

A Study on the Rising Costs and Challenges Faced by Urban Poor in Assam Due to Climate Change and Increased Health Risks

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Abstract--The change in climate and the variability associated with this change have led to devastating health issues around the globe. Due to the increased temperature, the hot days becoming hotter and the cold days are becoming less. Heat waves are becoming more common and more dangerous as they are combined with humidity. People now a day are facing lot of health problems including heatstroke, respiratory diseases, cardio vascular diseases, dengue, malaria, asthma, heart diseases, mental illness etc. due to the global climate crisis. People suffering from these diseases need to spend huge amount of money on medical treatment. This paper mainly analyzes the out of pocket expenditure of the poor people living in the urban areas that are more frequently exposed to the extreme weather conditions and at the same time lack the required protective shield. Most of them rarely have any health insurance to cover their medical expenses. They work day and night to get at least two meals a day, do not even have proper housing facilities to protect them from high temperature and mosquitoes which disturbs their sleep and further deteriorates their health. In order to analyze the above objective, both primary and secondary data will be collected. The secondary data will be collected from the government health reports of Assam and journals. The primary data will be collected from the poor people living in the urban areas of Assam.

Keywords-- Climate Change, health issues, out of pocket expenditure, urban area, urban poor.

I. INTRODUCTION

Climate change has lead to severe health issues. It has both direct and indirect effects on the health of the people. Direct effects include- heat stroke, asthma, bronchitis, vector born diseases, psychological disorders etc. Indirect effects include malnourishment. Due to change in the climate, the food production has decreased which increased the food prices. As a result, people are unable to afford nutritious food and are suffering from malnourishment and with such weak health, they are unable to cop up with the changing adverse climate.

Berry et al in 2018, pointed out that, Climate change and climate variability poses major threats to global health due to the risks imposed on physical and mental wellbeing. Out of Pocket Expenditure (OOPE) refers to the money spent by people from their own pocket to pay for the medical expenses including the fees paid for doctor's visit, expenses on hospital stays and medicines etc. the Organization for Economic Co-operation and Development defined OOPE as- Household out of Pocket Expenditure on health comprise cost sharing, self-medication and other expenditure paid directly by private individuals irrespective of whether the contact with the household system was established on referral or on the patient's own initiative. OOPE and be considered a significant challenge for a developing country like India where majority of the people belong to lower middle income families and they need to spend a larger portion of the earnings on medical treatment. It affects the financial stability and health outcome of the households especially of the vulnerable populations. It pushes affected people beyond the poverty line, creates debt burden and even deprives them from accessing the basic necessities of life. Due to high OOPE people even to seek medical help for their illness can even worsen their health condition and in future they may face high treatment cost. Agarwal et al in 2021, also pointed out that, exposure to extreme temperatures particularly, heat stress can lead to higher rates of morbidity and mortality. Both of these two on the other hand, can significantly increase the healthcare expenditure. Though the government has launched several policies to address the issue and is aiming to increase public health expenses but the desired result is not achieved yet. The government of India has introduced a health insurance scheme named – Ayushman Bharat- Pradhan Mantri Jan Arogya Yojna which is a flagship scheme of government of India. This scheme was launched with the aim of Universal Health Coverage (UHC). This scheme provides cashless cover of up to five lakhs per year to the BPL families.

This scheme is successful to a great extent in reducing the out of pocket expenditures. The Report of Economic Survey 2024-25 also highlighted that this scheme has reduced the out of pocket expenditure and recorded savings over Rs. 1.25 lakh crore. It has also been found that, between Fiscal Year 2015 and Fiscal Year 2022, Government Health Expenditure (GHE) increased from 29.0% to 48.0%, while Out-of-Pocket Expenditure (OOPE) declined from 62.6% to 39.4%. As the data reveals, this scheme is successful to a great extent in reducing out of pocket expenditures. But, in spite of this achievement, in reality the scheme is still not been able to cover the whole expenses. The scheme has a limit up to 5 lakhs. Moreover, the benefits of this scheme can be accessed only in government hospitals where the infrastructure is not up-to-date. Lack of proper public infrastructure and lack of awareness among the people are also some of the major hurdles in the path of proper implementation of the scheme. So, it is observed that, on the one hand, due to the drastic changes in the climatic condition, people are suffering from different diseases, on the other hand, due to out of pocket expenditure, the overall economic condition of the people are deteriorated. The problem is more severe for the poor people who are highly exposed to climatic adversities and at the same time, lack adequate financial resources to treat the disease that result from such adverse climate. As a result, their out of pocket expenditures increases.

