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HEALTH
ENVIRONMENT
AND CLIMATE
TURKEY

BRIEFING:

Climate Change and Mental Health

In collaboration with
The Psychiatric Association
of Turkey (PAT)

1- Introduction

Climate change has become a growing global crisis. In the 50 years between 1970 and 2020, climate-related threats have increased exponentially. Half of all the extraordinary events that occurred during this period occurred after 2003 and affected approximately 5 billion people.[1] These threats include acute events such as hurricanes, floods and wildfires, and long-term problems such as changes in ecosystems, food and water insecurity, and loss of land and culture. All these events have negative impacts on people's physical and mental health, and these impacts are increasing day by day.

Researchers studying the impacts of climate change on human health have so far focused on its impacts on physical health. However, climate change can also exacerbate social and environmental risk factors for mental health and psychosocial problems, leading to new mental health problems and worsening pre-existing mental health conditions. Therefore, there is an increasing need to provide mental health and psychosocial support in climate crisis preparedness and response. In June 2022, the World Health Organization (WHO) published a policy note at the Stockholm+50 conference and called on countries to include mental health support in their response to the climate crisis.[2]

The purpose of this briefing, published by CISIP (The Environment, Climate and Health Cooperation Project) and the Psychiatric Association of Turkey is to make mental health and psychosocial well-being one of the focal points of climate action by demonstrating the link between mental health and climate change. Strengthening the evidence for this link is crucial for building a holistic and more coordinated response to the climate crisis.

Further scientific research on the impact of climate change on mental health is certainly required, however the available information is sufficient to take action.

2- Climate change impacts on mental health

Mental health is a human right and it influences how we think, feel and act. Mental health underpins our ability to make decisions, build relationships and shape the world we live in. **Mental health is an integral part of health and wellbeing and is more than just the absence of mental illness.**[3] Mental health can be defined as a person's ability to think, learn, and cope with their own emotions and other people's reactions.[4, 5] Such a definition is a dynamic continuum and considers mental health issues a part of this mental health continuum.[5] In that sense, mental responses to the climate crisis, which is the topic of this article, can be considered in a continuum from healthy (psychological) responses to abnormal events to clinically diagnosable mental disorders.[6]

Mental health and well-being and the climate crisis are tightly linked. In their review of the impacts of the climate crisis on mental health, Lawrance et al., address this complex and multidimensional interaction and reveal the mental health and wellbeing determinants, which they categorise into five nested layers that interact with each other and with the climate crisis.[6] A person's demographics, biology, factors such as pre-existing mental and physical illnesses, their own attitudes and behaviors, their social relationships and values interact with wider social networks. All of these take shape within their living and working conditions; such as access to safe and secure housing, the state of water and food security, access to healthcare and income. Wider environmental, socioeconomic, political, cultural conditions impact all of these layers. Therefore, the layers and determinants that are defined in this model are interlinked and interact with each other, and a disruption in one layer due to an adverse climate impact has implications for all other layers.[6]

Based on this framework, the climate crisis' acute, subacute and chronic impacts on mental health can be categorised into direct and indirect impacts.[7] The direct impacts are generally referred to as acute impacts and appear following extreme weather events and the floods, hurricanes and wildfires they cause.[6, 8, 9] The literature mentions that the most common mental issues following extreme weather events are depression and post-traumatic stress disorder or PTSD.[10, 11] These events are also linked to anxiety, psychological stress, substance use and suicidal thoughts.[6, 11] Research showed that 20 to 30 percent of hurricane and flood survivors suffered from depression and/or PTSD.[8, 12, 13, 14] Wildfires were linked to PTSD, physiological hyperarousal, depression and poor concentration.[14, 15, 16] Furthermore, the heat stress caused by heatwaves was also linked to mood disorders and anxiety.[17]

Subacute or long-term climate-related changes last for months or years and include events such as droughts and prolonged heat waves. They can cause intense emotional response in those who experience directly or indirectly the impacts of the climate crisis.[7] The gradual change that is most associated with the climate crisis is global warming and increasing average temperatures.[8] Heatwaves and increasing average temperatures have been proven to be associated with increased rates of aggression, physical and psychological fatigue, and suicide.[8, 14, 17, 18, 19]

Indirect impacts of the climate crisis include economic losses, displacement and forced migration, competition over scarce resources and violence.[9] Deforestation, deglaciation, disappearance of rivers, desertification, water scarcity, increase in infectious diseases and loss of biomass impact living spaces and daily lives, causing loss of spatial and cultural parameters.[14] All changes and losses can have adverse effects on physical and mental health. **Long and severe periods of drought can make access to water and food difficult, cause displacement due to loss of life and belongings, as well as mental health problems due to the loss of homes and social networks.**[14] Economic crises can arise following environmental changes and lead to an increase in suicide rates and other mental-behavioral disorders.[14, 20]

