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Analyzing the Ramifications of Climate Change on Mental Health

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Analyzing the Ramifications of Climate Change on Mental Health

Abstract

When thinking about the vast array of impacts that the climate crisis has on humanity, there are many things that come to mind, but mental health impacts are likely not one of them. Even though research demonstrates that mental effects from any form of disaster far exceed the physical health implications mental health impacts of the largest disaster facing humanity since the Second World War are rarely considered at all, let alone when solutions are being created. This has led to a hidden crisis emerging underneath an even larger crisis, with serious consequences for most individuals across the globe. The detail that makes the mental health impacts of climate change an even more dangerous externality than the physical impacts is the fact that most individuals are not exposed to the physical effects of climate change, while the mental effects are far reaching, and silent in their existence. This paper hopes to bring attention to the exact ramifications of climate change on mental health and well-being, how connecting with nature can lead to happiness, what can be done to help, and why this growing problem is so important to bring attention to.

Keywords

Climate Change, Mental Health, Well-being, Anxiety

Disciplines

Climate | Environmental Health

Comments

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FYS 157-2

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Analyzing the Ramifications of Climate Change on Mental Health

Introduction

When thinking about the vast array of impacts that the climate crisis has on humanity, there are many things that come to mind, but mental health impacts are likely not one of them. Even though research demonstrates that mental effects from any form of disaster far exceed the physical health implications (Hayes and Poland 7), mental health impacts of the largest disaster facing humanity since the Second World War are rarely considered at all, let alone when solutions are being created. This has led to a hidden crisis emerging underneath an even larger crisis, with serious consequences for most individuals across the globe. The detail that makes the mental health impacts of climate change an even more dangerous externality than the physical impacts is the fact that most individuals are not exposed to the physical effects of climate change, while the mental effects are far reaching, and silent in their existence. This paper hopes to bring attention to the exact ramifications of climate change on mental health and well-being, how connecting with nature can lead to happiness, what can be done to help, and why this growing problem is so important to bring attention to.

Defining Mental Health and Well-being

Before discussion of how climate change impacts mental health can begin, mental health and well-being must be defined themselves. The World Health Organization (WHO) defines health as “a state of complete physical, mental, and social well-being and not merely in the absence of disease or infirmity.” Like physical health, mental health includes states of affirmative health, well-being, and emotional resilience, and is an interplay of physical and social well-being (Hayes and Poland 1). Mental health, therefore, is a person’s ability to think, learn, and live with their own emotions and the reactions of others (Berry et al. 124).

Well-being, meanwhile, is defined as feeling and functioning well, including experiencing positive emotions, positive relationships, and the social freedoms and opportunities to realize the potential of individuals. Well-being is shaped by an interplay of mental and physical health, financial security and standard of living, and the condition of the surrounding environment and places. It is based on psychologist Abraham Maslow’s hierarchy of universal human needs and the combination of intrinsic and extrinsic factors of an individual’s life. In short, well-being is constituted as health (including mental), safety, place (the environment), self, and belonging (Adger et al. 1465-66). Analysis of how climate change affects these minute, numerous, and unique factors shows how climate change affects mental health and well-being.

Pathways

It is worth noting that the climate emergency tends not to cause new types of mental disorders; rather, climate change is a risk multiplier. It increases the risk of experiencing symptoms diagnosable as a mental disorder, or intensifies symptoms and distress, or both, particularly for groups already at increased risk, including due to structural inequality

(Lawrance et al. 446). With that being said, there are 3 broad pathways by which climate change affects well-being. Climate change affects material circumstances, including infrastructure and ecosystems through which people access goods and services. Moreover, information about climate change impacts mental health and well-being via data, documents, and electronic media, which can alter people's aspirations, hopes, identities, and fears. Finally, policy responses to the climate emergency (or lack thereof) that seek to mitigate damages, which include finance, moral suasion, taxation, and regulation, can change social relations and material environments in ways that affect well-being (Adger et al. 1466).

