

# YOUTH PERCEPTION ON CLIMATE CHANGE AND ITS IMPACT ON HEALTH (ISLAMABAD)

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## Abstract

Climate change is a global issue characterized by a shift in regular weather patterns over decades or longer, such as rising temperatures, more precipitation, or decreased humidity. Pakistan is experiencing the consequences of climate change, with increased glacier melt, droughts, and warmer winters and early summers. Pakistan does not make a significant contribution to global warming or climate change. It is, nevertheless, the seventh most severely affected country. In the last century, the average temperature of Pakistan increased by 0.6°C. Pakistan's government has already initiated the Ten Billion Trees Tsunami Project, one of the world's most ambitious endeavors to extend and repair its forests. The objective of this study was to investigate the perceptions of youth of Islamabad on climate change and its impact on human health. The mixed methodology (qualitative and quantitative) is used to get better results in apprehensive research work. Our research found that a large percentage of people in the capital city believe climate change is happening and is caused by global warming and deforestation. The youth are aware of climate change and its effects on humans, but they require further education on the subject and guidance on how to mitigate climate change. The government should do something at the national or university level to raise awareness about climate change.

**Keywords:** Climate Change, Youth Perception, Forestation, Pollution, Green Pakistan

## Introduction

Climate change is a global issue characterized by a shift in regular weather patterns over decades or longer, such as rising temperatures, more precipitation, or decreased humidity (Denchak & Turrentine, 2021). Human activity is the largest source of CO<sub>2</sub> emissions, accounting for more than 20% of all

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CO<sub>2</sub> pollution on the planet. According to estimates, deforestation, land clearing, fires, and other forms of forest degradation produce 8.1 billion metric tons of CO<sub>2</sub> annually. Human activities that pollute the air include fertilizers, livestock raising, and industrial processes that produce fluorinated gases (Youmatter, 2020). Scientists warn that rising temperatures might hasten the development of vector-borne illnesses like malaria and dengue fever in some areas. The most prevalent arthropod-borne viral disease in the world is dengue, and temperature substantially influences how it spreads. The number of infections has climbed thirtyfold, reaching almost 390 million every year during the last fifty years. Deaths from Tuberculosis, malaria, cholera, stomach illnesses, and respiratory conditions are currently at its highest level (Ebl & Hess, 2020).

Epidemics have ravaged the twentieth century, spreading among communities beset by poverty and fragility. Over the twenty-first century, climate change is predicted to drastically limit renewable resources in the driest subtropical regions. Increases in waterborne infections might have a significant impact on human health (Maslin, 2021). Greta Thunberg, a young Swedish environmental activist, stirred up the world's leaders by calling for a Global Climate Strike on September 20, 2019, was observed at more than 4,500 locations across 150 countries. She has become a global emblem of young activism in the fight against climate change (Azeem, 2019). In December, the EU came up with an ambitious plan dubbed the European Green Deal, which aims to have zero carbon emissions by 2050 (Johnston, 2019).

Pakistan is the seventh most severely afflicted country in the world by climate change. In the last century, the average temperature of Pakistan increased by 0.6°C. The productivity of the rest of the land varies greatly from season to season, and half of the land that was once viable for agriculture is now unfit. According to forecasts, Pakistan's temperature is predicted to rise by around 01°C by the end of the century (Azeem, 2019). On June 5, 2021, as the global host, Pakistan joined the world community in celebrating "World Environment Day". Pakistan appreciates human's efforts to mitigate climate change. The government has already initiated the Ten Billion Trees Tsunami Project. As part of its drive for a Green Future, Pakistan has already put laws in motion to make 60 percent of our energy clean and green by 2030 and shift 30 percent of road transport to electric cars (Amin, 2021).

A medical specialist said, "In climate change adaptation in the country, increasing the youth's awareness on climate change must be considered" (p. 67). He claims that scientists and medical experts have been working hard to rule out the exact reason for seasonal respiratory disorders and skin allergies. No one has ever emphasized their exact underlying cause. In this context, the media should also play a role by hosting seminars and special programs. He further said that if we want to lessen the burden of allergy and respiratory symptoms, we need to address the environmental variables that aggravate them (Raza, 2018).

