Climate change's impact on public health research paper examples

Environment, Pollution

Introduction and Background Information

Climate change occurs as one of the topics that have generated immense debate across various settings all over the globe. This can be accredited to the threats that climate changeposes on the environment and health of the populations. The most worrying concern with regards to climate change is the fact that a significant proportion of the populations are not aware of the detrimental effects that climate changes poses to them. While much has been hypothesized regarding the implications of climate change, it is of the essence to note that the effects posed by climate change are dependent on a wider array of factors. One of the most comprehensive factors that determines the effects of climate change is the preparedness of a community to mitigatethe impacts of climate change (Grover, 2012). Researches carried out in the recent past indicate that climate change will affects all populations. However, there exists certain population segments that are more vulnerable to the effects posed by climate change. Precisely, populations from developing countries will be more affected than those from developed countries. This is because developing countries lack adequate measure to mitigate the effects of climate change. As an example, developing countries have weak health infrastructure; hence, are less likely to cope and respond to the health effects of global warming. In a nutshell, climate change has both environmental effects. With regards to environmental effects, climate change results in extreme weather conditions including more frequent storms, and intense droughts and floods (Institute of Medicine (U. S.) Committee on the Effect of Climate Change on Indoor Air Quality and Public Health, 2011). These effects have detrimental effects on

the environment. On matters regarding health, climate change worsens the severity of various health conditions. In fact, climate change impacts on the environmental and social determinants of health such as safe drinking water, and clean air.

This paper is based on the hypothesis that air pollution as a component of climate change has a number of health effects on India’s populations. Therefore, this paper seeks to ascertain this hypothesis; hence, answer the question as to whether climate change has any health implication on India’s populations. Ascertaining this hypothesis will not occur spontaneously nor in isolation. Instead, health issue that can be caused and those that have been caused by air pollution in the Indian context will be explored. As aforementioned herein, India is a major contributor of greenhouse gases, which have been hypothesized as the most comprehensive contributors of climate change (Parry, 2007). As a result, public health concerns arising from climate change, particularly air pollution occurs the most pressing concern for India. Evidently, India has experienced several episodes of extreme weather occasions within the last two years. This is a substantive indicator that this country should brace itself for more detrimental effects elicited by climate change.

Discussion

Air pollution occurs as one of the most comprehensive components of climate change. In fact, there are various ways in climate change results in air pollution. Above all, climate change results in the formation of smog. Precisely, pollutants from various sources such as factories and vehicles,

which are agents of climate change reacts with heat and sunlight; hence, resulting in the formation of ozone smog. In a nutshell, ozone smog results when oxides of nitrogen, and volatile organic compounds reacts with ultraviolet sun’s rays. Many at times, oxides of nitrogen, and volatile organic compounds emanates from vehicle gas emissions. The second way in which climate change precipitates air pollution is the fact that extreme weather conditions caused by climate change cause intense draught, which may result in wildfires. Notably, wildfires produces smoke, which is an air pollutant. Finally, climate change result in air pollution in that it elicits premature disintegration or withering of pollen from plants, which causes a form of air pollution known as pollen pollution. On another note, rising temperatures as a result of climate change makes plants to produce more pollen; hence, increasing the rate of pollen pollution.

There are various ways in which the above mentioned modes of air pollution resulting from climate has and continues to affects India’s populations. Ozone smog pollution as an aspect of air pollution reduces the quality of air that people from India breathe. In fact, ozone smog pollution makes it hard to breathe. Evidently, ozone smog present as a health concern in that such smog is a resilient irritant, which results in the constriction of the airways. This makes it challenging for the respirators system to access oxygen; hence, the breathing difficulties. From this analysis, ozone smog pollution presents as a major health problem for Indians struggling with respiratory illnesses. Conclusively, ozone smog pollution, worsens respiratory distress for Indians with various respiratory illnesses such as asthma, bronchitis, as well as emphysema (Haineset al., 2005).

Apart from the above connoted effects of ozone smog pollution as one of the forms of air pollution emanating from climate change on the Indian populations, this form of pollution also results in lung damage. Recent empirical researches on health concerns in India indicate that lung disease is one of the most compelling health concern for Indian populations. Ozone smog pollution and other forms of air pollution has been indicated as one of the causative factors for the lung disease in India. In most cases, lung damage caused by ozone smog pollution continues to worsen even in cases where symptoms aligned with lung damage such as sore throat and coughing have disappear. The manner in which ozone smog pollution has and continues to pose as a negative health impact on Indian populations aligns with the fact that it reduces the resistance that these populations have towards infections (Parry, 2007). For this reason, most Indian populations who have been exposed to ozone smog pollution experience health concerns including headaches, chest pain, nausea, wheezing and chest pains. Finally, ozone smog pollution is a public health concern for Indians because it results in fatigues; hence, reduce their productivity.