The direct and indirect impacts of the climate crisis can also hinder access to health services, disrupt the social support systems and thus exacerbate existing mental illnesses.[6]

As news coverage of extreme events linked to the climate crisis grows, new terms are used to define the stress caused by the climate crisis. While these terms will be addressed in the following sections, the psychological impacts of the climate crisis need to be addressed using a systematic perspective and by taking into account their interaction with existing risks, as highlighted above. In this sense, this is also an introduction to the emphasis on using approaches that are biopsychosocial and human rights-based to promote and protect mental health and wellbeing in the context of the climate crisis.

3- The link between climate change and mental health load

The mental health load linked to climate change

Mental health problems already constitute a significant burden worldwide. WHO estimates that there are approximately 1 billion people with mental health problems.[21] Despite the size of this burden, there are large gaps between mental health needs and the existing services and systems in many countries. Most people who suffer from mental health problems do not receive health care, and this is particularly true in low and middle-income countries, where less than 20 percent of the population report receiving adequate care.[22] It is apparent that even without climate change, global mental health faces many challenges.

2020 Lancet report argues that we are likely to see increases in mental distress in countries directly affected by climate disasters, and that the ability to recover will only be determined by efforts that promote resilience.[23] Similarly, the 2022 IPCC report also revealed that climate change is increasingly affecting the state of mental health worldwide.[24] It is predicted that mental health challenges, including anxiety and stress, will increase with further global warming in all regions assessed in the report.

A study conducted in the USA found that when average temperatures exceed 30°C, mental health problems increase by 0.5 percent, relative to average temperatures between 25°C and 30°C.[25] The same study argues that there is a 2 percent increase in mental health problems for every 1°C increase over a five-year period. Another study found that a 1°C increase in average monthly temperatures over several decades was associated with a 2.1 percent increase in suicide rates in Mexico and a 0.7 percent increase in the United States.[26]

There are no official statistics yet on the number of people affected by eco-anxiety in the world, but a 2021 study on climate change anxiety and its impact on the functioning of people aged 16-25 revealed important findings.[27] **The study, which surveyed 10,000 children and young people from 10 countries, found that all participants were concerned about climate change. More than 50 percent of the participants reported each of the following emotions: sadness, worry, anger, powerlessness, helplessness, and guilt.** More than 45 percent of respondents stated that their feelings about climate change have negative impacts on their daily lives and functioning.

4- The impacts of climate change on vulnerable groups' mental health

According to the United Nations (UN), disadvantaged groups consist of people who are more at risk of experiencing poverty than others living in the same region, people who have difficulties in satisfying their basic needs, or those who need special assistance. These groups include low-income individuals, the elderly, mentally and physically disabled people, children and youths, immigrants and refugees, people suffering from HIV/AIDS, religious and ethnic minorities and, in some communities, women.

Disadvantaged groups are more vulnerable than others to the impacts of climate change on physical, mental and social health. **Some of them are more affected by climate change if they live in places that are more prone to the risks of climate change, if they suffer from physical and mental illnesses, if they have limited access to health services, social services, safe and nutritious food, financial resources, and have cultural, language or citizenship barriers**. Furthermore, these may also affect their ability to prepare for and cope with ecological hazards.[28]

Children are also considered a vulnerable group. Acute and long-term impacts of climate stress can cause anxiety, depression, PTSD and other clinically diagnosed mental disorders in children and, depending on the level and type of stimuli and their developmental stage, they can exhibit various behavioral reactions such as irritability, nightmare, fear, social anxiety, introversion and urinary incontinence.[29, 30, 31]

Women, on the other hand, are at a higher risk of developing mental disorders in the aftermath of climate disasters because of their gender-specific needs from e.g. pregnancy and postpartum, as well as the fact that in some societies they become more prone to trauma and their caregiving burden increases. For example, malnutrition during pregnancy can lead to low birth weight and even stillbirth, all of which can be extremely stressful for the mother.[32, 33]

Another group at risk consists of people with pre-existing mental illnesses. In 2013, an estimated 43.8 million adults aged 18 or older in the United States suffered from mental illness. This represents 18.5 percent of all adults in this country. **People who suffer from mental disorders such as depression, anxiety, schizophrenia, bipolar affective disorder are particularly vulnerable to climate change-induced conditions such as extreme weather events, disasters and high temperatures.**[5, 34]

