# Mental Health Impacts of Climate Change - The Silent Crisis

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## Introduction:

In discussions about climate change, we often focus on its visible impacts like rising global temperatures, increasing sea levels, melting of glaciers, and increase in the frequency or severity of extreme weather events and their physical impacts, which are apparent. However, its impact on mental health often goes unnoticed or underestimated. The mental health consequences of climate change are complex, ranging from acute distress triggered by natural disasters to chronic conditions such as anxiety or depression resulting from environmental uncertainty. This article explores climate change's immediate and long-term impacts on mental health and the intersection between climate change and psychological well-being.

The impacts of climate change on mental health can manifest in multiple ways. Climate change might have direct impacts on mental health or indirect effects through factors such as loss of livelihood, migration, unemployment, and crop failure.

❑ **Table: Overview of Subclinical and Clinical Mental Health Impacts of Climate Change**

| Subclinical Mental health impact | Clinical Mental health impact |
|---|---|
| Shock<br>Despair<br>Helplessness<br>Grief<br>Fear<br>Irritability | Depression<br>Anxiety<br>Adjustment disorder<br>Substance abuse or dependence<br>Post-Traumatic Stress Disorder<br>Suicidal ideation.<br>Loss of personal identity |

A scoping review conducted in 2021 highlighted the increased incidence of major depressive disorder, heightened rates of hospital admissions and psychological distress during heat waves.[1] The review also identified a reduction in positive emotions, such as happiness, and an increase in negative emotions, like anger, stress, and fatigue. Furthermore, the review underscored

a concerning increase in aggression, domestic violence, and self-harm attempts, indicating the profound and varied effects of climate change on mental well-being

In a remote coastal region of the Solomon Islands, the rising sea levels were linked to an increase in mental health morbidities, illustrating how worries about sea-level rise have influenced the thoughts and behaviours of individuals, as well as those of their families and communities[2]. Chronic exposure to ozone is associated with increased cognitive decline rates in the elderly[3]. Long-term exposure to air pollution correlates with an increased likelihood of developing depression as various air pollutants rise, which suggests that the effects of air pollution on depression may persist over time [4].

Meta-analyses on air pollution revealed significant associations with adverse health outcomes. Exposure to particulate matter during pregnancy increases the risk of adverse outcomes, including infants with low birth weight, preterm deliveries, and neurodevelopmental conditions like autism spectrum disorders. [5] Another meta-analysis revealed a connection between extended inhalation of fine particulate matter (PM2.5) and nitrogen dioxide (NO2) and an increased risk of depression.[6].

Studies from India have explored the intersection of climate change and mental health. A study conducted in the Sundarbans Delta, India, explored the intersection of eco-psychiatry and environmental conservation. The study included 178 individuals attending community mental health clinics. In them, the prevalence of various mental morbidity is higher than the national average of the NMHS (National Mental Health Survey) 2016. Findings showed that Major Depressive Disorder was the most common condition (14.6%), succeeded by Somatoform Pain Disorder (14%), PTSD related to animal attacks (9.6%), adjustment disorder (9%), and self-harm attempts of 11.2%. [7]

A study in Kodagu district of Karnataka explored the prevalence of psychiatric symptoms among residents following a flood event. The findings indicated a high prevalence of psychiatric issues, with over two-thirds (66.7%) of residents experiencing symptoms. Depression emerged as the most common issue, affecting roughly one-third (33%) of the population. Anxiety disorders (31%) were also prevalent, followed by somatic disorders (28.7%), insomnia (35.7%), and substance abuse (15.8%). Notably, the study identified factors like displacement during the disaster and damage to homes as significant contributors to the development of psychiatric issues among these residents.[8].

Crop-damaging temperatures in India were associated with increased suicide rates, particularly during the primary agricultural growing season. The elevated temperatures during this period substantially elevated annual suicide rates. For temperatures surpassing 20°C, a 1°C rise in daily temperature correlates with an average of 67 additional deaths across India, equating to a 3.5% increase in the suicide rate per standard deviation of temperature increase. Over the last three decades, the warming climate has been linked to an estimated 59,300 farmer suicides in India, accounting for 6.8% of the overall increase in suicides.[9]

Approximately a year following a super-cyclone in Orissa, higher proportions of adolescents exhibited PTSD symptom[10]. Specifically, the prevalence of PTSD was 26.9%, major depression was 17.6%, and generalized anxiety disorder was 12%, surpassing the rates reported in the NMHS-2016. Additionally, the affected population experienced impaired performance in school, indicating the enduring impact on mental health and academic functioning.

In conclusion, the discussion surrounding climate change must expand beyond its ecological and

physical consequences to its profound effects on mental health. As this article has highlighted, climate change poses a wide array of mental health challenges. As temperatures rise and natural disasters become more frequent and severe, the mental health impacts ripple across societies, disrupting lives and livelihoods and affecting the marginalized communities the most.

However, amidst these challenges lies an opportunity for collective action. By acknowledging and addressing the mental health dimensions of climate change, policymakers can foster adaptive strategies that promote well-being and sustainability. Investing in mental health resources to better explore these phenomena, creating social support networks, building resilience, and improving community awareness can mitigate the adverse effects of climate change on mental health.

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