## Solastalgia and Forest Fires

Solastalji ve Orman Yangınları



<sup>1</sup>Muğla Sıtkı Koçman University, Muğla

One of the important problems created by climate change is forest fires. Forest fires occur due to both natural and anthropogenic causes. Forest fires, which occur with the effects of climate change such as an increase in temperature, drought, heat waves, and climatic conditions, are increasing gradually. Acute and chronic effects caused by forest fires cause significant life changes. As a result of the fire, not only forests are damaged, but also flora, wildlife, water resources, soil, climate, areas used by people for recreational purposes, and settlements near and around forested areas. As a result, changes such as increases in temperature, pollution, epidemics, drought, food shortage, and forest fires, affect mental and physical health. While exposure to forest fires creates a direct traumatic effect; indirectly, it affects mental health for a number of social, political and economic reasons such as poverty, unemployment and housing. Forest fires also create an environmental change. This environmental change creates a sense of loss, the sense of belonging is lost, it cannot connect with the new environment, it becomes difficult to adapt and causes distress. Uncertainty about the future, helplessness, stress, anxiety, posttraumatic stress disorder and depression are common psychological problems due to climate change. It defines some new mental health concepts as the consequences of climate change affect mental health. "Solastalgia" is one pf these new concepts. Solastalgia is defined as a term that expresses the pain and distress caused by the loss of the thing/things that people find solace and environmental change. Solastalgia is a necessary concept for mental health professionals to understand the links between ecosystem health and human health, especially the cumulative effects of climatic and environmental change on mental, emotional and spiritual health. Keywords: Forest fires, mental health, environmental loss, solastalgia

İklim değişiminin yarattığı önemli sorunlardan biri orman yangınlarıdır. Orman yangınları gerek doğal gerekse de antropojenik sebeplerden dolayı ortaya çıkmaktadır. Sıcaklığın artması, kuraklık, sıcak dalgaları, iklim koşulları gibi iklim değişikliğinin etkileri ile ortaya çıkan orman yangınları giderek artmaktadır. Orman yangınları nedeniyle ortaya çıkan akut ve kronik etkiler yaşamda önemli değişimlere neden olmaktadır. Yangınların neden olduğu akut ve kronik etkiler sonucunda sadece ormanlar zarar görmez aynı zamanda flora, yaban hayatı, su kaynakları, toprak, iklim, rekreatif amaçlarla insanların faydalandıkları alanlar ile ormanlık alanların yakını ve çevresindeki yerleşim yerleri de zarar görmektedir. Sonuçta sıcaklığın artması, kirlilik, salgın hastalıklar, kuraklık, besin kıtlığı, orman yangınları gibi değişimler ruh ve beden sağlığını doğrudan ve dolaylı olarak etkilemektedir. Orman yangınlarına maruz kalmak doğrudan travmatik bir etki yaratırken; dolaylı olarak da yoksulluk, işsizlik ve barınma gibi bir dizi sosyal, politik ve ekonomik nedenlerde ruh sağlığını etkilemektedir. Orman yangınları bir çevresel değişim de yaratmaktadır. Bu çevresel değişim bireyde kayıp duygusu yaratmakta, aidiyet duygusu kaybolmakta, yeni çevre ile bağ kuramamakta, uyum sağlaması güçleşmekte ve sıkıntı yaşamasına neden olmaktadır. İklim değişikliği nedeniyle sık karşılaşılan psikolojik sorunlar gelecek hakkında belirsizlik, çaresizlik, stres, anksiyete, travma sonrası stres bozukluğu ve depresyon olarak karşımıza çıkmaktadır. İklim değişiminin sonuçlarının ruh sağlığını etkilemesi nedeniyle bazı yeni ruh sağlığı kavramları tanımlanmaktadır. "Solastalji" bu yeni ruh sağlığı kavramlarından biridir. Solastalji insanın teselli bulduğu şeyin/şeylerin kaybı ve çevresel değişimin neden olduğu acıyı ve sıkıntıyı ifade eden bir terim olarak tanımlanmaktadır. Solastalji, ekosistem sağlığı ve insan sağlığı arasındaki bağlantıları, özellikle iklimsel ve çevresel değişimin zihinsel, duygusal ve ruhsal sağlık üzerindeki kümülatif etkilerini anlamak için ruh sağlığı uzmanları tarafından bilinmesi gerekli bir kavramdır. Anahtar sözcükler: Orman yangınları, ruh sağlığı, çevresel kayıp, solastalji

## Introduction

One of the problems caused by climate change, which is the biggest public health crisis of the 21st century, is forest fires. Forest fires cause injuries and diseases as well as loss of life and property, and cause many negative effects on natural life and environment. In Turkey, on July and August 2021, a total of 299 forest fires broke out in 49 provinces and 60 thousand hectares of forest area were burned (Deniz ve Hiç 2022). The most important fires in these provinces, which were reflected in the mainstream media, were in the provinces of

ABSTRACT

ÖZ

Muğla, Antalya and Mersin. In 2021, it is seen that forest fires due to climate change have increased in many parts of the world, especially in the United States of America, Spain, China, Fiji, England, Indonesia, Canada, Germany, Italy and Greece (Medyascope 2021).