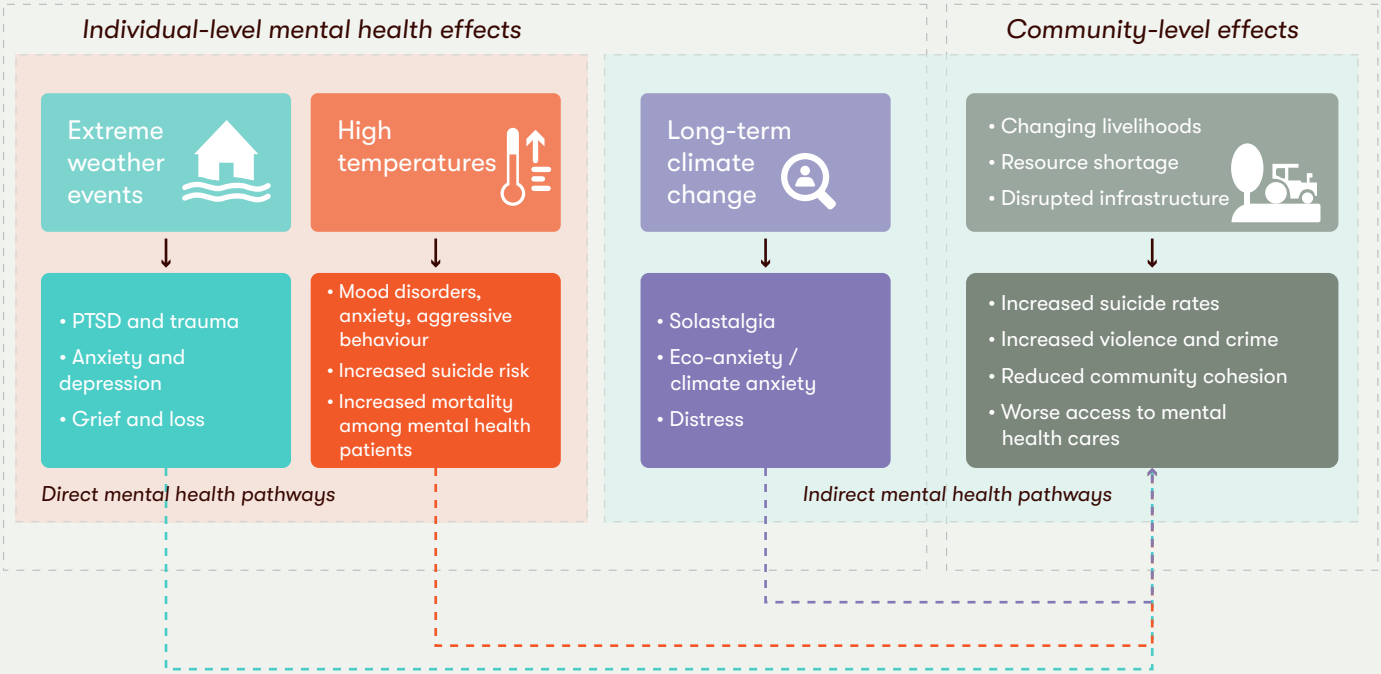

Figure 1. Climate change impacts on mental health.[35]

5- New climate change and mental health concepts

Climate change constitutes one of the most major challenges of our time and of our future. There are many climate change-related terms and concepts, and glossaries of climate change terms (The Climate Dictionary) have been published to provide definitions. Some of these new terms and concepts are related to mental health.

Eco-anxiety

Although eco-anxiety is not yet recognized as a disease, it has been defined as a symptom that develops in relation to climate change. The American Psychology Association (APA) defines eco-anxiety as "the chronic fear of environmental cataclysm that comes from observing the seemingly irrevocable impact of climate change and the associated concern for one's future and that of next generations". Therefore, the APA considers that "the internalization of the great environmental problems that affect our planet can have psychological consequences of varying seriousness in some people". Mild cases of anxiety exhibit symptoms such as sleep disturbances, nervousness, etc. In more serious cases eco-anxiety can create a sensation of suffocation and even depression.[36]

Eco-anxiety is a new concept, but it is closely linked to another, solastalgia, which the Lancet already included in 2015 as a term related to the impact of climate change on human well-being.

