Journal of Ecology and Toxicology

Review Article Open Access

Is Human Health Affected by Global Warming?

Saba K*

Department of Science and Medicine, Iran

Abstract

Some groups are more at risk than others due to the significant negative effects that global warming has on human health. The amount of public awareness of these risks is unclear; the scant research that has been done so far has produced contradictory results. The understanding of the health effects of global warming among Americans, their levels of support for government spending and action on the matter, and their confidence in information sources are all discussed in this essay. We also look into the disparity between assessments based on open-ended versus closed-ended questions in previous research findings. In October 2014, an online national sample of US adults was surveyed. General attitudes and beliefs regarding global warming, an affective assessment of health implications, vulnerable groups and specific health conditions, perceived risk, confidence in sources, and support for government action were all factors measured. The majority of respondents (61%) stated that they had either given little or no thought to how global warming would damage people's health before to taking the survey. Many respondents (64%) agreed that global warming is damaging to health in response to a closed-ended question, but few (27%) correctly identified one or more specific types of harm in response to an open-ended question. 33% of respondents to a closed-ended question said that some groups are more affected than others, but only 25% of respondents to an open-ended question could name any communities that were disproportionately affected. Given these findings, it may not be surprising that respondents only showed a limited amount of support for a government response: less than 50% of respondents said that government should be doing more to protect against health harms from global warming, and about 33% said that government should be doing more. The majority of Americans say they are generally aware that global warming can have a negative impact on health, but only a small percentage know exactly what kinds of harm it can cause or who is most likely to be impacted. Perhaps as a result, support for a more extensive public health response is only moderate. Primary care doctors and public health officials seem to be in a good position to inform the public about the importance of climate change for health.

Keywords: Public Health; Global Warming; Climate Change

Introduction

The effects of global climate change are already being felt in the United States and around the world, and they are expected to get significantly worse over the course of the next century and beyond. Drought, wildfires, air pollution, sea-level rise, coastal floods, ocean acidification, violent storms, and damaged ecosystems are all on the rise as a result of increasing temperatures, changing precipitation patterns, and rising atmospheric carbon dioxide levels. The body of knowledge regarding the effects of climate change on public health is quickly expanding, despite the field of study being relatively new. The worst health issues are predicted to occur in developing countries with high rates of poverty over the course of the next several decades. These issues include injury, heat stroke, malnutrition, and vector-borne illnesses [**1**]. Climate change is expected to have a negative impact on human health worldwide. The Third National Climate Assessment's four key conclusions recently provided an overview of the climate change effects on human health in the United States. These conclusions are presented verbatim because the authors of the National Climate Assessment considered the following 4 statements to be the most crucial information for all Americans to understand about climate change and health. They identified these statements as their "key findings": (a) numerous factors, such as the occurrence of more extreme weather events, wildfires, deteriorating air quality, dangers to mental health, and illnesses spread by food, water, and disease-carriers like mosquitoes and ticks, among others, pose a hazard to human health and well-being. In the United States, some of these health effects have already started. (b) If nothing else changes, climate change will make some of the current health threats the country is currently facing worse. Children, the elderly, those who are ill, those who are poor, and some communities of colour are among those who are particularly vulnerable. (c) People can be greatly protected from some of the effects of climate change through public health initiatives, including preparedness and prevention. The biggest improvements in health come from early action. Our capacity to adjust to upcoming changes may be constrained as risks grow. (d) In several industries, such as energy, agriculture, and transportation, responding to climate change offers potential to enhance human health and wellbeing. Numerous of these tactics provide a number of advantages, including safeguarding people while halting climate change and bringing about other societal advantages [**2-6**].

The idea that the public should be made aware of dangers to their health and wellbeing is fundamental to the practise of public health. To understand how they are at risk, minimise that risk, and engage in meaningful public conversation about collective measures that may be taken to lessen public health concerns, people need to have the necessary knowledge [**7**]. In order to lessen the health hazards associated with climate change, individuals, communities, and nations can take a variety of significant prevention (i.e., mitigation) and readiness (i.e., adaption) measures. Effective health hazard preparedness strategies against climate change take place mostly at the subnational level, in

***Corresponding author:** Saba K, Department of Science and Medicine, Iran, E-mail: saba@kgmail.com

Received: 01-Nov-2022, Manuscript No: jety-22-81481, **Editor assigned:** 07-Nov-2022, PreQC No: jety-22-81481 (PQ), **Reviewed:** 16-Nov-2022, QC No: jety-22-81481, **Revised:** 26-Nov-2022, Manuscript No: jety-22-81481(R), **Published:** 30-Nov-2022, DOI: 10.4172/jety.1000142