Meteorological and climatic conditions such as increased temperatures, increased drought, and heat waves are among the leading reasons for the increasing frequency of forest fires and the increase in the number of exposed areas (IPCC 2021, Romanello et al. 2021, Şen 2022). In terms of forest fires, it is known that Turkey, which is located in the Mediterranean climate zone, especially the Western Taurus and Muğla regions are among the most sensitive areas in terms of forest fires. While some of these fires occur naturally due to increased temperature and drought with climate change, some fires are caused by negligent or deliberate anthropogenic causes (Calda et al. 2020, Romanello et al. 2021, Şen 2022).

For whatever reason, forest fires bring many negative effects and most importantly, they disrupt the ecological balance. As a result of forest fires, natural life and wild animals die, and wildlife changes with the arrival of other species in forest areas. With the deterioration of natural life, forest production is badly affected, erosion occurs, soil structure deteriorates, mass and water loss occurs, water resources deteriorate and it all causes disasters such as air pollution, desertification, floods, landslides and avalanches. In addition, air quality deteriorates due to forest fires, toxic gases and fumes are dispersed into the atmosphere, as a result of which carbon emissions increase and all these change the global climate system. When a forest fire breaks out and affect residence areas, people lose their homes, lands and animals, their habitats are destroyed and forced migrations occur. (Ayanoğlu et al. 2017, Romanello et al. 2021).

Fires, which endanger the continuity of forests and reduce forest areas, cause direct and acute health effects as well as indirect and long-term effects by exposure to smoke, flames and heat (Pihkala 2020a). The air quality deteriorates with the gases emitted into the atmosphere by the effect of the fires, and the resulting fumes affect the health of people outside fire areas as well as people in the region where fires take place. Even after flames are extinguished, exposure to smoke and ash from a forest fire causes significant health problems in both people at-risk and healthy people. Especially children, pregnant women, the elderly, asthma, COPD and cardiac patients are the risk groups that have the most problems due to the negative effects of fire. Necessary measures should be taken to protect these risky groups from health problems caused by fire. In addition, burns, heat exhaustion, heat cramps, and heat stroke are common acute health problems for firefighters and people stuck in the fire area. All these physical health problems are noticed in the acute period and necessary interventions and treatments are provided. As in all natural disasters, mental health problems are as common as physical health problems as a result of forest fires. However, since mental health problems are not noticed in the acute period or do not appear immediately, the intervention process changes. Due to the psychological traumas experienced as a result of disasters, the lives of individuals are majorly affected. After the fire, as it happens after all natural disasters, its negative effect on an individual continues, it causes negative behaviors, psychological reactions and moreover, the individual has difficulty in returning to his previous process and even experiences various mental problems. When the necessary psychological support is not provided after these problems, we encounter more severe mental health conditions (HASUDER 2021). All of these affect the physical, mental and social health of the society, especially the people living near forest areas (Ayanoğlu et al. 2017, Romanello et al. 2021).

Today, the most important reason for the frequent occurrence of forest fires is climate change. Studies examining the effects of climate change on mental health have described acute or chronic mental health problems. These are anxiety, post-traumatic stress disorder (PTSD), depression, substance use disorders, phobic and somatic disorders, suicidal ideation and completed suicide (Cunsolo Willox et al. 2015, Clayton et al. 2017, Galway et al. 2019, Charlson et al. 2021). Forest fires also cause the feelings of uncertainty about future, uncontrollable despair, stress and anxiety (IPCC 2021). It defines some new mental health concepts specific to climate change due to the effects of climate change consequences on mental health. One of these concepts is "Solastalgia".

Disasters caused by climate change, such as forest fires, also cause spatial and environmental changes and this change creates a sense of loss in the individual. The concept of "solastalgia" is used to describe the pain and distress caused by the loss of the space and environment which are personally cared for. Seen as secondary trauma, solastalgia is actually a symptom. Therefore, it's not a mental illness. Solastalgia is defined as a term that expresses the pain and distress caused by the loss of the things that people find comfort in and environmental change. It is a new concept that gives meaning and clarity to mental distress caused by spatial and environmental changes due to forest fires (Albrecht et al. 2007, CPA 2020). Mental health professionals need to have more information about the concept of solastalgia, which is one of the mental problems caused by climate change. Thus, they will be able to identify the individual experiencing solastalgia, carry out studies to

470

prevent solastalgia, help individuals with solastalgia find and use healthy and effective coping methods, and take the necessary precautions to prevent a mental disorder. In this study, it is aimed to raise awareness of mental health professionals by considering the concept of solastalgia, which is one of the possible common mental health consequences of climate change, and the situations that cause solastalgia and solastalgia in forest fires.