Direct Impacts

The most evident way by which climate change affects mental health and well-being is through direct impacts, which can be identified through several different ways, such as acute and chronic psychosocial reactions, forced migration, and new psychological disorders that have been created by the climate emergency. There is a well-established link between extreme anxiety reactions to acute weather events and disasters, such as floods, forest fires, more frequent and powerful hurricanes, etc. (Berry et al. 124-5). These reactions include post-traumatic stress disorder (PTSD), somatic disorders, major depressive disorder (depression), increased drug and alcohol abuse, higher rates of suicide, and elevated risk of child abuse (Doherty and Clayton 268). Acute reactions also go beyond the individual and affect entire communities, with weakened community cohesion, increased vulnerability to stress, community displacement, and threatened sense of belonging being results of climate change impacts (Hill and Perkowitz 38).

Mental health and well-being are not only threatened by acute climate events but also by chronic, long-term changes to the environment. The most common and evident long-term effects of climate change are extreme heat, drought, and declining air quality, all of which can lead to mood and anxiety disorders, lowered happiness and life satisfaction, mental distress, diminished self-worth, intergroup hostility, and depression (Hill and Perkowitz 38). Longer, more severe heat is also likely to be associated with increased mortality, homicide, suicide, physical assault, and spousal abuse (Doherty and Clayton 268), as well as increase mood and behavioral disorders amongst people with pre-existing mental illness (Hayes and Poland 2). What's more, long-term anxiety and depression, PTSD, increased aggression in children, and even suicide have been associated with extreme floods (Berry et al. 125).

A further direct impact that climate change has on mental health and well-being is through forced migration of populations that have been particularly affected by climate change and people who have been forced to move away from their homelands which have become uninhabitable due to climate change. Loss of connection and belonging to home can undermine mental health, as forced relocation involves severing emotional ties to a place, disruption of social networks, and attempting to maintain cultural identity in new residences. Climate migration is also known to cause grief, anxiety, and sense of loss among migrants (Doherty and Clayton 271). At its worst, climate change may dislocate people permanently from land, creating cohorts of displaced individuals who will experience depression and trauma associated with loss of home, place, and social networks (Berry et al. 126). Furthermore, forced displacement due to climate change has been linked to increased depression, anxiety, and PTSD, and comes with severe and on-going stress, loss of identity, and loss of supportive connections. Recent examples of this can be seen in the aftermath of

Hurricanes Katrina and Harvey, as well as the wildfires of Australia impacting indigenous Aboriginal peoples living in the rural heartlands of the continent (Lawrance et al. 458).

New Mental Health Terminology

Not only has climate change directly impacted communities through mental disorders which were already known, but it has also led to the creation of new terminology to describe new disorders found throughout the crisis. This new terminology includes emotional responses such as “eco-anxiety, climate anxiety, eco-distress, ecological grief, and solastalgia.” Eco-anxiety, or climate anxiety, is defined by the American Psychological Association as “the chronic fear of environmental doom” and may include symptoms like anxiety, worry, stress, hopelessness, despair, irritability, sleep disturbance, loss of appetite, panic attacks, and bodily symptoms of anxiety (e.g. awareness of heartbeat, butterflies in stomach, sweaty palms, perceived shortness of breath) and other similar responses to the current and future impacts of the climate and ecological crises. Eco-distress, or climate distress, is defined by the Royal College of Psychiatrists, UK as “a way of describing the wide range of thoughts and emotions people may experience when they hear bad news about our planet and the environment,” and includes several emotions such as “feeling anxious, worried, upset, scared, sad, angry, distressed, vulnerable, or unsure about the future” (Lawrance et al. 462-463).

Eco-grief, or climate grief, is defined as “the grief felt in relation to experienced or anticipated ecological losses, including the loss of species, ecosystems and meaningful landscapes due to acute or chronic environmental change.” It is particularly prevalent in those who are in closest proximity to the direct effects of climate change and groups who traditionally are very connected to the land they reside upon (e.g., Indigenous communities, agrarian societies, and climate scientists). Solastalgia is “the distress experienced when

your home environment is changing in ways perceived to be profoundly negative,” which can be from climate change related events, but also any changes that threaten our sense of home, even without dislocation (Lawrance et al. 463). While only a small part of how climate change directly affects mental health and well-being, the introduction of new psychological terminology highlights the severity of the problem and the necessity for wider social changes. All these effects, however, like acute and chronic effects and migration, and not just the new terminology, demonstrate how climate change directly affects mental health and well-being.