The researcher aims to explore the perception of youth on climate and its impact on health. A Mixed (Qualitative and Quantitative) Research Methodology was used to meet the aim of study.

## **Literature Review**

Climatic change occurs when the earth's climate patterns shift and stay that way for an extended period. Before human activities started to alter the global climate, five key factors combined to cause climate change. As a blanket covering the earth, human-caused increases in emissions of greenhouse gases trap the heat in the atmosphere and raise temperatures. A 1.5°C maximum global temperature rise would help humanity avoid the worst climate effects. Human activity is causing climate change today, which poses a growing threat to the entire planet. The amount of greenhouse gases is at its highest point in two million years, and it is still rising. The most significant problem that needs to be tackled is to halt or avoid climate change (Terrapass, 2019). Climate change is now causing severe droughts, water scarcity, and increasing sea levels, among other factors (Sarah & MD, 2020). People are impacted by climate change in many different ways. Our wellbeing, food security, residence, safety, and work are all impacted. Developing nations are already experiencing, as a result of urbanization and globalization, climate change is further contributing to the stress. Coastal ecosystems are vital to human well-being because of their high production and supply of essential services. Increased stress from both human and climate-related factors threatens further damage coastal resources (ibid, 2020).

Respiratory health is severely at risk due to climate change. Asthma, allergic rhinitis, Pneumonia, and infections in the lungs are the key disorders to be concerned about. People who already have cardiovascular conditions are more vulnerable to the effects of climate change. Greater poverty and restricted access to

healthcare will cause increase in suffering (D'Amato & Cecchi, 2015). The World Health Organization claims that climate change is a significantly increasing public health risk (Toan, Kien, Giang, Minh, & Wright, 2014). As the climate catastrophe worsens, humans will face new challenges dealing with novel or developing viral diseases. Climate-based warning systems are under development to detect places at high risk of disease outbreaks. Targeted vector-control measures might be employed successfully in areas where emerging illnesses are present (ibid, 2020). Extensively drug-resistant (XDR) typhoid, main cause of death in Hyderabad, Sindh, Pakistan, is brought on by harsh climatic conditions and poor sanitation. One of the highest rates in Asia, 60% of infant deaths in Pakistan are caused by diarrhea. Since 2006, there have been a number of dengue outbreaks reported around the nation, with the greatest outbreak occurring in 2011 with over 20,000 reported cases and over 300 fatalities. Up to 22.4% of Karachi's population reported having malaria, which was followed by stomach problems with 14.9% of the population. Between December 2016 and March 2018, Pakistan recorded a total of 8,521 suspected CHIKV cases, with Baluchistan and Sindh provinces accounting for the majority. Climate change scenarios increase the pandemic potential of malaria by 12-27 percent and dengue fever by 31-47 percent (Ali, et al., 2021).

Vietnamese people's opinions of climate change were with scientific findings of the country's vulnerability to climate change. People assessed variations in heat, cold, and rainfall during the previous 5-10 years and correlated these issues to predict future hazards to themselves and their families. Headaches, weariness, and dizziness were the most prevalent symptoms of hot weather, pneumonia, influenza, and developing infectious illnesses such as dengue fever or Japanese encephalitis. Hypertension and other cardiovascular disorders have grown increasingly widespread. Communication is becoming increasingly important in dealing with the effects of climate change, says Hanoi Mayor Nguyen Phu Trong. People's concerns will aid policymakers in developing effective communication methods, he says. A majority of respondents in a survey by the city's Chamber of Commerce and Industry (CCI) knew what "climate change" meant and associated it with storms, floods and extreme cold (Toan, Kien, Giang, Minh, & Wright, 2014). Climate change is a serious issue, nevertheless there are several solutions. Three sorts of action include reducing emissions, preparing for the effects of climate change, and supporting essential changes have the ability to improve our lives, preserve the environment, and bring about economic gains. Additionally, we have International agreements like the "Paris Agreement" and the "United Nations

Framework Convention" on Climate Change to direct our efforts (UN CLIMATE ACTION, 2020).