### Loss of a Personally Attached and Valued Place

Loss of space is not a trivial experience. Many people form a strong attachment to where they live. This bond provides the person with a sense of stability, security and personal identity. It has been pointed out that people experience more happiness, life satisfaction and optimism when they have a strong bond with the region and society they live in (Brehm et al. 2004). It is stated that many things such as job performance, interpersonal relationships and health are related to the attachment to a place and are affected by the positive and negative relationship established with place attachment (Fullilove 2013). In disasters such as forest fires caused by climate change, flora, wildlife, water resources, soil, climate, areas used by people for recreational purposes and residence areas in and around forest areas are also damaged and changed. This change causes the place that is important for the individual and the bond established with this place to be negatively affected. Scannell and Gifford (2016) indicated the beneficial effects of the place that is important for the individual in their study experimentally. In the study, they divided the sample into two different groups. One sample group was asked to describe and visualize the place where they belong and which is important to the individual while the other sample group was requested to describe and visualize the place which is not important for the individual and where they do not develop any personal attachment. It was found that those in the caring and commitment group showed higher self-esteem and sense of belonging than those in the non-attached group. In cases such as forest fires, individuals lose places where they live, work, produce and have memories. This realistic state of loss also brings about the loss of the relationship established with physical space (Tschakert et al. 2019). Disasters such as forest fires cause changes in the living place and environment, and cause both short-term, short-distance, long-term and long-distance displacements. Just like the loss experienced by burning of a place and the environment, the forced displacement can also be defined as a loss of place. Cattaneo et al. (2019) argues that the chronic effects of climate change have led to voluntary and permanent migrations and will continue to do so. Voluntary or involuntary migration events cause loss of place and community connections, struggles to earn living and financial difficulties associated with it. The feeling of loss is experienced as an inevitable result with the change of physical space in conncection with the migration event. All of these negatively affect physical, mental and spiritual health (Dannenberg et al. 2019). It is indicated that the bond established between the place and the individual and the importance given to the place are so effective that they cannot be ignored in the life of the individual.

# Relationship between Personally Attached Place and Significant Loss of Space and Identity, Autonomy, and Sense of Control

The concept of identity consists of many elements including cognitive, physical and social elements. Our bodily sensations, body image, memories, goals, value judgments and experiences are effective factors in our identity. Our social identity is shaped by factors such as the social position we belong to, gender, ethnicity, age, status and how others evaluate ourselves. According to the psychoanalyst Erik Erikson, the increasing consistency, continuity and sameness of experiences in the integrity of the past and the future forms the basis of the sense of ego identity (Dalbay 2018). An individual's perception of identity is affected by their experiences in daily life (Dittmar 2011). One of the defining features of identity is that it is social. In other words, it is the individual's feeling of belonging to a community or group. The sense of belonging constitutes the sociocultural dimension of identity (Barnett et al. 2021). The bond established with the place of residence improves the sense of belonging and provides a positive sense of identity (Tschakert et al. 2019). A positive identity is formed as the product of trust in the continuity of groups and belief in self-efficacy, that is, the capacity to exercise control, distinctiveness and self-esteem and a sense of worth. Adaptation to climate change is inevitably influenced by social identity processes, namely how people perceive themselves, others and their place in the world around them (Barnet et al. 2021). With disasters such as fire and flood, environmental change changes the direction of daily life and the loss of identity perception can deepen with environmental loss of the individual. People are aware of and are sensitive to threats to their identity that may arise from changes in social or environmental conditions or through labeling by others. Individuals faced with such threats can respond in various ways by changing their behaviors, adapting their identities, denying the existence of the threat or accepting the existence of a threat, but not changing their identity or behavior in any other way (Barnett et al. 2021). When a house burns or is damaged, valuable objects inside the house are also lost. Personally meaningful objects, especially objects that represent important moments in life, relationships or personal/family history, play an important role in gaining insight into who we are, For example, objects such as a photograph, a dowry chest, a painting on the wall give signs of our identity. Such objects are a part of the individual's perception of identity as much as they are a part of the physical space (Dittmar 2011). Identities also play an active role in ensuring and limiting adaptation (Barnett et al. 2021). The spatial and environmental change caused by climate change causes the loss of valuable objects as well as the loss of important places. The loss of valuable objects appears as another way of disrupting the individual's sense of self and identity (Dittmar 2011). Disasters such as forest fires and floods not only destroy homes, places and the environment, they also destroy many things that help define our identity. With the disappearance of these personally meaningful objects and other things related to daily life, the sense of loss of the place that is important to the individual deepens, and accordingly, problems are experienced in the continuity of the loss of personal identity (Galway et al. 2019).