II. LITERATURE REVIEW

According to the World Health Organization (2019), out of pocket expenditure, India accounts for 50.6% of health expenditure. Van Doorslaer *et al.*, (2006); Bonu *et al.*, (2007); and Garg and Karan, (2009) in their study found that, high out of pocket expenditure reduces access to healthcare services, leads to decrease in the consumption of food and basic necessities, and exposes households to financial catastrophe and impoverishment. Healthcare payments in India are a major cause of poverty which is pushing approximately 32–39 million individuals below the poverty line each year. According to, World Bank in 2024, on the one hand, poor people lack the financial resources to access healthcare and on the other hand, illness reduces labour supply and limits their financial ability.; this way creates a vicious circle of poverty and poor health.

According to, Patel V, Parikh R, Nandraj S, Balasubramaniam P, Narayan K, Paul VK, *et al.* (2015), India's healthcare system has several critical shortcomings.

These include- uneven distribution of healthcare personnel, a weak foundation and infrastructure in primary healthcare, a vast and unregulated private sector, insufficient public health funding, fragmented health data systems, unsustainable rise in medication and technology costs due to irrational use, and inadequate governance and accountability mechanisms.

Rawat A, Saha A, Kumar A. in 2020-21, opined that, with increases in sub centers, primary health centers, and community health centers, though the infrastructure has expanded considerably between 2005 and 2020, the distribution of resources remains inequitable across states.

Russell S conducted a study in 2004, on the health expenditure of the poor on illness and found that, in India, OOP health expenditures constitute a significant proportion of total household expenditure and this effectively reduces expenditures on other important necessities that lower the overall welfare of households.

Hooda (2017), Garg, Karan (2009), Berman, Ahuja, Bhandari (2017), Selvaraj Karan (2009), Lungdim Roy, Guruswamy, Arokiasamy (2009), conducted their studies on impact of out of pocket expenditure and poverty and found that, high OOP health expenditures affect the household economy and push many households into poverty.

Peters, Yazbeck, Sharma, Ramana, Pritchett, Wagstaff in their study in 2002 found that, India showed that around 2.2% of the population fell below the poverty line because of OOP payments for healthcare.

According to, Balarajan Y, Selvaraj S, Subramanian SV (2011), nearly 39 million people in India become impoverished every year due to OOP health expenditures.

In a study by van Doorslaer E, O'Donnell O, Rannan-Eliya RP, Somanathan A, Adhikari SR, Garg CC, *et al.* in 2006 showed that around 37 million people were pushed into poverty in 1999–2000 due to OOP payments alone.

McHenga M, Chirwa GC, Chiwaula LS. (2017), Braveman P, Gruskin S. Poverty, equity, human rights and health(2003) found that, OOP health expenditures can increase the incidence and depth of poverty; additionally, poverty has a negative impact on health.

According to, van Doorslaer E, Masseria C, Koolman, (2006) Leive A, Xu K. (2008), OOP healthcare payments aggravate both the occurrence and depth of poverty and people sale assets and borrow money to pay for the expenses incurred and these are becoming most important mechanisms.

Shahrawat R, Rao KD(2009) observed that, majority of the health insurance programmes in India cover only the hospital expenses.

III. OBJECTIVES

The main objectives of this study are-

1. To analyze the type of the diseases suffered by the people due to adverse climate.
2. To find out if there is deterioration of the financial condition of the people due to out of pocket expenditure on diseases especially on diseases caused by adverse climatic conditions.
3. To find out if there any change in the expenditure pattern of people on the basic necessities due to out of pocketexpenditure.
4. To find out the extent of awareness of the people about the government schemes regarding the minimization of out of pocket expenditures.