Solastalgia

Solastalgia is a relatively new concept that is used to understand the links between ecosystem health and human health, and particularly the cumulative effects of climatic and environmental changes on mental, emotional and spiritual health. Solastalgia is a term coined by the Australian environmental philosopher Glenn Albrecht in the early 2000s and describes the mental exertion/distress that comes with living with negative environmental changes. Solastalgia is the response people give to change in their immediate environment, due to the loss of biodiversity, pollution, deforestation and other environmental challenges brought about by climate change. It is used to describe the erosion of a person's sense of place, identity and belonging in response to these changes. The incidence of solastalgia is expected to grow as climatic events increase in frequency and severity with the worsening of climate change.[37, 38]

Ecological grief

Cunsolo and Ellis (2018) defined the concept of "ecological grief" in relation to expected or anticipated ecological loss due to acute or chronic environmental change, including the loss of species, ecosystems and loved landscapes. Cunsolo and Ellis contend that ecological grief is a natural response to ecological change and that it is a way to express what we value in our lives. The authors define three types of ecological grief:

1. Grief associated with physical loss (for example, species),
2. Grief associated with disruptions to environmental knowledge (such as unpredictability of seasons) and loss of identity, and
3. Grief associated with anticipated future ecological losses.[39]

Eco-guilt

Eco-guilt is defined as a form of guilt that people experience when they feel that they do not meet personal or societal standards for environmental behavior or when they think about activities that pollute the environment. They may feel that they are violating environmental norms through their actions or inaction. People may experience high levels of eco-grief when they believe their or their country's ecological footprint is above average. Eco-guilt often comes up in the context of tourism. There is a growing body of theoretical papers on eco-guilt, but empirical findings on its impact are still contradictory.[40] Eco-guilt can also motivate people to develop pro-environmental behavior.

Ecological migration

Climate-induced ecological destruction, depletion of food resources, disasters and anticipated risks for the near future force people to migrate to safer and food secure areas. Ecological destruction exacerbates ecological migration. **Approximately 265 million people have been displaced by natural hazards between 2008-2018.** Furthermore, the change in demographic structure and the consequent changes in socioeconomic systems will exacerbate the impacts on local ecological environments. Ecological migration is expected to increase in frequency in the near future.[28]

Eco-paralysis

Eco-paralysis is the inability to meaningfully respond to climatic and ecological challenges. It can stem from the sudden emotional shock caused by ecological threat or by the cognitive dilemma of having too many and sometimes conflicting options for.[41]

6- The role of the health sector and the importance of their awareness raising

Mental health and mental wellbeing are linked to climate change in multiple ways.[6] Therefore, addressing the impacts of climate change on mental health and wellbeing requires a holistic approach to health. To prepare and strengthen the healthcare system to serve the population, the individual, illness-based model needs to be abandoned and a public health-based approach that fosters social capital prioritized.[42]

It is essential that mental health professionals are trained and have better knowledge of climate change and its impact on health, and particularly on mental health.[6, 42, 43] The relationship between health and the environment and the health impacts of the climate crisis need to be included in the (continuous) trainings of mental health professionals, prioritising those who serve the most vulnerable groups. Furthermore, mental healthcare needs to be restructured to cope with the consequences of climate emergencies, food and shelter crises, death and injuries as well the psychological consequences such as PTSD.[5, 43] Comprehensive guidelines and action plans will highly benefit first responders, primary care professionals, and mental health professionals in providing assistance to patients facing climate-related events and natural disasters.[42, 43] **Focusing not only on the tangible losses attributable to the climate crisis, but also on the deterioration of the social, natural and cultural environment, sense of self and wellbeing is an important step for resource allocation and climate policy planning.[44]**

Mental health professionals can reduce the impacts of climate change on mental health by identifying communities who have limited access to healthcare and are the most vulnerable to the climate crisis and its impacts, and by proactively addressing their needs. Mental health professionals can also play an active role in increasing the resilience of the vulnerable communities by establishing preventive strategies and advocating for greater support and adequate health care capacity.[43]

Finally, mental health professionals should inform their patients and the public about the mental health impacts of the climate crisis on individuals and communities, and they should prioritise this issue. From a public health perspective, it is important that mental health professionals and the health sector play an active role in tackling the climate crisis, both at societal and political levels.[44]

7- Recommendations for alleviating the mental health impacts of climate change

Climate change is set to affect human mental health in many ways, and these effects are prone to increase. It is imperative to take measures to reduce global warming and to develop mechanisms to deal with the challenges posed through adaptation. Making plans to reduce greenhouse gases and fossil fuel-based energy consumption, to develop and use sustainable and efficient alternative energy sources, to end deforestation, and to reduce the carbon footprint are some examples of actions that need to be taken to mitigate climate change and its effects. Climate change mitigation and reducing its impacts requires collaboration, programs and action plans on national and international levels.[17]