Forest fires caused by climate change, together with the loss which they cause in spatial and environmental change, affect the individual's sense of autonomy and control. Autonomy and sense of control are seen as important concepts in the formation of a positive identity perception (Barnett et al. 2021). Autonomy means that you manage your own life and approve of your actions. Autonomy across cultures is a basic human need. Individuals experiencing autonomy show signs of higher levels of psychological health and social functionality (Lancer 2016). Disasters such as forest fires cause changes in daily life routine and some vital ailments are felt more intensely and can disrupt expectations and habits learned over the years (Fresque-Baxter and Armitage 2012). This affects autonomy. The individual who lacks autonomy is more controlled by what others do, think and feel and will try to adapt accordingly. The individual, who reacts according to the expectation and reaction of another person, worries about them and acts by bowing to their ideas. In addition, they may have difficulty in making decisions and taking action on their own (Lancer 2016). With the environmental change after forest fires, the control over one's own life is lost and the freedom to make decisions about personal needs is affected (Silver and Grek-Martin 2015). It is accepted that the desire to be able to fulfill personal needs and basic duties independently and to live without being dependent on others is a basic psychological need at the center of human well-being (Deci and Ryan 2011). Individuals who cannot fulfill this basic need in disasters such as forest fires feel more distress. The sense of control over the life of the individual who is exposed to undesirable changes in his environment due to disasters may also decrease. An individual with a decreased sense of control may feel inadequate, have difficulty in coping with daily stresses, and this difficulty may increase the possibility of encountering mental health problems (Schönfeld et al. 2016). After disasters such as forest fire, people do not only lose their homes, lands or belongings; they have lost a place, a place which they personally connect with and attach importance to. The loss of this important place, namely the loss of the environment, brings with it the loss of identity perception and disrupts the individual's independent roles and responsibilities. The mental distress caused by losses which are experienced are linked together like the links of a chain. As can be seen, disasters cause many negativities and the sense of spatial loss and the accompanying feelings of identity, autonomy and loss of control cause solastalgia in the individual.

## **Concept of Solastalgia**

The chronic characteristic effect of climate change is the sense of loss (Askland and Bunn 2018, Cunsolo and Ellis 2018, Tschakert et al. 2019). Loss of relationship with physical space is an important part of this. As climate change alters the areas in which people live, many are likely to experience the feeling that they have lost a place important to them. This phenomenon is called solastalgia (Albrecht 2005, Albrecht et al. 2007). Solastalgia is a relatively new concept for understanding the links between human health and ecosystems, particularly the cumulative effects of climatic and environmental change on mental, emotional and spiritual health. It is seen that the concept of solastalgia has a multidisciplinary and empirical structure.

The concept of solastalgia was first defined by Glenn A. Albrecht at an Ecohealth Forum in Montreal/Canada in 2003 (Galway et al. 2019). The concept of solastalgia was defined by Glenn A. Albrecht (2005) as "the feeling of alienation and psychological discomfort that people feel due to the change and disappearance of the ecosystem of the regions they live in due to the climate crisis". Albrecht (2005) coined the word solastalgia as a combination of the words 'consolation' and 'nostalgia'. Nostalgia is defined as the melancholy or homesickness experienced by individuals when they leave a loved one. On the contrary, solastalgia is the distress caused by environmental change that is directly related to the home environment and affects people although there is no question of leaving home (Albrecht et al. 2007). In other words, solastalgia is the situation in which feelings of sadness or loss arise related to the negative perception of changes in a valuable environment for the individual. People with solastalgia are defined as those who do not leave the area despite the change in the ecosystem of the area they live in, witness the change of everything around them, see that nothing is the same as before, and feel a great

longing for their place before the change (Cunsolo et al. 2013, Christensen 2019). In the study of Cunsolo Willox et al. (2015), it was noted that as a result of the change in the interaction between the environment and people, food insecurity, sadness, anger, stress, deterioration in family communication, sense of self-worth and sense of integration with the society decreased in the society in the affected area. Solastalgia is an individual and situation-specific concept. In the absence of place and home security, grief is like a whirlpool of emotions such as anger, sadness, longing, and anxiety (Cianconi et al.2020). Solastalgia refers to the pain or distress caused by the loss of a comforting place; for example, when their homes or lands are lost due to reasons such as road construction, dam projects, deforestation etc, it is the sense of desolation that people feel, consciously or unconsciously. Albrecht argues that such invasive changes in one's home environment are perceived as an attack on one's sense of place. Solastalgia is also expressed as the homesickness we feel at home as the reverse of nostalgia (CPA 2020).