As aforementioned herein, wild fire smokes occurs as another form of air pollution that is closely attributed to climate change. Smoke from fires elicited by climate change cause air pollutions, which has detrimental effects. In the beginning of the year 2014, precisely the month of March, Indian was faced with a fire, which occurred in the Seshachalam forest. While it may not be certain that this fire incidence was precipitated by climate change, there is significant evidence that the fire was linked to climate change. Smokes from wild fires such as this one are of immense public

health concern in the Indian context. Smoke form these fires reduced the air quality in Indian contexts, which is of great health concern for vulnerable populations including pregnant women, children, individuals with lung disease, as well as persons with cardiovascular disease.

Smoke from wildfires as a component of air pollution poses both short-term and long-term impacts on the Indian populations. One of the most pertinent short-term implications of smoke emanating from wildfires is the fact that it aggravates respiratory, and cardiovascular illnesses. In addition, such smoke is a public health concern in the Indian contexts because ii results in the damage of cells in the respiratory system. Such damage results in an increased susceptibility to respiratory illnesses amongst the Indian populations. In line with the ling-term implications, a number of Indian have had their health compromised as a result of smoke emanating from wild fires. Of concern are the Indians who have their lungs damaged permanently as a result of such smoke. Other Indians experience decreased lung function because of such smoke (Haines et al., 2005). This analysis depicts the manner in which smoke from wild fires as a component of air pollution resulting from climate change is a public health concern in the Indian contexts.

Finally pollen pollution as a component of air pollution is a public health concern in the Indian context because of the health related complications associated with it. Pollen pollution increases the amount of harmful particles present in the atmosphere. These particles are a potential cause of difference health problems. In most cases, the pollen grain pollutants penetrate into the lungs; hence, causing respiratory distress, which is a

significant health issue in the Indian context. In other cases, pollen grains as a component of air pollution result in the penetration of pollen particles into the blood stream. This can result in the occurrence of cardiovascular problems. The health issues posed by pollen pollution are of concern across various contexts not limited to India alone.

Furthermore, pollen pollution as an aspect of air pollution associated with climate change often worsens the occurrence of respiratory infections. A close analysis of the Indian health care context demonstrates that pollen pollution aggravates a number of lung diseases including acute bronchitis, and asthma attacks (Haines et al., 2005). For Indian populations with cardiovascular diseases, pollen pollutants elicit arrhythmias and heart attacks, which is one of the leading cause of death in India. Apart from aggravating respiratory and cardiovascular illnesses, pollen pollutants is a health concern in India because it can cause eyesight problems. Pollen particles result in irritation of the eyes, which can result in the eventual loss of eye sight.

Climate change remains a topic of focus amongst scholars drawn from different settings. Air pollution is an essential component of climate change. Exposure to different forms of air pollutants, especially wildfire smoke, pollen particles, and smog predisposes individuals to a number of health concerns including lung damage, breathing difficulties, and eyesight problems. Such health concerns are replicable in the Indian contexts, whereby a number of populations have been affected by health issues elicited by air pollution. Persons with certain illnesses such as respiratory diseases such as asthma are the ones who are affected significantly by air pollution elicited by climate

change. This is attributed to the fact that air pollutants reduces the functioning capability of the respiratory system.

Conclusion

The above analysis depicts the manner in which climate change is both an environmental and public health concern. Climate change is an environmental health threat because has resulted in overall environmental degradation. As an example, climate change has elicited the decline in fresh water sources because of the increased water contamination and extraction. On a similar note, climate change has resulted in the degradation of air quality in that it has caused air pollution. India has been found to be one of the top twenty countries faced with extreme weather conditions accredited to climate change. Air pollution poses as an immense health concern in the Indian context due to the health issues it precipitates. While it is true that a number of Indian populations are affected by air pollution as a component of climate change, there is a need to comprehend with the fact that certain populations are more prone to these effects. Precisely, Indians with cardiovascular and respiratory infections are immensely affected by air pollution. It is on this basis that there is the need for policy change in the Indian context in order to address these health concerns cause by air pollution.

References

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