Citation: Saba K (2022) Is Human Health Affected by Global Warming?. J Ecol Toxicol, 6: 142.

homes, businesses, communities, states, and regions. Conversely, effective mitigation strategies—intended to reduce the severity of climate change—take place primarily at the national and transnational, or global, levels due to the global nature of the causes. The public, as well as the complete spectrum of other decision-makers, should be made aware of the hazards posed by climate change as well as the available responses. This will open up significant chances to preserve local and global public health advancements as well as to further improve global health. Many Americans still view climate change as a distant problem with little personal relevance, despite the fact that most portions of the US population and those in other industrialised nations have a good understanding of it **[8]**. Americans' ambivalence about the existence, urgency, and severity of climate change has been attributed to a number of factors, including national political dynamics intended to foster debate around the cause and existence of climate change despite widespread scientific agreement that it is accelerating due to human activity, and issue framing that encourages ambivalence, such as framing climate change as an environmental problem, a scientific problem, and a political problem instead of perceiving. Few studies have looked at how much the American population is aware of the dangers that climate change poses to their health. According to a nationally representative survey conducted in 2011, 25% to 33% of Americans believed that, in the absence of action to combat global warming, there would be "many more" deaths and injuries over the next 20 years due to a variety of factors, such as flooding (31%), hurricanes (30%), severe winter storms (29%), malnutrition brought on by increases in food prices (27%), wildfires (26%), and heat strokes (26%). The remainder either stated that there would be "a few more," "no more," or "fewer" deaths and injuries as a result of inaction on global warming, or, in the majority of cases, they gave a "don't know" response. Although these findings imply that a sizeable percentage of Americans may be aware of the effects of climate change on human health, very few Americans describe this awareness as a top-of-mind association: Before any further questions about global warming in the 11 nationally representative Climate Change in the American Mind surveys since 2008 (N = 12,723), respondents were asked an open-ended question: "What is the first term or phrase that comes to mind when you think of "global warming"?" In all of these surveys' open-ended responses, hardly any respondents made the connection between climate change and human health on their own. 20 Similar results were obtained in representative community surveys done in Malta and Canada, which indicated that open-ended questions rarely elicited spontaneous links between climate change and health **[9].**

Unsupported Links between Climate Change and Health

To gauge their specific knowledge of the health effects of global warming and of the affected populations, respondents could be asked up to two additional open-ended questions. What health issues, if any, are Americans currently dealing with that are linked to global warming, according to the first question? After that, a closed-ended question was asked: "Do you believe that some groups or types of Americans are more likely than other Americans to experience health issues related to global warming?" A follow-up open-ended question, "What groups or types of Americans do you think are more likely than other Americans to experience health problems related to global warming?" was posed to respondents who had provided an affirmative response to gauge their beliefs about which groups are more likely to be impacted.

Assessment of Risk Perceptions That Is Closed-Ended

Perceived harm to the world's health in the present and the future. Respondents were asked to provide an estimate for the number of individuals worldwide who are currently injured or ill due to global warming, who are currently killed due to it, who will be injured or ill due to it in 50 years, and who will be killed due to it in 50 years in 4 different questions. None, hundreds, thousands, millions, or don't know where the available response options. Closed-ended questions about the reliability of specific sources of information on the health effects of global warming were included in the poll, with response options ranging from highly distrust to strongly trust (in between was provided as the neutral option, as well as a not sure category). Individual (primary care physician, climate scientists, no climate scientists, television weather reporters, religious figures, US military figures, and friends and family) and institutional (CDC, World Health Organization [WHO], Environmental Protection Agency [EPA], American Medical Association [AMA], environmental organisations, respondent's local health department) sources were all included in the list of sources evaluated **[10].**

Actual Versus Implied Knowledge of Risks to Health Posed By Global Warming

The vast majority of respondents who stated in response to closed-ended questions that they anticipate certain types of harm to be caused to the health and safety of their communities over the next ten years did not express the same opinions in response to an open-ended question about the types of harm that global warming causes to human health. For instance, only 13% of respondents to the open-ended question earlier in the survey provided an answer that indicated they were aware of the effects of extreme weather, despite 35% of respondents stating that bodily harm from extreme weather and/or hurricanes will become more frequent in their community over the next decade if nothing is done to reduce global warming.