Solastalgia may occur gradually with the slow onset of changes in the local environment of the person or it may occur when the local environment changes suddenly, as it does after a natural disaster. People exposed to environmental change cannot reconnect with the lost environment, lose their sense of belonging and the process gets worse because they feel uncertainty, powerlessness or lack of control over the change process (Albrecht 2005, Albrecht et al. 2007). With the worsening condition, the reactions elicited by solastalgia include general distress and stress. This general distress may result in more serious health and medical problems such as drug use, physical illness and mental illness in individuals who have difficulty coping with stress and solastalgia (Albert 2005). For the awareness and treatment of solastalgia, which is becoming increasingly widespread, it is necessary to restore the emotional health of the individual, which has been shaken as a result of the physical trauma caused by the damage to his home and soil. To cope with solastalgia, the individual needs time and conscious effort. The individual's belief in himself, his environment and good days ahead, as well as conscious effort, is necessary for the healing process (Albrecht 2005, Albrecht et al. 2007, CPA 2020, Cianconi et al. 2020).

### **Solastalgia and Forest Fires**

When the causes of unavoidable large forest fires are examined, it is reported that some fires started due to climatic conditions, while others started due to human origin (Calda et al. 2020). For a forest fire to start, three basic conditions are required: fuel, oxygen, and ignition source. Climate change can increase the probability of the existence of each of these three basic conditions. The increase in this probability and the prolongation of the time interval known as the fire season due to climate change affects the number and size of forest fires. Since forests fulfill the Earth's task of absorbing carbon dioxide and cooling the climate, forest loss negatively affects this task (Xu et al. 2020). Considering all these, it is inevitable that human health will be negatively affected (To et al. 2021).

When we look at the acute and chronic health effects after forest fires; acute effects are caused by incidents such as fire, smoke, temperature, etc. while chronic effects result from longer-term changes in the climate (Clayton et al. 2017). Pollution, epidemics and drought, food shortages that occur with forest fires directly and indirectly affect our mental and physical health. (Pihkala 2020a, Pihkala 2020b, Ágoston et al. 2022). While direct effects include exposure to traumatic events such as forest fires, indirect effects involve influencing mental health, to a large extent, for a range of social, political and economic causes such as poverty, unemployment and housing (Connors 2020). Most of the studies examining the effects of fires on mental health have focused on PTSD, depression, anxiety, and substance use (Eisenman et al. 2015, Belleville et al. 2019, Charlson et al. 2021, To et al. 2021, Gawrych 2021). To et al. (2021), in determining the scope of forest fires and mental health, witnessing or experiencing loss of property and loss of security of loved ones or fear of losing loved ones are listed as trauma factors which increase the risk of post-fire anxiety, depression and PTSD in adults. It is stated that substance abuse is mostly seen in individuals with a diagnosis of mental disorder. Belleville et al. (2019), a questionnaire was applied to 379 people who were evacuated from the region where the forest fire broke out, and 55 people selected from 379 people were interviewed for the diagnosis of mental disorder. As a result of the interview, 29.1% met the criteria for PTSD, 25.5% for depression and 43.6% for insomnia; it was determined that this situation was definitely or probably related to the fires. Dood et al. (2018) conducted structured interviews with 30 people affected by the fires caused by climate change in Canada. Interviewees stated that experiences of evacuation and isolation, as well as feelings of fear, stress and uncertainty, contributed to the acute and longterm negative effects on their mental and emotional health. Some interviewees stated that the environmental change caused by the fire affected their livelihoods and soil-based activities. They described the negative consequences of this on their mental health. It is noted that many things have changed for the people of the region after fires, and the environmental change is mostly seen in the physicality of the landscape, and how the change is perceived and experienced is as important as this change. It is indicated that all this environmental and spatial loss causes a feeling of mental distress in the individual and this situation is explained by the concept of solastalgia (Butler et al. 2018).

