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THE EFFECT OF CLIMATE CHANGE ON MENTAL HEALTH

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Abstract

Climate change is increasingly having a stronger and longer-lasting impact on people, which can directly or indirectly affect their mental health. However, Mitigation and adaptation strategies are therefore necessary for effective management of the impacts of climate change on mental health for sustainable development and economic growth. Groups that are especially vulnerable to the mental health impacts of climate change include children, the elderly, and women. In this study, we look at the effect of climate change on vulnerable populations and provide mitigation measures in addressing these challenges. These mitigation measures includes, the use of public transport to lower greenhouse gas emissions and reducing symptoms of depression and stress and also by the use of renewable energy technology like wind, solar and other clean energy to reduce particulates and pollution in the air. We also provide adaptive measures through policy-making, surveillance, and monitoring, community-based initiatives, building upon global commitment, and a multisectoral community base approach. It concludes with the recommendation that information about climate adaptation and mitigation should be made the target of the society and the world at large.

Keywords: Climate change, Mitigation, Adaptation, Population, Mental health, Impact, Vulnerable

INTRODUCTION

The threat posed by climate change is no longer nebulous., but a devastating reality with ominous future projections. It is generally known that climate change exacerbates already-existing disparities, putting those who are most marginalized at greater risk for the negative effects of a changing environment on their health. In fact, the first main takeaway from the Lancet's Countdown on Climate Change and Health study underscores the disproportionate effects that climate change has on the world's most disadvantaged people and the consequences that follow if social and environmental justice issues are not addressed. [1]. Since the 1960s, there have been more than three times as many documented weather-related natural disasters worldwide. Over 60,000 people die as a result of these calamities each year, mostly in underdeveloped nations. A growing body of research on the connection between mental health and climate change mental health shows that extreme weather events, which are more frequent, intense, and complex as a result of climate change, can cause PTSD, MDD, anxiety, depression, complicated grief, survivor guilt, vicarious trauma, recovery fatigue,

substance abuse, and suicidal ideation. [1]. Climate change's influence on mental health can only be roughly measured. However, a World Health Organization (WHO) assessment found that from 2030 to 2050, climate change is predicted to result in about 250,000 additional deaths annually, with 38,000 of those deaths older people, 48,000 due to diarrhea, 60,000 due to malaria, and 95 000 due to under nutrition in children. This assessment only considered a subset of the potential health impacts and assumed continued economic growth and health advancements. [4]. One of the immediate effects of climate change is flooding, which has a severe impact on the mental health of many victims throughout Africa. Climate change-related flooding has a significant negative influence on Africa's health sector, making it urgent to take health issues into account while attempting to mitigate and adapt to climate change. The existence of humans has been said to be threatened by climate change. Globally, it has an impact on the social and environmental factors that influence health, such as access to clean air, safe drinking water, enough food, and adequate shelter. Flooding has a wide range of effects, including extreme weather, worsened air quality, displacement and migration of vectors, and an increase in a number of diseases associated with water and ecological elements. As a result of environmental change, more instances of mental health problems are being noted and recognized. [5,6]. Therefore the paper aim to access the effect of climate change to mental health

MENTAL HEALTH IMPACTS

The expanding body of evidence on climate change and mental health shows that extreme weather events, which are becoming increasingly frequent, intense, and complex as the climate variations, can trigger major depressive disorder (MDD), post-traumatic stress disorder (PTSD), anxiety, despair, difficult grieving, survivor guilt, vicarious trauma, exhaustion from recovery, substance misuse, and suicidal ideation. [34–47].Incremental climate change can alter natural landscapes, disrupt food and water supplies, change agricultural constraints, affect land use and habitation, deteriorate infrastructure, lead to financial and relationship stress, increase the likelihood of violence and aggression, and force entire communities to relocate. [3].The overwhelming risks of climate change can also instill despair and hopelessness because efforts to address the "wicked dilemma" of climate change appear intangible or unimportant compared to the breadth and magnitude of the risks [7]. Paradoxically, these same disastrous conditions may foster charity. As people work together to salvage, repair, and console in the midst of the turmoil and loss of a changing climate, compassion, optimism, and develop a sense of meaning and personal progress (also known as post-traumatic growth) are encouraged [8, 9].

Individuals who experience particularly intense, multiple, or long-lasting acute events such as floods that destroy the home or more life-threatening extreme storms or wildfires are likely to experience severe trauma and may be susceptible to PTSD and other types of mental health problems. Among those exposed to extreme weather events, the possibility of suicide is higher and worse in poorer socioeconomic areas. Increasing awareness and knowledge about the inevitable severe consequences of climate change may have an existential impact and significant additional stress on people. Eco- or climate anxiety, Eco paralysis, and ecological grief are terms used in relation to this. The term "ecological grief" refers to the despair associated with experiencing or anticipating ecological losses, for example, loss of species ecosystem and meaningful landscapes, due to acute or chronic environmental change.

VULNERABILITIES

Ageing, pregnancy, and pre-existing medical issues, including mental disorders, geographical location, socioeconomic considerations, and existing inequities, can all exacerbate mental health risks [2, 14, 15, and 16]. Climate change is a multiplier of health risks, exacerbating existing social inequities. Climate change works as a multiplier of health risks, exacerbating existing social injustices [17].

