is any kind of reference to Glenn Albrecht, the Australian philosopher who popularized the term “solastalgia”. In an article by Ana Pastor in *El País SModa* published in 2015, she explains that solastalgia is a new concept coined by “an Australian philosopher” and that it defines “the sadness and melancholic state produced by the (unstoppable?) destruction of the planet” (Pastor, 2015, p. 74), without naming Albrecht at any point.

Therefore, as the origin of some of these terms is associated with specific psychologists or researchers, there must be, from a logical perspective, conceptual nuances in the use of these terms, if only because they have been coined in different areas and with approaches that do not always coincide. The scientific debate does not currently show up extensively in the media. One of the exceptions is an article by Laura Rocha in *Infobae.com* quoting journalist and science writer Graham Lawton: “If eco-anxiety is treated as a pathology, the forces of climate change deniers will have won” (Rocha, 2021). However, the debate on the psychological and psychiatric status of the effects of climate change on mental health is still very much open and the media does not seem to be the space for advancing academic and scientific consensus.

As Table 6 indicates, fear, anguish, stress and sadness top the list of negative feelings. The first three are very close emotions and, together with sadness,

would form the conceptual core of what the media interpret as “eco-anxiety”. It is particularly striking to see how feelings that involve a pessimistic resignation, such as hopelessness or resignation, appear in 14.07% of the articles. Meanwhile, feelings linked to the idea of ecoanger (those that could indeed lead to action) such as rage, anger, wrath or indignation; also appear in a similar number —14.57% of the articles.

**Table 6. Emotions linked to eco-anxiety with greater presence in the sample**

| Emotions     | No. | %      |
|--------------|-----|--------|
| fear         | 62  | 31,16% |
| anguish      | 58  | 29,15% |
| estress      | 53  | 26,63% |
| sadness      | 32  | 16,08% |
| guilt        | 31  | 15,58% |
| hopelessness | 24  | 12,06% |
| depression   | 23  | 11,56% |
| helplessness | 21  | 10,55% |
| grief        | 17  | 8,54%  |
| fear         | 17  | 8,54%  |
| frustration  | 12  | 6,03%  |
| anger        | 11  | 5,53%  |
| panic        | 10  | 5,03%  |
| betrayal     | 8   | 4,02%  |
| rage         | 7   | 3,52%  |
| ire          | 6   | 3,02%  |
| indignation  | 5   | 2,51%  |
| resignation  | 4   | 2,01%  |

Source: Own elaboration.

Thus, one of the main problems encountered in the analysis of the sample is precisely the ambiguous use of the effects of climate change on people’s mental health. From a psychiatric perspective, there is a need to identify these phenomena rigorously for the interest of a conceptual and theoretical coherence. The texts analysed speak of anxiety, fear, sadness, helplessness, indistinctly as if they were similar reactions to climate change. These are all what Norgaard (2009) called “uncomfortable emotions”, i.e. negative emotions that cause people to avoid the information and news that trigger them. The Australian Psychological Society has tried to expand this list of emotions and talks about fear, anger, guilt, shame,

grief, loss or helplessness, among others (Australian Psychological Society, 2019). In the same vein, when Joe Duggan asked scientists from all countries to express their feelings about the environmental crisis through his “Is this how do you feel” project, the letters received reflected frustration, disgust, anger, anxiety and stress (Duggan, 2020).

## REFERENCES OF THE EFFECTS OF CLIMATE CHANGE ON MENTAL HEALTH

The analysis of the personal references and institutions cited in the articles of the sample reveals some key names. Table 7 lists FundéuRAE and the American Psychological Association (APA) among the most cited institutions, the former due to the choice of the word of the year and the latter as the most prestigious international institution in the field of psychology. The latter would be consistent with the thematic focus of part of the sample, as almost 30% of the articles analysed expressly mention the term “psychology”.