## **Methodology**

The study is on the understanding of youth on climate change and their perception on the health problems caused by it. The mixed methodology is used to get the better result in an apprehensive research work. To get a wider range of perception of youth of Islamabad a Quantitative and Qualitative both methods are used.

Qualitative research works with primary and first-hand data and aims to interpret meaning from the collected data. In a focus group, participants are questioned about their beliefs, views, opinions, or ideas regarding a specific subject. The group's objective is not to settle on a one standpoint or come to an agreement. Instead, it seeks to recognize and understand people's perspectives. An interview guide was utilized as a tool for gathering data on the ground. The interview guide included open-ended and unstructured questions about each theme, allowing respondents to share as much information as they felt comfortable with. Sample of total ten respondents, consists of 4 males and 6 females with age range 18 to 25. carefully chosen from different universities of Islamabad by using the "Convenient Sampling" and "Snowball Sampling." Techniques. Both sampling techniques are sub types of non-Probability Sampling.

The focus of Quantitative research methods is to statistically analyses the data gathered by surveys, questionnaires, and other types of surveys. A survey is a technique for gathering data that includes a set of pre - determined questions that participants respond to base on their knowledge and understanding. The online survey method was used to gather data and for this purpose questionnaire was designed as a survey tool that contain a list of questions or other forms of prompts. Sample of total 30 respondents (10 each) from 3 different universities of Islamabad through Cluster Sampling. The enlisted universities are International Islamic University, National Defense University and NUST University. A "Cluster Sampling" is a random sample chosen in accordance with the study's goal and population characteristics. In Islamabad there is number of universities so, the researcher randomly selected the sample of 3 universities from the whole youth population of Islamabad.

## Discussion & Analysis

### ❖ Quantitative Analysis

Climate change is a global issue characterized by a shift in regular weather patterns over decades or longer, such as rising temperatures, more precipitation, or decreased humidity. Pakistan is experiencing the consequences of climate change, with increased glacier melt, droughts, and warmer winters and early summers. Pakistan does not make a significant contribution to global warming or climate change. It is, nevertheless, the seventh most severely affected country. (the recent flood is the vivid example of the climate change in Pakistan). For this research paper the data gathered by questionnaires. Through these questionnaires it is analyzed statistically and presented graphically and the analysis consists of three sections.

- In first part the research is about the general perception and understanding of youth regarding climate change
- The other phase of analysis contains youth perception on the impact of climate change on human health
- Third comprises on suggestions or ideas to tackle the climate change

### ❖ Awareness on Climate Change and its Importance

After analyzing the data from the questionnaire responses, overall 96.7% of the respondents are aware of the climate change and according to them climate change in a long-term alteration of temperature or extreme change of weather pattern. For example, some of the respondent understanding about climate change.

**Respondent A** “Climate change is defined as a change in weather conditions that lasts for more than three months. Climate change refers to changes in the environment as a result of global warming and natural calamities.”

**Respondent B** “Climate change is related to the changes within the climate due human activities causing environmental problems like global warming. Climate change policies includes two major categories: 1. Adaptation 2. Mitigation”

**Respondent C** “Climate change refers to long-term shifts in temperatures and weather patterns. These shifts may be natural.”

**Respondent D** “it’s about the climate changing and affecting the lengths of seasons and caused by global warming.”

Moreover, the analysis includes the youth perception on the importance of climate changes and its causes and effects and also some suggestions regarding how to tackle or reduce the change in climate and make the environment clean. As we discussed the importance, the source of knowledge about climate change, 56.7% of the participants came to know about climate change through school/colleges and universities. 23.3 % came to know through television, radio and newspaper, 6.7% heard it from internet and social media. 6.7% heard it from government agencies/ information, and 3% know about it through special publications or academic journals. Figure 1.