IV. METHODOLOGY

For this study, a convenience sample of 45 respondents was collected from the people in the age group 20-50. Out of 45, 19 are daily wage earners, 11 are street vendors 9 are rickshaw pullers and 6 are domestic workers. Before collecting the information from the respondents, verbal consent was taken. The interviewer explained all the information related to the study. After that, the respondents were allowed to ask questions. All the respondents included in the study were suffered from some climate related disease. A predesigned, semi-structured interview schedule with both closed-ended and open-ended questions containing information on various study variables was prepared to collect the information. The five pointlikert scale is also used to measure the responses regarding the change in the expenditure pattern of the respondents.

The questions included those on possession of and knowledge regarding changes in per monthly income of the household, changes observed in the climate, diseases suffered due to climate change, illness expenditure, changes in the employment status due to illness, indebtedness, sale of movable and immovable property, changes in household expenditure on food, education and health. Questions were also asked regarding the knowledge about government insurance policy and whether they have availed the policies or not.

V. ANALYSIS AND DISCUSSION

The data was collected on the type of the diseases suffered by the people due to climate change. The following table gives an idea about the diseases suffered by people of the study.

Table:1:
Data on diseases

Diseases suffered due to Adverse Climate	No. of Persons
Malaria	21
Dengue	12
Asthma	6
Heatstroke	6

Source: Primary data

From the table, it is clear that; majority of the people suffers from malaria. People also suffer from dengue, asthma, as well as heatstroke and they at the same time agree that, they suffered from these diseases because of change in the climate. Out of 45, 39 are saying that, climate change is the main reason for such type of diseases. 33 of the respondents are agreed that, they have noticed change in the pattern of rainfall. Now a day, due to change in the climate, rainfall continues for long periods, similarly, temperature also has increased which has made their lives miserable. Due to extreme heat and mosquito bites, they cannot even have a complete sleep which further deteriorates their health. Few of them on the other hand, reported that, they don't even have electricity connections. In such circumstances, they even started to develop other physical ailments.

Due to the diseases, people have to spend their hard earned money. Many of them are doing lot of hard work to meet both ends. In such situations, health issues causes additional burden. Out of 45 respondents, 33 said that, they cannot work during illness and 12 said that, they work for few hours. Majority of them do not try to get the benefit from the government insurance policies because, it covers only the hospitalization costs while they have to bear the other costs including medicines, transportations out of pocket cost for diagnostics etc. Moreover, they found the procedures complex and time consuming. Most of the respondents said that, their financial conditions have been deteriorated due to out of pocket expenditures.

Majority of the respondents agreed that, their expenditure patterns have been changed due to the expenditures on their illness. They have to cut down their expenditures even on the basic necessities of life. They reduced the purchase of food. They consume more rice and less vegetables, meat and fish after their expenditure on treatment since they have no other option. Out of 45, 39 said that, they cut down their expenditure on food after spending money on their treatment, 2 of them said that, they have not changed their expenditure pattern and 4 of them are neutral about their expenditure patterns.

From the data, it is found that, majority of the respondents are aware of the government insurance schemes. Out of 45, 37 of them have knowledge about the schemes, 29 of them said; they have the health insurance coverage. Only few of them are not aware of the scheme. Majority of the respondents are not aware about the insurance limit of the Government scheme.

VI. CONCLUSION

Changes in the climate has an adverse impact on each and every aspect of our lives. The impact is more on our health and the burden falls more heavily on the poorer sections of the society. They suffer from malnourishment due to lack of nutritious food consumption. In such circumstances, adverse climate causes further deterioration of their health. They suffer from different types of diseases which mainly resulted from adverse climate. And due to the treatment expenditure on diseases, their out of pocket expenditure increases. Though government health insurance schemes are available, majority of them are not availing due to the complexity of the procedures and time taken for those procedures. Some of them even do not have adequate knowledge about the government schemes. The increase in the out of pocket expenditures causes even change in the consumption pattern of the people.

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