Children are generally more vulnerable to the health effects of climate change and differ from adults in psychosocial, cognitive, anatomical, immunological, and physiological ways, depending on their developmental stage [18]. Climate extremes have been linked to "changes in behavior, development, memory, executive function, decision-making, and educational achievement in children." [19]

Indigenous people who live near nature and rely on it for a living are sensitive to meteorological, seasonal, and climatic changes. Changes in meteorological parameters, seasonality, and exposure to acute and chronic weather events have been associated with mental health outcomes such as intense emotional responses, suicide, sadness, and anxiety [20]. Climate change was viewed as limiting Sami resilience in interview research among Swedish reindeer herders. They lamented the future and expressed concern about becoming the last generation of reindeer herders [21]. Other indigenous groups have expressed similar concerns about the future [22].

Mitigation measures

Addressing the health impacts of climate change necessitates measures anchored in mitigation and adaptation at all levels - global to local - as well as from all sectors and individuals. Climate change mitigation refers to broad attempts to reduce greenhouse gas emissions and boost carbon sinks to mitigate the rate, size, and scope of climate change [23]. Key climate change mitigation include:

Encouraging physical activities as this can help improve one's sense of wellbeing

One individual action that can help reduce the consumption of fossil fuels that contribute to climate change is choosing to bike and/or walk (provided it is safe and practical to do so). Physical commuters are more likely to suffer from PTSD, anxiety, and other mental diseases [27]. Compared to vehicle commuters, bicycling and walking to work, school, appointments, and other destinations reduces stress for the users. They also reduce emission and boost their physical health [28]. For instance, users of the Washington, D.C bikeshare program reported lower levels of stress and weight reduction [29], the same is true for teenagers who actively commute to school, who not only exhibit reduced stress level of perceived stress but also better cognitive function, cardiovascular fitness, and academic achievement[30]

Encouraging the use of public transport as this can help revitalize community mental health

Shifting from personal vehicles to public transportation also reduces greenhouse gas emissions, Additionally, numerous studies have demonstrated that taking public transit increases neighborhood workability, leisure activities and community cohesion as well as reduces the symptoms of stress and sadness linked to driving less and getting more exercise [31]. Meanwhile, driving in traffic affects air quality, lowers productivity, and raises healthcare cost [32]. It is important to improve urban planning and transportation since they have a positive impact on climate and mental health

The use of green space to reduce stress

The use of parks and green have been linked to higher mental well being and better air quality. For instance, compared to paved surfaces and structures, trees and green spaces absorb less heat. It has been demonstrated that spending less time in nature greatly lowers stress levels and prevent illnesses linked to stress, it's interesting to note that this proof is consistent regardless of socioeconomic level, age, or gender [11] Likewise, people who relocated to places with more availability to green space saw significant negative effects on their mental health, whereas people who relocated to locations with less access to green space exhibited long-lasting pains [33]. Moving to a greener location isn't always a possibility, even though a person's neighborhood has a significant impact on their physical and emotional health. The importance and function of green spaces in enhancing air quality, lowering stress levels, and maintaining a healthy living environment for everyone must be acknowledged as the planners and policymakers make choices that will alter the landscapes of our cities and communities.

Through the use of clean energy system as this can help minimize health burden

In addition to being climate friendly, sustainable energy sources including wind, solar, hydro, and others as well as energy efficiency help to lessen air pollution and particles. According to research on air quality and children's lung development, Children's lung function significantly improves when air pollution decreases [13]. According to additional studies, kids who are exposed to more urban pollution are more likely to experience concentration issues, anxiety and depressive symptoms, as well as poorer scholastic performance and brain function [12]. Clean energy offers a chance to safeguard vulnerable groups, like children, who are more severely affected by these effects.

ADAPTIVE MEASURES

Policies, practices, behavioral therapies, community-based interventions, specific training, and pharmaco-therapeutics are examples of adaptation approaches addressing climate change's psychosocial implications. General methods for treating mental health issues or illnesses associated with climate change include primary care interventions, individual and group-based therapy, cognitive-based therapy (including cognitive-based therapy, cognitive restructuring, and stress inoculation training), and crisis counseling. [10].In general, engaging in art, literature, and spirituality can help to maintain emotional hardiness. In addition to the previous, the following priority adaptation methods should be addressed to promote population-level mental health in a changing climate:

1. Policy measures through increase funding and access to mental health service.
2. Monitoring and surveillance activities include conducting epidemiological studies after extreme weather occurrences and keeping track of emergency room visits throughout heat waves and after such occurrences.
3. Planning for the mental health system's resilience and adaptation to climate change;

4. Practice the adoption of a stepped-care approach to mental health, which is frequently utilized in disaster mental health to support varying levels of response based on the date of the disaster and the amount of suffering.

5. Community-based initiatives, such as climate change resilience plans that target mental well-being.

6. Special training for caregivers and first responders, such as psychological first aid.

7. Inculcating the calming effects of music and poetry in education and sensitization of the masses on the impacts of climate change on mental health. The music and poetry can be used to sensitize patients, communities and institutions on the amazing preventive measures including healthy lifestyles and wellbeing.

CONCLUSION

New health risks will be created by climate change, affecting those already marginalized. Community base initiatives such as climate resilience plan and special training for caregiversare among the most important adaptation measures. Vulnerability assessments help identifies persons at risks. Health sector staff should be educated, including ordinary medical care providers and first responder after extreme events. Also, Information about climate change effects on mental health should be made target the society at large, local authorities, risk groups, decision makers and the general public.

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