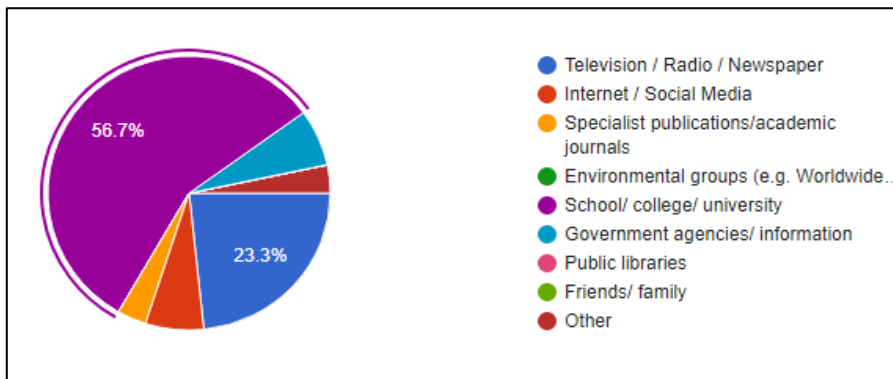


Figure 1.

This pie graph depicts where the majority of young people first learned about climate change. Youth consider climate change as a major issue and in this respect 80% participants responded that it’s a crucial aspect that is needed to be discussed but just 3% consider it not much important. In addition, when asked about the causes of climate change 36.7% responded that climate is caused by Global Warming. Besides that, 26.7% students said that it is occurring due to deforestation, 13.3 % responded that it is due to the excessive emission of carbon by the developed countries, 10% said it is due to the urbanization and 6.7% goes with the population growth. Figure 2.

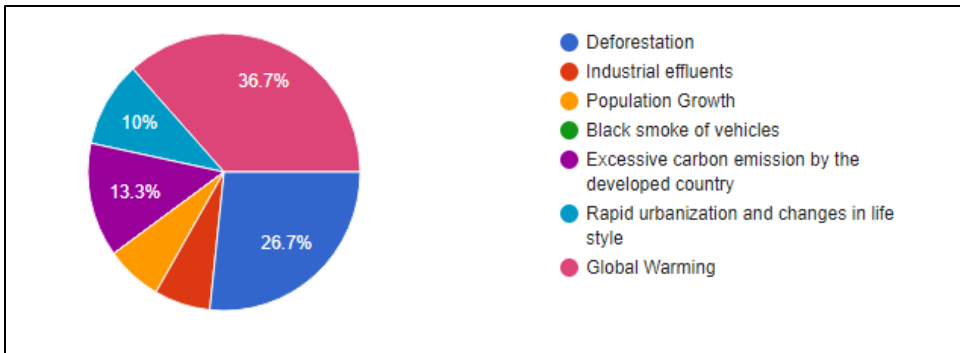


Figure 2.

❖ **Perception of Youth on Impact of Climate Change on Health**

Now second section of analysis regarding the youth perception on the impact of climate change specially on human health. 86.7% participants responded that yes climate change is directly impacting their daily life and environment. 96% participants believe that climate highly impact the health whereas just few of them thought that is other way around. As in the factor of health, air pollution is considered as the main cause. 46.7% agree that health issue is mainly caused by air pollution, 33.3 strongly agreed and 6.7% disagree with this statement. Figure 3.

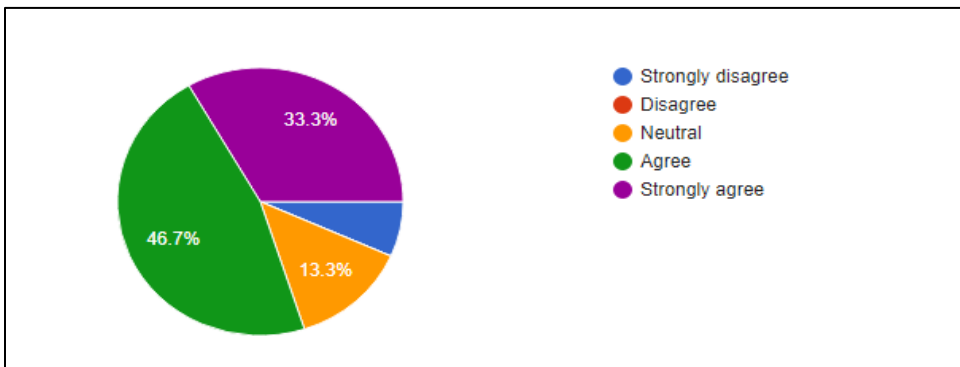


Figure 3.