Coordinated, collaborative efforts to address the impacts of climate change on mental health requires not only policy frameworks but also tangible engagement from mental health professionals. **Some of these actions include communicating about climate change and mental health in a way that helps people understand its relevance and importance, advocating for greenhouse gas reduction in healthcare facilities, participating in efforts to reduce the healthcare sector's carbon footprint, disaster preparedness and participating in adaptation measures such as disaster response.**[45, 46]

Another recommendation to reduce the psychological impacts of climate change is psychological adaptation. Psychological adaptation includes a series of response behaviors such as accepting the global crisis caused by the serious threats and consequences of climate change. Psychological adaptation is a process during which people can accept the threats and consequences of climate change instead of avoiding them and can develop coping strategies to manage their emotions and thoughts. This also requires behavioral and psychological involvement, where people change their behaviors and lifestyles to reduce the threat and protect themselves.

Active hope, on the other hand, supports people's psychological adjustment to the process. Active hope increases the ability to actively engage in climate change adaptation behaviors, rather than waiting for someone else to take on the task of tackling the climate change challenge. The key issue here is that hope alone will not provide adequate protection against the increasing risks of climate change. This active process is completed when the reality and the magnitude of the problem are accepted, plans to solve the problem are designed, and relevant actions are taken.[47]

8- Demands to decision-makers

Climate change's escalating impact on health is undeniable and its pressure on mental health requires careful consideration. Policies that promote urbanisation, deforestation need to be urgently abandoned.

It is necessary for decision makers to implement policy-making processes that include the health sector, for healthcare and climate measures. WHO's "Mental Health and Climate Change" policy note provides important guidelines.

The following five recommendations have been developed for Turkey:

1. Integrate climate change issues into mental health care policies and programs

Mental health problems from climate change need to be recognized and included in policy design efforts.

2. Integrate Mental Health and Psycho-Social Support into programs developed on climate change and health

Climate change mitigation and adaptation efforts provide dual benefits. For example, while building green areas benefit climate action in terms of mitigation, they also have a positive impact on mental health. WHO recommends that efforts that address mental health should be prioritised when building climate-resilient health systems.

3. Fulfil internationally agreed commitments

Adhering to the mental health requirements of binding international conventions such as the Paris Agreement and the Sustainable Development Goals will have positive impacts on both climate action and mental health.

4. Implement multisectoral and community-based approaches to reduce vulnerabilities and address the mental health and psychosocial impacts of climate change

The Ministry of Forestry and Agriculture, the Ministry of Environment, Urbanization and Climate Change and the Ministry of Health should be included in the process of alleviating the health impacts of climate change. Community and civil society based engagement should also be recognized.

5. Ensure adequate funding for both mental health and the health effects of climate change

Governments need to increase the budget allocated to mental health. Although the budget allocated to mental health problems is small, the health burden and the economic costs due to mental health disorders may be much higher than expected. It should be noted that climate mitigation and adaptation efforts will have positive effects on mental health.[2]

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About the Project

This briefing has been published as part of the CISIP project.
The Environment, Climate and Health Cooperation Project (ÇİSİP in Turkish) was launched by the Health and Environment Alliance (HEAL), HASUDER (Association of Public Health Professionals - Turkey) and Kocaeli University Department of Public Health in April 2020. Funded by the European Union, CISIP's aim is to bring together all environmental health actors in Turkey and to support health professionals in the fields of environmental and climate policies.

The Environment, Climate and Health Cooperation Project will continue until July 2023 and aims to:

- Establish a collaborative platform on the environment and climate change for all health professionals.

- Organize online trainings, provide mobile training seminars and courses for medical students on the environment and climate change with a public health perspective.

- Create a dialogue between health professionals in Turkey, professional organizations, non-governmental organizations and think tanks in Europe.

- Produce environmental, climate change and health content, briefs and training materials directed to health professionals.

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Founded in 1995, the Psychiatric Association of Turkey works on the development and scientific qualification of the psychiatry specialty, the protection of the rights of psychiatrists and patients, the organization of protective, preventive, developmental and therapeutic services, as well as the protection of mental health throughout the country, the dissemination, guidance, determination of standards and monitoring of mental health studies. At the same time, it is a professional organization that works with the principles of science, ethics and solidarity, aiming to fight against situations that disrupt the social and ecological balance, especially discrimination and violence that may impair mental health, inform the society, convey its evaluations on this issue to the relevant institutions and form public opinion.

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