It has been reported that forest fires that occurred in the Aegean and Mediterranean Regions of Turkey in 2021 caused many direct and indirect effects, especially in people living in the fire area and exposed to fire (TTB 2022). It has been noted that there is a spatial and environmental change as a result of forest fires, and this change primarily affects the people living in the area where the fire broke out and then all the people (İşçi 2021). The forest fires in Mersin, Antalya and Muğla have changed the lives of the people of the region and have been changing more and more every day. The personal resources of the people living near the areas where forest fires broke out, as well as the economic resources which ensure the continuity of their lives, have disappeared. For example, one of the places most affected by the forest fire in Muğla Marmaris was the village of Osmaniye. In the region where the geographically registered Marmaris honey is produced, most of the villagers dealing with beekeeping put their beehives among red pine trees in the forest area. The most important livelihood of the people of the region is pine honey produced by bees from red pine forests (CNN TÜRK 2021). Pine honey is an exceptional honey that bees produce not from flower pollen, but from the secretion of an intermediary insect living in the trunk of some pine tree species native to the Mediterranean climate. It is found only in Turkey and Greece in the world (Arslan et al. 2021). Both the forest area has been destroyed and the pine honey beetles and bees have died. The production of pine honey, which is an important source of income for the people of the region, has stopped. When they look back, the environment they perceive and remember has disappeared. Thus, the people of the region had to relocate because their forests, houses, lands and bees were destroyed. As in this example, forest fire brings with it a series of losses. The impact of the loss resulting from this environmental change on human mental health needs to be defined. The concept that defines the mental distress caused by this loss is "solastalgia". Solastalgia refers to the pain and distress experienced due to the change and transformation of the comforting or habitual physical space due to disasters such as forest fires and the lack of the usual comforting physical capacity. It is a potential human response. It is definitely not a mental illness. (Albrecht et al. 2007).

The environmental and physical changes that occur with forest fires may create significantly different perceptions in people. Solastalgia is a useful concept for describing the changes and effects in psychological health after a wildfire. After a forest fire, people living there see that the places they had previously found solace in, the places they created and earned their livelihood after they started living there, are destroyed, and they often want the environment and landscapes changed by fire to be restored. In a study examining the responses of individuals living in the region after the forest fire, it is revealed that there is a strong desire to reconnect with the grief caused by the loss of the forest and the burning landscape (Eisenman et al. 2015). Individuals try to develop a positive relationship and find solace by connecting with their new landscape. Knowing that it is not reversible causes mental distress.

Considering the environmental challenges such as biodiversity loss, pollution, deforestation, as well as the speed and scale of climate change, it is predicted that more and more people will experience solastalgia. Galway et al. (2019), Louv states in his book "The Nature Principle: Reconnecting with Life in a Virtual Age" that "if climate change occurs at the rate some scientists believe and people continue to pile up in cities devoid of nature, then solastalgia will lead to an increase in mental illnesses." Solastalgia is a necessary concept for understanding the links between ecosystem health and human health, especially the cumulative effects of climatic and environmental change on mental, emotional and spiritual health. To be aware of the solastalgia caused by the loss of the habitual environment after disasters caused by climate change such as forest fire; it is necessary to increase the resilience of the individual, to help the individual reconnect with the changing environment, that is, to strengthen the adaptation, to understand the exposed society, to identify the problems they experience and to prevent mental illnesses (Galway et al. 2019). In this direction, mental health professionals will be able to develop intervention studies for both the individual and the society by defining the mental problems that occur due to climate change, such as solastalgia.

## Conclusion

Solastalgia has been felt by many cultures for centuries. Conditions such as ecosystem distress and climate chaos further intensify the emotion the term describes. Solastalgia describes the feeling of distress that people experience in response to the changing environment, such as forest fires, floods, droughts, land clearing, overhunting. The basis of this feeling of distress; it is based on the loss of the connected environment and the disappearance of all the elements that help define the identity of the person with this loss and the inability to control and feel autonomy over the changing environment. Today, forest fires are seen as a more frequent

disaster due to climate change and other reasons. It is important to draw the attention of mental health professionals about the causes of forest fires and how they affect people psychologically. Although solastalgia has begun to appear in the literature on how forest fires affect mental health, it seems that there is much more to learn about solastalgia. Recognition of mental health concepts caused by climate change, such as solastalgia, is necessary for taking necessary precautions, determining the needs of the individual and society in this regard, increasing psychological resilience, developing coping skills and rebuilding a strong environmental connection and individual's well-being. It is thought that more plans, programs and researches will be made for the recognition, prevention and treatment of climate change-related psychopathologies. Mental health professionals stand at an important point as a power and resource in this regard.