Media and Information Consumption

Climate change does not only affect mental health and well-being through direct effects, but also through the consumption of information about the climate crisis and the messaging techniques used by the media that can exacerbate the problem. The influence of media representations helps explain why climate change can have psychological impacts on individuals that do not experience direct physical impacts. Since the media has ulterior motives when reporting on news, including catering to a specific audience, sensationalizing a story, etc., the messages that are conveyed about climate change can be misleading (Doherty and Clayton 267). When the media creates sensational reports and dramatic messages about future climate change impacts, it decreases the self-efficacy of individuals (Adger et al. 1468). What’s more, with the advent of new information technology like social media and Internet imaging, news about climate change can be accessed at anytime, anywhere. This exposure to information engendered by modern technology raises salience of global crises and can engender anxiety and passivity in the face of seemingly overwhelming threats (Doherty and Clayton 267).

Framing

One of the ways that the media is able to influence individuals and allow climate change to affect individuals' mental health and well-being is framing. Frames are interpretative storylines that emphasize certain aspects in a story that are more important than others to people, and although a frame cannot cause behavioral change, it can change the emotional response to it. Framing that makes climate change more tangible and personally relevant can trigger feelings of worry and hope, which may ultimately positively influence and foster climate action (Otte 133). In the same way, media in the US suggests greater uncertainty about anthropogenic climate change when compared with other developed countries (Doherty and Clayton 267), and media that paints climate change as uncertain and based on divergent opinions can reinforce uncertainty among the public and skepticism towards climate change. It can also reduce levels of trust in climate change scientists and climate friendly technologies (Otte 135). In several ways, messaging affects mental health and well-being in different ways than direct impacts, but both still result in the degradation of mental health and well-being.

Effects of Policy Change

Much like how media representations of climate change can lead climate change to indirectly affect the mental health and well-being of individuals, governmental policy changes to mitigate the physical effects of climate change, or lack thereof, have a similar effect. When governments fail to adequately prevent or respond to natural disasters, people lose confidence and trust in civil institutions, resulting in backlash (Doherty and Clayton 271). Youth climate distress and "eco-anxiety" are heightened by continual inaction of leaders; meanwhile, good leadership and effective governance on the climate crisis improves

mental health and well-being, and social trust (Lawrance et al. 469). Although overfocus on individual action (instead of action by governments and industries) leads to individuals being overwhelmed and distressed, individual as well as institutional climate actions provide individuals with a greater sense of agency and control, and increase feelings of meaning and empowerment (Lawrance et al. 460, 467). What's more, policy changes themselves can lead to heightened anxiety if not pursued correctly, like job layoffs and fluctuating energy prices. Therefore, lack of climate action, as well as the policy changes themselves can negatively impact mental health and well-being, which means that a just transition from fossil fuels that supports all individuals throughout the process is crucial, not only to eliminate injustices but also to minimize possible mental health impacts.

Reasons for Making These Connections

At this point, this information about how mental health and well-being are impacted by climate change may seem useless, but understanding how mental health and well-being are impacted can help implement more effective climate action while also bringing attention to another huge crisis that is affecting the US and the rest of the world. Recognition of well-being may be the key to moving past climate change policies that seek to preserve the status quo through ad hoc adjustments, and well-being goals could be the pathway towards climate actions that are legitimate and that transform social and ecological systems in ways that retard the process of climate change and promote sustainability (Adger et al. 1470). Although they are more difficult and slower to implement, new measures that take well-being and mental health into consideration have potential for much more lasting climate impact (Otte 135). Furthermore, identifying climate change as a determinant of mental health can have several positive societal impacts, including reducing the mental health stigma and building psychosocial resilience, which is

“the ability of an individual or a system to recover from a setback, adapt well in the face of trauma, and survive and thrive despite significant adversity and stress” (Hayes and Poland 2). Moreover, identifying the impact that climate change has on mental health can generate positive individual tendencies, such as encouraging environmental stewardship, climate change mitigation behaviors and advocacy for action, and engagement in help-seeking behavior (Hayes and Poland 7).

