



## Human Health Problems and Government Support: Impact of Flood in Kashipur Village in Uttar Pradesh

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**Abstract:** Flood is a potential disaster that has the capacity to impact large number of people's health such as water-borne diseases, malaria, dengue, injuries and so on. Therefore, the research main aim is to examine impact of flood on human health problems and the government support in Uttar Pradesh. Quantitative research was used to fulfil the aim where 120 respondents were found using purposive sampling method from Kashipur Village. The results showed the lack of drinking water, poor sanitation, and many communicable diseases. Infections from polluted water and inadequate sanitation conditions were also found. Mosquito related diseases such as dengue, malaria as well as water-borne diseases were examined. Government mixed support was found after analysing the results, they provided relief material such as food supplements and drinking water whereas lack of support post-disaster. A gap response found after the disaster from the government. The study concludes that there is a need of enhanced healthcare services and equitable cooperation from NGOs and Government. They should make a high priority on immediate and long-term needs during and after the disaster for affected communities. However, the study found limited to Kashipur village and lack of cooperation from people during the survey. Further research in more comprehensive areas, as well as an examination of community-based resilience plans and the role of technology in disaster response, may provide valuable insights that enhance future disaster management programs.

**Keywords:** Human Health, Health Problems, Flood, Disaster, Government and NGOs Support

### Introduction

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Flood has always proved to be detrimental to human health since time immemorial. Flood not only leads to loss of life but also affects the health of the affected individuals. It can have widespread impact on the well-being and health of the influenced communities. Flood can cause outbreaks and diseases because of contaminated and polluted water

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including cholera and hepatitis A. Floods can increase the danger of mosquito borne diseases like malaria as well due to standing water (Shokri *et al.*, 2020). Flooding can lead to malnutrition or undernutrition bin people due to services disruption and food insecurity. In addition, mortality rate increases during floods because of infectious diseases. Normal injuries are common during flooding but due to non-availability of proper treatment, these injuries also get fatal in some cases. Flood can either have short-term or long-term impacts on human health. Not only just physical health gets impacted during flood in fact, mental and emotional health also gets impacted. People suffer from heavy losses such as loss of property, wealth and even families and loved ones which leads to deterioration of mental well-being.

Floods in any region or place can have multifaceted and profound impacts on human health. Uttar Pradesh has faced several floods which have led to wide range of environmental, mental, and physical impacts on people. This study is involved in analysing the consequences of the flood events occurred in the UP, the northern state in India. This is evident that water borne diseases arise during flooding (Hunter, 2003). Most likely human health is misunderstood to be involving only physical health of the human but it also involves mental, social, and emotional health of the person. This research paper will cover the impact of flood on the health of the people residing in UP. UP is a state with high population that infers that large group of individuals are impacted due to flood. Terai region of UP that borders with Nepal and the eastern districts are known to be the most impacted areas of UP by flood (Amadio *et al.*, 2023). It has been estimated that approximately 16.50 lakh hectares of land is impacted yearly and observes a huge loss of livestock, houses, and crops (Nayak & Panda, 2016).

In such situations external assistance from governments and NGOs help people survive in challenging situations. Government and others institutions are involved in developing and providing support to the people struggling in the flooding areas. Government has a great role in protecting and ensuring the safety of people by providing them adequate healthcare services during the time of disaster (Chatterjee, 2010). Various steps and programs have been taken by the government in order to save people from floods and provide them shelter and other services for their convenience. The government has been able manage floods by founding a team for the national disaster (Cronin & Guthrie, 2013). First of all, one of the ways in which the government can help is to inform people early and give them warnings about the same before the outbreak of the flood. This measure will prevent the state from suffering heavy losses that are associated with the floods. Government should focus on predicting the potential consequences of the situation and act accordingly. The areas that are

affected, governments should focus on evacuating as much as people possible ensuring their safety (Parker *et al.*, 2009).

The government of the Uttar Pradesh during the time of flood is focused on providing essential medical care. Temporary medical facilities such as immunizations, treatment for diseases, and first aid are provided by the government (Shrichand & Singh, 2012). In addition, medical camps are also established along with mobile healthcare units in the areas that are impacted. These camps and units have a medical team of support staff, nurses, and doctors for the treatment of the patients (Shrichand & Singh, 2012). These medical camps set up by the government are also responsible for providing clean drinking water and proper sanitation facilities (Kumar *et al.*, 2016). Along with this, vaccination campaigns are also started by the government with the help of non-governmental institutions and voluntary support agencies. These campaigns are started in order to prevent the outbreak of any communicable disease such as hepatitis, typhoid, and cholera after the flood (Kumar *et al.*, 2016). This measure acts as a barrier in the aftermath of the flooding. Government also emphasizes to maintain the health of children and mothers. In this situation, majorly infants and pregnant women required advanced and specialized care. Human resources must send to the impacted areas to support people.