#### References

- Ágoston C, Csaba B, Nagy B, K″ováry Z, Dúll A, Rácz J et al. (2022) Identifying types of eco-anxiety, eco-guilt, eco-grief, and eco-coping in a climate sensitive population: a qualitative study. Int J Environ Res Public Health, 21;2461.
- Albrecht G, Sartore GM, Connor L, Higginbotham N, Freeman S, Kelly B at al. (2007) Solastalgia: the distress caused by environmental change. Australas Psychiatry. 15:95-98.
- Albrecht, G (2005) 'Solastalgia'. A new concept in health and identity. PAN: Philosophy Activism Nature, 3:44-59.
- Albrecht, G (2006) Solastalgia. Alternatives Journal, 32:34-36.
- Albrecht, G (2010) Solastalgia and the creation of new ways of living. In Nature and Culture: Rebuilding Lost Connections. (Eds S Pilgrim, JN Pretty). London, UK, Earthscan.
- Albrecht, G.A (2020) Negating solastalgia: An emotional revolution from the anthropocene to the symbiocene. Am Imago, 77:9-30.
- Arslan MB, Şahin HT, Duru ME (2021) Çam balı üretiminde Basra Böceği (Marchalina Hellenica Genn.) ile konukçu ağaçların kimyasal içeriği arasındaki ilişkiler üzerine bir inceleme. Bartın Orman Fakültesi Dergisi, 23:1042-1053.
- Askland HH, Bunn M (2018) Lived experiences of environmental change: Solastalgia, power and place. Emot Space Soc, 27:16-22.
- Ayanoğlu S, Dölarslan M, Gül E (2017) Sadece Bir Yangın mı? Ekolojik ve Sosyo-Ekonomik Açıdan Orman Yangınları. Türk Bilimsel Derlemeler Dergisi, 10:32-35.
- Barnett J, Graham S, Quinn T, Adger WN, Butler C (2021) Three ways social identity shapes climate change adaptation Environ Res Lett, 16:124029.
- Belleville G, Ouellet MC, Morin CM (2019) Post-traumatic stress among evacuees from the 2016 Fort McMurray wildfires: exploration of psychological and sleep symptoms three months after the evacuation. Int J Environ Res Public Health, 8:1604.
- Brown MJ, White BP, Nicholas PK (2022) Mental health impacts of climate change: considerations for nurse practitioners. J Nurse Pract, 18:359-363.
- Burns MR, Taylor JG, Hogan JT (2007) Integrative healing: e importance of community collaboration in post re recovery and pre re planning. In Wildfire Risk: Human Perceptions and Management Implications (Eds WE Martin, C Raish, B Kent):81-98. New York, NY, Routledge.
- Butler A, Sarlöv-Herlin I, Knez I, Ångman E, Ode Sang Å, Åkerskog A (2018) Landscape identity, before and after a forest fire. Landsc Res, 43:878-889.
- Calda B, An N, Turp MT, Kurnaz L (2020) İklim değişikliğinin Akdeniz havzasındaki orman yangınlarına etkisi. International Journal of Advances in Engineering and Pure Sciences, 32:15-32.
- Cattaneo C, Beine M, Fröhlich CJ, Kniveton D, MartinezZarzoso I, Mastrorillo M at al. (2019) Human migration in the era of climate change. Rev Environ Econ Policy, 13:189-206.
- Charlson F, Ali S, Benmarhnia T, Pearl M, Massazza A, Augustinavicius J, Scott JG.(2021) Climate change and mental health: a scoping review. Int J Environ Res Public Health, 23:4486.
- Christensen, J (2019) Climate anxiety is real, but there's something you can do about it. https://mahb.stanford.edu/libraryitem/climate-anxiety-real-theres-something-can/ Accessed date:01.07.2019.
- Cianconi P, Betrò S, Janiri L.(2020) The impact of climate change on mental health: a systematic descriptive review. Front Psychiatry, 11:74.
- Clayton S, Manning C, Krygsman K, Speiser M (2017) Mental Health and Our Changing Climate: Impacts, Implications, And Guidance. Washington, American Psychological Association.