Connection Between Nature and Happiness

What’s more, understanding the ramifications of climate change on mental health and well-being leads to a greater understanding of how important nature, as well as maintaining an affinity for nature, has positive benefits for mental health and well-being. People who feel connected to nature have greater health and well-being, while also being more likely to take action to protect nature; furthermore, time spent in biodiverse natural environments has a positive impact on well-being, including positive mood and happiness, improved cognitive function, increased vitality, and reduced stress, anxiety, and depression (Lawrance et al. 456). Modern disconnection from nature exacerbates climate change caused mental disorders and cycles of self-defeating exploitation, while happiness and sustainable behaviors could result from closer human connections with nature. Additionally, there is a correlation between sustainable behaviors and happiness, as sustainable behaviors are also prosocial behaviors since they help the planet and the people who live here. By the same token, more effortful pro-environmental behaviors may have a stronger link with happiness, and much like how sustainable behaviors cause happiness, happiness causes sustainable behaviors in a reciprocal relationship (Zelenski and Desrochers 31-32). Armed with this knowledge of the importance of how mental health and well-being are affected by climate change, and the relationship between happiness and

sustainability, individuals can adjust their lifestyles to be more sustainable and thereby happier, as well as advocate for climate action that gives attention to mental health and well-being.

Conclusion

Taking everything into account, it is evident that climate change is not only a problem for the physical state of the planet, but it is also a clear and present danger to the mental health and well-being of all individuals on the planet. It affects mental health and well-being through 3 pathways: direct material and physical changes that cause acute and chronic health concerns, the spread of information which can alter how individuals emotionally react to climate change information, and the policy reactions of institutions, which a lack of can negatively affect individuals' mental health. The affect that climate change has had on mental health is also evident in the new terminology that has been born from the crisis like "eco-anxiety," "eco-distress," and "solastalgia." These effects are crucial in understanding the relationship between climate change and mental health and well-being, an understanding that can lead to the creation of more effective and intentional climate action. Further, understanding that relationship also helps to understand the relationship between happiness and nature, which helps to encourage positive, sustainable lifestyles. In effect, it all explains how a healthy mind, healthy body, and healthy planet are all interconnected and crucial to living out a happy and healthy life.

Works Cited

- Adger, W. N., et al. "Climate Change Affects Multiple Dimensions of Well-being through Impacts, Information and Policy Responses." *Nature Human Behaviour*, vol. 6, no. 11, 2022, pp. 1465-1473. *ProQuest Central, Social Science Premium Collection*, <https://www.proquest.com/scholarly-journals/climate-change-affects-multiple-dimensions-well/docview/2737612021/se-2?accountid=2694> https://gettysburg.primo.exlibrisgroup.com/openurl/01GETTYSBURG_INST/01GETTYSBURG_INST:MUSCAT?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&genre=article&sid=ProQ:ProQ%253Apsychology&atitle=Climate+change+affects+multiple+dimensions+of+well-being+through+impacts%252C+information+and+policy+responses&title=Nature+Human+Behaviour&issn=&date=2022-11-01&volume=6&issue=11&spage=1465&au=Adger%252C+W.+Neil%253BBarnett%252C+Jon%253BHeath%252C+Stacey%253BJarillo%252C+Sergio&isbn=&jtitle=Nature+Human+Behaviour&btile=&rft_id=info:eric/&rft_id=info:doi/10.1038%252Fs41562-022-01467-8 <https://doi.org/10.1038/s41562-022-01467-8>, doi:10.1038/s41562-022-01467-8.
- Berry, Helen L., Kathryn Bowen, and Tord Kjellstrom. "Climate Change and Mental Health: A Causal Pathways Framework." *International Journal of Public Health*, vol. 55, no. 2, 2010, pp. 123-132, <https://doi.org/10.1007/s00038-009-0112-0>, doi:10.1007/s00038-009-0112-0.
- Doherty, Thomas J., and Susan Clayton. "The Psychological Impacts of Global Climate Change." *American Psychologist*, vol. 66, no. 4, 2011, pp. 265-276. *PTSDpubs*, <https://www.proquest.com/scholarly-journals/psychological-impacts-global-climate-change/docview/1365980070/se-2?accountid=2694> https://gettysburg.primo.exlibrisgroup.com/openurl/01GETTYSBURG_INST/01GETTYSBURG_INST:MUSCAT?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&genre=article&sid=ProQ:ProQ%253Apsychology&atitle=The+psychological+impacts+of+global+climate+change&title=American+Psychologist&issn=0003066X&date=2011-05-01&volume=66&issue=4&spage=265&au=Doherty%252C+Thomas+J%253BClayton%252C+Susan&isbn=&jtitle=American+Psychologist&btile=&rft_id=info:eric/40473&rft_id=info:doi/10.1037%252Fa0023141 <https://doi.org/10.1037/a0023141>, doi:10.1037/a0023141.
- Hayes, Katie, and Blake Poland. "Addressing Mental Health in a Changing Climate: Incorporating Mental Health Indicators into Climate Change and Health Vulnerability and Adaptation Assessments." *International Journal of Environmental Research and Public Health*, vol. 15, no. 9, 2018, pp. n/a. *ProQuest Central*, <https://www.proquest.com/scholarly-journals/addressing-mental-health-changing-climate/docview/2123867866/se-2?accountid=2694> https://gettysburg.primo.exlibrisgroup.com/openurl/01GETTYSBURG_INST/01GETTYSBURG_INST:MUSCAT?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&genre=article&sid=ProQ:ProQ%253Apsychology&atitle=Addressing+mental+health+in+a+changing+climate&title=International+Journal+of+Environmental+Research+and+Public+Health&issn=1660-4741&date=2018-09-01&volume=15&issue=9&spage=n/a&au=Hayes%252C+Katie%2526+Poland%252C+Blake&isbn=&jtitle=International+Journal+of+Environmental+Research+and+Public+Health&btile=&rft_id=info:eric/40473&rft_id=info:doi/10.3390%252Fijerh15090000