Government starts to train more officials by providing them regular sessions on various protocols to be followed and how to provide healthcare services (Kumar *et al.*, 2016). Along with ensuring the safety and protecting the impacted people, government undertakes the rescue and evacuation operation to save from further consequences and placing them on more safer places. NGOs are also involved for the safety of the affected people. Flood is a serious disaster that impacts people in many ways specially their health (Kumar *et al.*, 2016). Therefore, it is important to study about the impact of flood on human health to raise knowledge among people.

## Literature Review

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According to Mohanty *et al.* (2020), despite significant investments and ongoing efforts to control flooding, India continues to suffer significant socioeconomic losses and a high death toll. The management of floods in India is a multifaceted process that is influenced by various socio-hydro climatological factors, including socio-economic dynamics, sea level rise, and climate change. The intensity and frequency of flood events are influenced by these factors, but only partial protection is guaranteed by factors directly related to the flood management process, such as the improper application of schemes, the careless application of traditional structural measures, and the end-

to-end management of flood management programs and practices. Problems and Government Support: Impact of Flood in Uttar Pradesh. With a focus on the current flood management practices, the authors review the major Indian flood management agencies' initiatives and identify the region-specific flood problems in India. Long-term efficacy of these practices is examined, and certain deficiencies are noted. In order to improve flood resilience, stakeholders and policymakers may find the suggestions made in this article helpful in developing and implementing sustainable flood management plans.

Prasad discussed about how the most frequent natural disasters that have an impact on human society and the economy are floods, landslides, and extreme precipitation events. The frequency of floods in India has increased due to recent changes in climatic conditions and an increase in anthropological activities. Floods not only destroy property but also take human and animal lives. Since floods are occurring more frequently now than in the past, flood plains are being encroached upon, and other human activities like mining and deforestation have resulted in increased damage from floods. Time series data on floods for the entire nation from 1953 to 2018 were used to analyze the impact of flooding in this study. By taking into account the maximum area (m.ha) and population affected (m) in a given year, the data was split into two sections, referred to as "before and after." The area affected (m.ha), population affected (m), crop area damage (m.ha), house damage, number of lives lost, and total damage (Rs. Cr.) for the before and after periods were all analyzed using the ordinary least squares method. Population (m), crop area damage (m.ha), house damage (m.ha), and total damage (Rs. Cr.) were found to be highly significant at the 1% level, while the area affected (m.ha) and number of lives lost were significant at the 5% level for the previous period. The post-period data shows that while the other study variables were not significant, the population (m), total damage (Rs. Cr.), and area affected (m.ha) were significant at the 1% and 5% levels, respectively. The amount of damage caused by floods has decreased in the aftermath thanks to the government's response, which includes disaster management acts and policies. It is necessary to reduce the affected area, population, and overall damage by raising public awareness of flood preparedness and management through cooperative community-based initiatives.

Joshi *et al.* (2011) investigated the long-term effects of recurrent floods in Uttar Pradesh, India, on diarrhea in children under five years old. In areas affected by flooding (exposed) and areas not affected by flooding (unexposed), a two-stage stratified cluster survey was carried out. The overall prevalence of diarrhea showed no discernible long-term effects from the floods, with the exposed group experiencing a

prevalence of 55.1% compared to 56.2% in the unexposed group of children under five. In both exposed and unexposed strata, the prevalence of diarrhea is correlated with the household's economic situation. Anemia was discovered to be a major risk factor for diarrhea in children, both in the populations exposed to the flood and those not. Regarding gender, caste, religion, and household size, the frequency of diarrhea was not significantly impacted by the frequent floods. According to the study, floods have very different long-term effects than they do short-term ones.