- CNN TÜRK (2021) Çam balı üretiminin yüzde 95'i Türkiye'deydi: Yangınlarda arı kovanları da kül oldu. https://www.cnnturk.com/. Accessed date:05.08.2021
- Connors E (2020) New APA poll reveals that Americans are increasingly anxious about climate change's impact on planet, mental health. American Psychiatric Assocation. https://psychiatry.org/. Accessed 21.10.20222.
- Costello A, Abbas M, Allen A, Ball S, Bell S, Bellamy R et al. (2009) Managing the health effects of climate change: lancet and University College London Institute for Global Health Commission. Lancet, 373:1693-1733.
- CPA (2020) Handbook of Climate Psychology. London, UK, Climate Psychology Alliance.
- Cunsolo A, Ellis NR (2018) Ecological grief as a mental health response to climate change-related loss. Nat Clim Change, 8:275-281.
- Cunsolo Willox A, Harper SL, Ford JD, Edge VL, Landman K, Houle K et al. (2013) Climate change and mental health: an exploratory case study from Rigolet, Nunatsiavut. Canada. Clim Change, 121:255-270.
- Dalbay RS (2018) "Kimlik" ve "toplumsal kimlik" kavramı. Süleyman Demirel Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 31:161-176.
- Dannenberg AL, Frumkin H, Hess JJ, Ebi KL (2019) Managed retreat as a strategy for climate change adaptation in small communities: public health implications. Clim Change, 153:1–14.
- Deniz M, Hiç Ö (2022) İklim değişikliği ve tarımın değişen yüzü: artan riskler, tarımdaki daralmalar ve orman yangınları sonrası politika önerileri. Biga İktisadi ve İdari Bilimler Fakültesi Dergisi, 3:12-22.
- Dodd W, Scott P, Howard C, Scott C, Rose C, Cunsolo A, Orbinski J (2018) Lived experience of a record wildfire season in the Northwest Territories. Can J Public Health, 109:327-337.
- Eisenman D, McCaffrey S, Donatello I, Marshal G (2015) An ecosystems and vulnerable populations perspective on solastalgia and psychological distress after a wildfire. EcoHealth, 12:602-610.
- Galway LP, Beery T, Jones-Casey K, Tasala K (2019) Mapping the solastalgia literature: a scoping review study. Int J Environ Res Public Health, 16:2662.
- Gawrych M (2021) Climate change and mental health: a review of current literature. Psychiatr Pol, 56:1-13.
- HASUDER (2021) Orman yangınlarının halk sağlığına etkileri ve çözüm önerileri hakkında bilgi notu. https://hasuder.org.tr/ Accessed 05.08.2021.
- IPCC (2021) Climate Change 2021: The Physical Science Basis, the Working Group I contribution to the Sixth Assessment Report. Cambridge, UK, Cambridge University Press
- İşçi M (2021) 2021 Yılı Orman Yangınları Değerlendirme Raporu. Muğla, Tarım ve Orman Bakanlığı Orman Genel Müdürlüğü Muğla Orman Bölge Müdürlüğü.
- Lancer D (2016) Exploring autonomy, locus of control, and self-efficacy. https://psychcentral.com. Accessed 17.05.2016.
- MacSuibhne SP (2009) What makes" a mental illness?" What makes" a new mental illness"?: The cases of solastalgia and hubris syndrome. Cosmos and History: The Journal of Natural and Social Philosophy, 5:210-225.
- Medyascope (2021) 2 Ağustos 2021, Pazartesi Dünya alevler içinde: İtalya, İspanya, Yunanistan, Rusya ve Kanada da orman yangınlarıyla boğuşuyor. https://medyascope.tv. Accessed 02.08.2021.
- Pihkala P (2020a) Anxiety and the ecological crisis: an analysis of eco-anxiety and climate anxiety. Sustainability, 12:7836.

Pihkala P (2020b) Eco-anxiety and environmental education. Sustainability, 12:10149.

- Romanello M, McGushin A, Di Napoli C, Drummond P, Hughes N, Jamart L et al. (2021) The 2021 report of the Lancet Countdown on health and climate change: code red for a healthy future. Lancet, 398:1619-1662.
- Scannell L, Gifford R (2016) Place attachment enhances psychological need satisfaction. Environ Behav, 49:1-31.
- Şen Z (2022) İklim değişikliği ve Türkiye. Çevre, Şehir ve İklim Dergisi, 1:1-19.
- Silver A, Grek-Martin J (2015) "Now we understand what community really means": Reconceptualizing the role of sense of place in the disaster recovery process. J Environ Psychol, 42:35–41.
- To P, Eboreime E, Agyapong VIO (2021) The impact of wildfires on mental health: a scoping review. Behav Sci, 11:126
- Tschakert P, Ellis NR, Anderson C, Kelly A, Obeng J (2019) One thousand ways to experience loss: a systematic analysis of climate-related intangible harm from around the world. Glob Environ Change, 55:58–72.
- TTB (2022) Temmuz-Ağustos 2021 Orman Yangınları Değerlendirme Raporu. Ankara, Türk Tabipler Birliği.
- Watts N, Amann M, Ayeb-Karlsson S, Belesova K, Bouley T, Boykoff M, Costello A (2018) The Lancet Countdown on health and climate change: from 25 years of inaction to a global transformation for public health. Lancet, 391:581-630.

- Wood VJ, Gesler W, Curtis SE, Spencer IH, Close HJ, Mason J, Reilly JG (2015) Therapeutic landscapes' and the importance of nostalgia, solastalgia, salvage and abandonment for psychiatric hospital design. Health Place, 33:83-89.
- Xu R, Yu P, Abramson MJ, Johnston FH, Samet JM, Bell ML et al. (2020) Wildfires, global climate change, and human health. N Engl J Med, 383:2173-2181.
  - Authors Contributions: The author(s) have declared that she has made a significant scientific contribution to the study and has assisted in the preparation or revision of the manuscript

Peer-review: Externally peer-reviewed.

Conflict of Interest: No conflict of interest was declared.

Financial Disclosure: No financial support was declared for this study.