[ealthcompleteshell&atitle=Addressing+Mental+Health+in+a+Changing+Climate%253A+Incorporating+Mental+Health+Indicators+into+Climate+Change+and+Health+Vulnerability+and+Adaptation+Assessments&title=International+Journal+of+Environmental+Research+and+Public+Health&issn=16617827&date=2018-09-01&volume=15&issue=9&spage=&au=Hayes%252C+Katie%253BPoland%252C+Blake&isbn=&jtitle=International+Journal+of+Environmental+Research+and+Public+Health&bttitle=&rft_id=info:eric/&rft_id=info:doi/10.3390%252Fijerph15091806](https://doi.org/10.3390/ijerph15091806)
<https://doi.org/10.3390/ijerph15091806>, doi:10.3390/ijerph15091806.

Hill, Nicole, MPH, and Robert Perkowitz. "Climate Changes Mental Health." *Journal of Environmental Health*, vol. 85, no. 1, 2022, pp. 38-39. *ProQuest Central*, <https://www.proquest.com/scholarly-journals/climate-changes-mental-health/docview/2681106706/se-2?accountid=2694>
https://gettysburg.primo.exlibrisgroup.com/openurl/01GETTYSBURG_INST/01GETTYSBURG_INST:MUSCAT?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&genre=article&sid=ProQ:ProQ%253Ahealthcompleteshell&atitle=Climate+Changes+Mental+Health&title=Journal+of+Environmental+Health&issn=00220892&date=2022-07-01&volume=85&issue=1&spage=38&au=Hill%252C+Nicole%252C+MPH%253BPerkowitz%252C+Robert&isbn=&jtitle=Journal+of+Environmental+Health&bttitle=&rft_id=info:eric/&rft_id=info:doi/.

Lawrance, Emma L., et al. "The Impact of Climate Change on Mental Health and Emotional Wellbeing: A Narrative Review of Current Evidence, and its Implications." *International Review of Psychiatry*, vol. 34, no. 5, 2022, pp. 443-498, <https://doi.org/10.1080/09540261.2022.2128725>, doi:10.1080/09540261.2022.2128725.

Otte, Pia P. "What Makes People Act Climate-Friendly? A Decision-Making Path Model for Designing Effective Climate Change Policies." *Current Opinion in Environmental Sustainability*, vol. 52, 2021, pp. 132-139, <https://www.sciencedirect.com/science/article/pii/S1877343521001196>, doi:10.1016/j.cosust.2021.10.003.

Zelenski, John M., and Jessica E. Desrochers. "Can Positive and Self-Transcendent Emotions Promote Pro-Environmental Behavior?" *Current Opinion in Psychology*, vol. 42, 2021, pp. 31-35, <https://www.sciencedirect.com/science/article/pii/S2352250X21000269>, doi:10.1016/j.copsyc.2021.02.009.