Firdaus (2012) mapped out the main slum areas of an urban center, as well as the surrounding environmental conditions and their effects on the health profiles of the occupants. The analysis is based on primary data that was gathered in two different periods: November–December 2001 and May–June 2009, using a questionnaire to conduct a thorough survey of ten of the city of Aligarh, India's major slum areas. According to the analysis, there has been no improvement in these areas over the previous seven years, and the areas are characterized by a complete lack of basic amenities and facilities, such as drinking water, bathrooms and toilets, drainage systems, and garbage disposal facilities. Numerous infectious diseases, both communicable and non-communicable, were found to be highly prevalent. Of these, respiratory infections accounted for 60.22%, tuberculosis (31.26%), and diarrhea/dysentery (54.23%) were found to be positively correlated with the use of traditional fuels ( $p < 0.01$ ), poor personal hygiene ( $p < 0.01$ ), and contaminated drinking water ( $p < 0.01$ ), respectively. The last section of the paper discusses policy-oriented issues related to the connection between urbanization, the rise in slums, and health issues facing developing countries.

Usama (2015) discussed how India's physio-geographic and climatic conditions, combined with its unique land features, make it one of the world's most disaster-prone nations. It is susceptible to a variety of natural disasters, including landslides, cyclones, floods, earthquakes, famines, and droughts, all of which can cause fatalities and property damage. One type of natural disaster that frequently occurs throughout all of India, particularly in the state of Uttar Pradesh, is flooding. Several of the State's principal rivers, including the Ganga, Ghaghra, Yamuna, Ramganga, Gomti, Rapti, Sharda, and Gandak, are responsible for flooding. In Uttar Pradesh, the eastern districts are more susceptible to flooding than the western and central regions. It has been determined that the highly deficient rainfall period in Eastern Uttar Pradesh recurs every 6 to 8 years, while in Western Uttar Pradesh it recurs every 10 years. The State covers 240.93 lakh hectares in total, of which 73.06 lakh hectares are prone to flooding. The Irrigation Department estimated that only 58.72 lakh hectares could be protected from floods each year. This study examines the "Ballia district," a region in eastern

Uttar Pradesh that is frequently prone to flooding. It also discusses the risk posed by the Ghaghara River and the different structural and non-structural flood control measures that have been implemented in these areas. These days, space technology is also crucial for monitoring and evaluating flood damage and the mitigating actions needed for efficient flood control.

According to Madhuri *et al.* (2015), flooding is a recurring issue in the Indian state of Bihar that has a terrible effect on people's ability to support themselves. Despite the government's efforts to mitigate flooding, households still experience hardship because their material and non-material assets have sustained significant damage. In light of this, the study's goals are to: (1) investigate the varying contributions made by the community and the government to livelihood resilience; (2) evaluate the influence of flood experience and flood education on livelihood resilience; and (3) investigate the influence of educational attainment, as indicated by the average number of years that male-headed households have attended school, on livelihood resilience. Using a multi-stage random sampling technique over seven blocks in the Ganga and Kosi river basins in the district of Bhagalpur, Bihar, primary data were gathered from 472 households. Descriptive statistics and structural equation modeling were employed in the data analysis. The study's conclusions demonstrate that community action that was quick and unplanned was more successful than assistance from the government. The experience with flooding is also very important for the reconstruction of livelihood. There is no flood education in the region; instead, people learn how to survive floods from their elders. Additionally, the male-headed households' varying educational backgrounds lead to variations in their perspectives and understanding of livelihood resilience.

Mishra *et al.* (2016) conducted research in the Narharpur village of C.D. block Barhalganj, district Gorakhpur. The study area was deliberately chosen based on the highest frequency of floods and flood-related disasters in the chosen village in the eastern region of Uttar Pradesh. Data and information were gathered using an ex post facto research design utilizing the PRA technique. Using these instruments, an attempt has been made to conduct a comparative analysis based on the affected farmers' responses to the relief efforts carried out by GOs, NGOs, and SOs. Every year, the state of Uttar Pradesh, which contains one-fourth of the nation's flood-prone area, experiences significant damage from flooding. Since eastern Uttar Pradesh makes up half of the state's flood-affected area, flooding frequently causes property and human damage in this region. When GO and SO were compared with regard to the relief work they conducted during the flood, it became clear that GO had given structural and financial support, while SO and NGO had given humanitarian support to lessen

damage. The results made it abundantly evident that the best ways to lower the risk and damage from flood disasters were through adaptive behavior, personal initiative, and community support.