**Table 7. Names and institutions cited in the articles of the sample**

| Cited Names and Institutions | No. | %      |
|------------------------------|-----|--------|
| FundéuRAE                    | 20  | 10,05% |
| Greta Thunberg               | 16  | 8,04%  |
| APA                          | 14  | 7,04%  |
| WHO                          | 13  | 6,53%  |
| IPCC                         | 13  | 6,53%  |
| Glenn Albrecht               | 9   | 4,52%  |
| Susan Clayton                | 7   | 3,52%  |
| Fernando Valladares          | 6   | 3,02%  |
| UN                           | 6   | 3,02%  |
| Stef Craps                   | 2   | 1,01%  |

Source: Own elaboration.

However, the importance of Greta Thunberg as a public figure linked to the effects of climate change on mental health is striking. Thunberg’s activism seems to be one of the key factors in this, as she herself has stated that it arose as a search for an answer to the anguish caused by climate change. In fact, a news item published in *El Universal* describes how, at the World Economic Forum, Greta Thunberg called for eco-anxiety to extend beyond activists: “Adults are always saying that they have a duty to give hope to young people. But I don’t want their hope. I don’t want them to talk to us about hope, I want them to panic” (BBC, 28 March 2019). However, one of the most interesting conceptual debates raised by

this topic is the paralyzing facet of ecoanguish. Several psychologists speak in the articles analysed of the risk of paralysis and inaction in the face of eco-anxiety. In fact, an article in the sample entitled “Solostalgia and fire whirlpools, when climate change changes the language” shows Thunberg as a positive example: “Faced with these predicted catastrophes, some choose not to act because they think it is too late [...] On the opposite side is the young Swede Greta Thunberg, who led part of her generation to act” (Hood, 2021).

This distinction between paralyzing anxiety or starting point of action actually has a terminological narrative that can be observed in some of the texts in the sample. Thus, several authors propose to speak of anger or rage as feelings leading to action against climate change, “experiencing ecoanger predicts better mental health outcomes, as well as greater engagement in proclimatic activism and personal behaviours” (Ibáñez, 2021, p. 46), even from a zoological perspective “anger is a key adaptive emotional driver of engagement with the climate crisis” (Ibáñez, 2021, p. 46).

On some occasions, the object of this ‘ecoanger’ —a term that only appears in 2.51% of the texts in the sample— is a response to the ‘lack of political will’, says Ana Pastor (2015, p. 74). But, Valladares argues, “When you understand that everything is related to the political and social system, you can enter into an anxiety that can lead to depression” (Ibáñez, 2021). Méndez (2021) points out that these feelings in the face of government inaction can even be associated with betrayal, as citizens somehow expect a political reaction to the climate emergency.

Most of the texts from the sample present solutions to eco-anxiety from an individual perspective, as when Ricardo Trotti explains that he “self-medicated with a high dose of recycling [...] It’s a drop in the ocean, but it calms my anxiety” (Trotti, 2015). Other articles point to the dual function of combating eco-anxiety: to improve one’s mental health and also to foster one’s activism, with the consequent collective benefits expected from this. Indeed, in some of the propositional texts in the sample, the reaction to political inaction becomes a matter of collective creativity and how “cooperation and a sense of community can be reborn in a negative context” (Claver, 2019).

A 23-year-old Filipina interviewed in *El Espectador* explains how young people realized that worrying about the climate crisis “won’t stop it. So we turned our individual anxiety into collective action. And now, we fight everywhere: in the streets, in courts, inside and outside institutions all over the world” (*El Espectador*, 2021).

## CONCLUSIONS

This paper suggests, firstly, that anxiety due to climate change is still a developing idea, with a limited presence in the Spanish and Latin American press, except in some very specific cases, such as the nomination of “eco-anxiety” as the word of the year. This idea generally appears in a patchy way from a conceptual point of view. However, the articles analysed show a certain temporal evolution in

the use of the different concepts. Thus, between 2015 and 2019, words such as “solastalgia” or “nature deficit disorder” timidly made their way into the media, until, from 2019 onwards, the concept of eco-anxiety gained relative dominance in the press. This is probably also due to the simplicity of the term, which combines in a colloquial way the two worlds it refers to: the environment and mental health.