Discussion

These results confirm our claim that most Americans are not well-informed about the impact of climate change on their health. The vast majority of survey participants do believe that global warming is a "bad thing," and many of them provided answers to closed-ended questions that indicate they understand or are inclined to believe that the effects of climate change on human health are negative. On the other hand, almost two thirds of Americans have given little or no thought to the health risks posed by climate change. Additionally, only a small percentage of respondents responded to open-ended questions about the relationship between climate and health. For example, when asked what health issues Americans are currently facing related to global warming, only about 1 in 4 respondents gave even a single accurate response. The public must undoubtedly be better informed about the risks climate change poses to their health. Regardless of the technique employed to gauge the public's comprehension, the results of the current study show that a significant section of the population is ignorant of these concerns. Public health officials are responsible for supplying the general public with knowledge that will help them make wise decisions about their own health risk management and enable them to participate in public discussions about general risk management tactics. People in the public, communities, and organisations are unlikely to be sufficiently fortified without adequate warning. We discovered that, despite a lack of public awareness of the health effects of climate change, nearly half of the populace believes that all levels of government should be doing more to safeguard citizens from these effects. Majorities of people agree that this purpose should receive more funding. However, it is significant to note that these levels of support for a public health response to climate change are lower than the levels of support expressed by the same survey participants

for both general government actions against global warming and for specific actions aimed at protecting other resources (such as our country's infrastructure). Who should be in charge of leading efforts to inform the public about the health dangers associated with climate change? Considering that many people trust them as reliable sources of information about the health effects of global warming, the study's findings suggest that traditional public health organisations like the CDC, local public health departments, and state health departments are relatively well positioned to educate the public. The most reliable sources of knowledge regarding health issues related to global warming are, somewhat predictably, people's own primary care physicians. An effective way to inform the public about the importance of climate change for health is through public communication campaigns led by doctors and their medical societies, with traditional public health agencies serving as supportive partners and efforts to encourage social reinforcement by members of the public (i.e., family and friends). Such an effort ought to pay attention to both the health advantages of addressing climate change as well as the risks it poses to human health.

Conclusion

In order for people, families, businesses, communities, states, and the country as a whole to better be able to make significant prevention and preparedness decisions that will safeguard health, it is essential to increase Americans' understanding of the health implications of climate change. According to the study's findings, the American public has a limited understanding of how climate change will affect human health, and as a result, support for public health organizations' preventative measures is paltry. The ultimate goal of public health communication efforts should be to improve protective measures and informed participation in pertinent policy decisions. To achieve this goal, credible sources should be used to clearly link climate change and health outcomes.

References

1. Sagarkar S, Mukherjee S, Nousiainen A, Björklöf K, Purohit HJ, et al. (2013) Monitoring bioremediation of atrazine in soil microcosms using molecular tools. Environ Pollut 172: 108-115.
2. Lien PJ, Ho HJ, Lee TH, Lai WL, Kao CM (2015) Effects of aquifer heterogeneity and geochemical variation on petroleum-hydrocarbon biodegradation at a gasoline spill site . Adv Mater Res 1079: 584-588.
3. Qin G, Gong D, Fan M Y(2013) Bioremediation of petroleum-contaminated soil by biostimulation amended with biochar. Int Biodeterior Biodegradation 85: 150-155.
4. Claus H (2014) Microbial degradation of 2,4,6-trinitrotoluene in vitro and in natural environments. Int Degrad 15-38.
5. Nõlvak H, Truu J, Limane B, Truu M, Cepurnieks G (2013) Microbial community changes in TNT spiked soil bioremediation trial using biostimulation, phytoremediation and bioaugmentation. J Environ Eng Landsc Manag 21: 153-162.
6. Oczkowski A (2015) Preliminary evidence for the amplification of global warming in shallow, intertidal estuarine waters. PLoS ONE 10:e0141529.
7. Wiltshire KH, Manly BF (2004) The warming trend at Helgoland Roads, North Sea: phytoplankton response. Helgol Mar Res 58: 269.
8. Marba N, Duarte CM (2010) Mediterranean warming triggers seagrass (Posidonia oceanica) shoot mortality. Glob Change Biol 16: 2366-2375.
9. Rönnbäck P (1999) The ecological basis for economic value of seafood production supported by mangrove ecosystems. Ecol Econ 29: 235-252.
10. Harrison TD, Whitfield AK (2006) Estuarine typology and the structuring of fish communities in South Africa. Environ Biol Fishes 75: 269-293.