The graph shows the percentage of youth who believe that air pollution is a cause climate change and health problems. Youth perception on health is that they said that with the time the number of diseases increased for example 63.3% believe that vector borne disease and diarrhea from food/waterborne illnesses increased over time passes, 26.7% are not so sure about it and 10% don't know about this. Figure 4.

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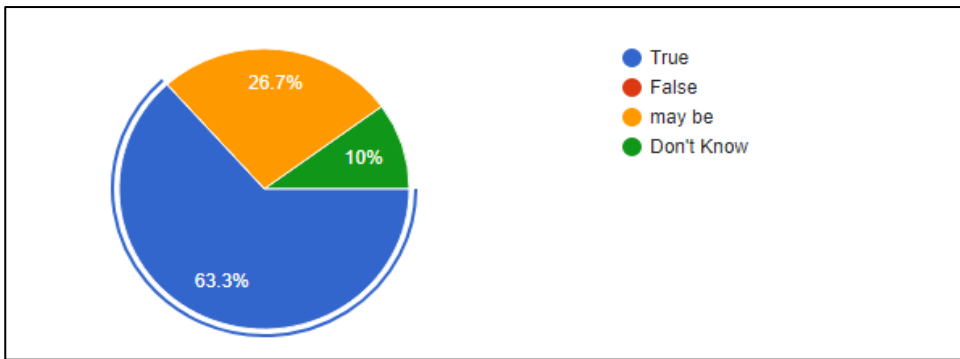


Figure 4.

❖ **Suggestions on How to Tackle the Climate Change**

Third section is about the youth point of view on the suggestions on how to tackle or reduce the increased risk of change in climate. As when asked who is responsible for managing climate change, 63.3% said individuals themselves bring change, 20% said international organizations should handle change in climate, 30% said it's the responsibility of government, 16.7% believe that it's the responsibility of the business industry, and 30% considered environmental organizations are responsible. Figure 5.

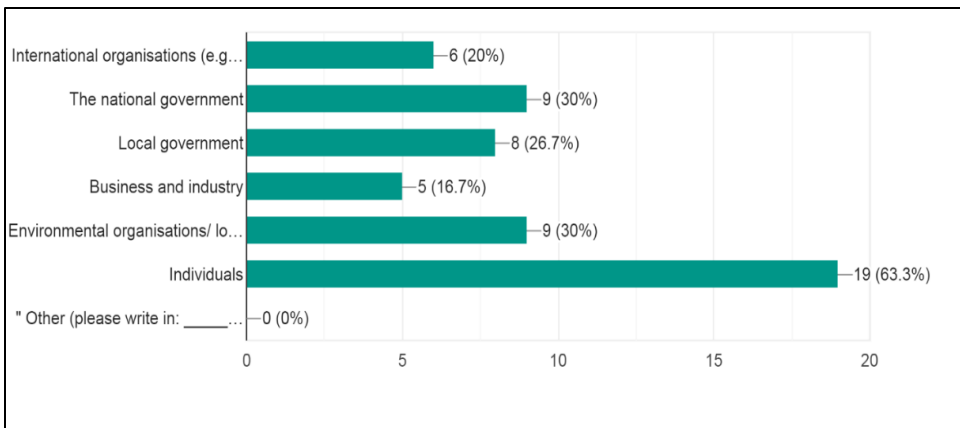


Figure 5.

❖ **Qualitative Analysis**

Sub-themes are forms to analyze after the participant observation.