However, these years of consolidating a proper terminology are characterized by the use of words in an imprecise way, even linking climate anxiety to the fear of rain. We also find some critical and ironic uses of “eco-anxiety”, ridiculing those who suffer from it, perhaps unaware that some of the emotions caused by climate change can seriously damage people’s mental health. This study, therefore, confirms that, from the point of view of the clinical psychology, the media have begun in recent years to describe the effects of climate change on mental health using neologisms which, however, are still used in an ambiguous and inaccurate way, perhaps partly because of the urgency detected when it comes to offering proactive information in the face of a new social problem.

Among the most frequently cited emotions in the sample articles, some negative emotions such as fear, anguish, stress, sadness or guilt stand out. Paralyzing emotions—such as hopelessness, depression, helplessness or frustration—are mentioned more frequently. But at the same time, feelings that could motivate an active response from citizens—such as rage, anger, rage or indignation—are also present. However, few of the articles in the sample explain the positive role the latter can play not only in improving the mental health of the individual but also in enabling society—especially among young people—to take action in the face of the serious problem of climate change.

The results of this study indicate that the inaccurate use of the term “eco-anxiety” in the media is also a simplification with communicative hurdles in at least two respects:

- It highlights an emotion that may be considered negative, such as anxiety, hiding the fact that other positive emotions, potentially driving action and engagement, are included in this emotional response. This could send the wrong message about people’s emotional experiences when confronted with climate change information.
- In its simplicity, it fails to capture the complex and profound emotional and mental health impacts of climate change. It is likely that the success of this term in the media partly contributes in preventing society from becoming aware of the serious consequences of this impact and the extent of the psychological distress it causes.

## FUTURE WORK

The WHO (2020) notes that the COVID-19 pandemic has unavoidably led to a reframing of the impact of crises on the mental health of citizens, to the extent that “a new pandemic is looming: the ‘psychological’ pandemic, stemming from



the havoc wreaked on the mental health of the population by this unprecedented global health emergency” (Spanish General Council of Psychology, 2021). This aspect could link the health crisis caused by the coronavirus and the mental health problems generated by climate change in the public, as can be observed in the sample. For example, in a news item by Andrea Muñoz (2021) for ABC, psychologist Bárbara Tovar explains that the pandemic “has notably favored” (p. 40) climate anxiety. Although both crises share emotional responses such as fear, anxiety or sadness (Losada Díaz et al., 2020), their emotional impact is different, as the pandemic involves an immediate and very serious danger, full of uncertainties even in the short term. In the face of this crisis, a preventive and individually protective response is expected. Climate change, on the other hand, is a less surprising and more protracted threat, requiring a much more proactive personal involvement.

The nomination of “eco-anxiety” as word of the year 2021 by the FundéuRAE shows the validity of this term in a social context marked by the pandemic, and where mental health becomes a major issue. The similarities between the two crises are inevitable. “The climate tragedy is in slow motion and will last many more years, but the urgency to act is the same,” argues Andreu Escrivá in an interview of the sample (Martínez Ron, 2020). In fact, one aspect that appears in some of the texts analysed is the solidarity between scientists studying climate change and those virologists who have long been warning of the conditions in which new viruses are being promoted. The work of both seems to be relegated to the background until the dire consequences of these phenomena emerge.

However, the differences between the two crises are also clear. It is interesting how the time scale of the climate crisis is noticed in several articles of the sample. Clara de Massol, a researcher at King’s College London, already described the effects of climate change in an article in *El País* in 2019 as a “slow-motion violence that forces us to think about things on a different scale. We are used to the more spectacular expressions of violence, but climate change is something more gradual, more treacherous” (Aunión, 2019, p. 32). Perhaps the difference in the two time scales justifies the differences in attracting the interest of public opinion and the media. Many of the texts in the sample stress that climate change still does not attract the necessary attention and, above all, that there is still no clear enough perception of the effects that this phenomenon may have on the mental health of citizens.

Further research is therefore needed to clarify the links between climate change and COVID-19 when discussing mental health impacts. It is important to highlight that the confluence in time of the COVID-19 and the climate change crises, could impact the mental health of citizens in a more complex and intense way than the simple sum of their respective emotional impacts. In this sense, it seems necessary to undertake specific studies that will allow us to understand this new reality and address the increase in mental health problems in a post-covid society.

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