### ❖ Perception and Understanding on Climate Change

The participants know about the climate change, according to most of the participants its similar to the answer researcher get from survey. Participants know that the increase in the temperature or because of ozone depletion climate change is occurring. Respondent A said “Climate change is basically like the change is season like in winter, the winter were cold but not like present ‘khushk sardi’ the air is dry and a smog is easily visible in the air. The rainfall level decreased.” And according to Respondent B---Climate change is a change in weather pattern like the summers are now prolonged and winter time period is shrinking.

Other responses added more and said “Yes, climate change is more affecting Pakistan compared to developed countries. Lahore, Gujranwala, and Karachi are the most polluted cities of Pakistan, and every year, smog is increasing. Smog caused many health problems and accidents. People can’t travel from one place to another. Last year, in Gujranwala artificial rain, was showered to decrease the effect of smog, but it cost a huge amount which is not possible to continue it every year.”

### ❖ Causes of Climate Change in Pakistan

If we talk about the causes of climate change most of the respondents discussed it’s because of the deforestation, there is no plants and deficiency in oxygen is a major problem like one of the responded said that “if we talk about Islamabad we see that the plants were cut down and new Industrial and housing schemes are building and now more vehicle are on the road which is the basic cause of climate change and also say I would say that 70 to 80% change in climate occur because of human activities.” And they said that climate change is affecting their lives directly.

Other respondent says that “I would say 100 and 10% climate change is caused by human activities, like burning fuel from factories or smoke from vehicles all are used or done by human beings and increasing the global warming. Also, in Karachi we don’t have clean drinking water because the factories and industries polluted all the water. And damaging the climate.”

### ❖ Perception on Effects of Climate Change on Health

Respondent C said that “all the respiratory diseases like asthma, lung cancers are caused by climate change and smog is the main reason. And if you travel in smog in means you are smoking 24 cigarettes per day.” The other respondent said

“diseases related to skin are caused by climate change and is giving favorable conditions to vector borne disease to spread.” The respondents didn’t think and don’t know about that if COVID19 is also because of climate change but one of the respondents responded that “we can’t say that COVID19 came because of climate change but we can say that the climate change become the reason of its spread. Climate changes provide that condition to activate and help the virus to spread at this large scale and the changing climate is giving the favorable environment to different bacterial or viral diseases to spread at a large scale and cause destruction.” One of the respondents said “that diseases like heat stroke, diarrhea, dengue fever is also caused by climate change and give them the desired habitat to grow and spread.” All the respondent strongly agreed that climate change is affecting our health and with the time the disease also increases and new diseases are now becoming common.

## **Conclusion**

Climate change is often regarded as one of the world's most pressing problems. It is predicted to be significant hazards and consequences for biodiversity, ecosystems, population health, and livelihoods. As a result, humans play three roles concerning climate change: responsible actors, victims, and change agents. The aim of this research was to investigate the perceptions of youth on climate change in terms of causes, effects, and alternatives. This research found that a large percentage of people in the capital city believe climate change is happening and can name potential implications such as more rainfall and higher temperatures. Lahore, Karachi, Gujranwala, and now Islamabad have all been affected by 23 recent climate change, which resulted in a rise in health concerns for the city's residents. Climate change is perceived to be caused by global warming and deforestation. Youth does not have a clear understanding of how to tackle the problem other than tree planting but they know that we will not be able to reach our aim of lowering global temperatures alone via planting. The notion of a clean and green Pakistan did not just refer to plantations. It refers to the decrease of carbon and other hazardous substances from Pakistan's environment and air. Youth is aware that climate change is impacting our health but confused about whether some diseases such as diarrhea and dengue fever are caused due to climate change or not. They only know about the respiratory and skin problems brought on by climate change. Some of the respondents were aware of the health issues related to climate change and expressed their opinions on the COVID19

virus, also disseminated due to climate change. The youth are aware of climate change and its effects on humans, but they require further education on the subject and guidance on how to mitigate climate change. The government should do something at the national or university level to raise awareness about climate change. There are awareness programs at the school and college levels but, unaware of any climate change initiatives at the higher levels. Policymakers should also create policies for good guidance since university students are more mature and will be able to perform a better job in addressing the climate change issue.

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