According to Kumar *et al.* (2016), floods are among nature's most catastrophic events and have a variety of effects on human life. Because of factors like poverty, inadequate infrastructure, and restricted access to resources and medical care, flood damage is more severe in rural areas than in urban ones. With a population of 104.1 million, the Indian province of Bihar is home to 76% of people who live in constant fear of flooding. More than 2.3 million people in Bihar's northern region were impacted by severe floods in 2008, and more than 5.9 million people were affected in 3768 villages spread across 20 rural districts in 2013. Floods further restrict access to social services and health care while causing damage to infrastructure and property. This work is based on the information gathered for the master's thesis of the main author as well as his firsthand knowledge of floods from living in a community that was inundated. It describes the effects of floods in Bihar's rural areas and draws attention to the ongoing marginalization and exclusion of those affected by floods. The authors advocated for more effective flood mitigation strategies by bringing attention to the problem and urging international support.

Thomas and others (2023) discussed natural disasters result in a great deal of suffering, property loss, and an increase in morbidity and mortality among the impacted population. Relief and rescue services that act quickly and efficiently can significantly lessen the effects of these occurrences. In the immediate wake of the devastating flood that struck Kerala, South India, in 2018, a population-based cross-sectional descriptive study was carried out to record the experiences of the victims as well as the community's readiness and reaction to the calamity. Nearly 97% of the homes had water flooding inside of them, and 55% of the homes had flood waters that rose to levels above four feet. Over 93% of the households were moved to relief camps and safer areas. The worst affected were the elderly and those with long-term illnesses, as they were unable to obtain healthcare. Several families (62%) had assistance from their neighbors. Nonetheless, the number of fatalities was relatively low, which may be credited to the local community's prompt rescue and relief efforts. This incident highlights how crucial it is for the local community to be prepared for disasters and to act as first responders.

Wasson *et al.* (2019) discussed the economic risk and social vulnerability of riverine floods in India are among the highest in the world. Millions of people are at risk, and billions of rupees' worth of infrastructure and property are at stake. Floods claimed 97,551 lives between 1953 and 2011, and at 2017 exchange rates, their total economic cost to India was 4.506x10<sup>12</sup> INR (6912x10<sup>7</sup> USD). Since independence,

embankments have dominated flood protection plans and disaster risk reduction strategies. Despite the valiant construction of tens of thousands of embankments to save lives and property from flooding, economic damage has increased and has continued to do so even after accounting for inflation to reflect rising wealth and the consequent increase in the amount of property that can be damaged. Numerous factors have been proposed to explain this seeming contradiction, but they seem to revolve around embankment breaches, partial embankments, sedimentation in channels caused by embankments and consequently deeper and more dangerous floods, human encroachment onto floodplains partially due to “the levee effect,” which holds that people feel safer in the presence of embankments, and the replacement of traditional coping mechanisms by government initiatives. Although non-structural disaster recovery (DRR) has been discussed and implemented in some cases by governments, NGOs, and academics, there hasn't been much progress in developing this strategy to more fully complement structural interventions to lower casualties and damage. The recommendations for a more comprehensive form of disaster risk reduction (DRR) for India were generated by a workshop of practitioners and analysts in February 2017. These are presented as a means of at least mitigating the situation that has turned into an existential crisis for many Indians.

Kumar *et al.* (2017) conducted the study on the Central Ganga plain, Ballia District, U.P., India. This study tackled this research question for the understudied Ballia, Uttar Pradesh, India region. This research paper aims to identify the primary cause of the flood, as well as its impact on the study area, and to develop an improved management strategy to lessen the issue. Because of the high rainfall in the area, it is not advisable to build a settlement along the riverbanks. While monsoon rainfall is 864.8 mm, annual rainfall is typically 983 mm. There is 1,013.1 mm of annual rainfall in the district on average. The most recent flood disaster (2013) destroyed 324 villages and impacted 2,73600 people. It resulted in the deaths of sixteen people and six cattle as well as the loss of 3525 homes and 2,10738 hectares of crops, at a cost of approximately 4.38 crores in settlements and drainage system improvements. Another option to lessen the severity of flooding and preserve ecosystem services is to harvest water through ponds and other structures.

### **Aims and Objective**

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The research aim is to examine the effect of flood on human health in Uttar Pradesh. The following objectives have been framed to fulfil the research-



- To study the impact of flood on human health problems in Uttar Pradesh
- To examine the support of government and NGOs in providing healthcare services

## Methodology

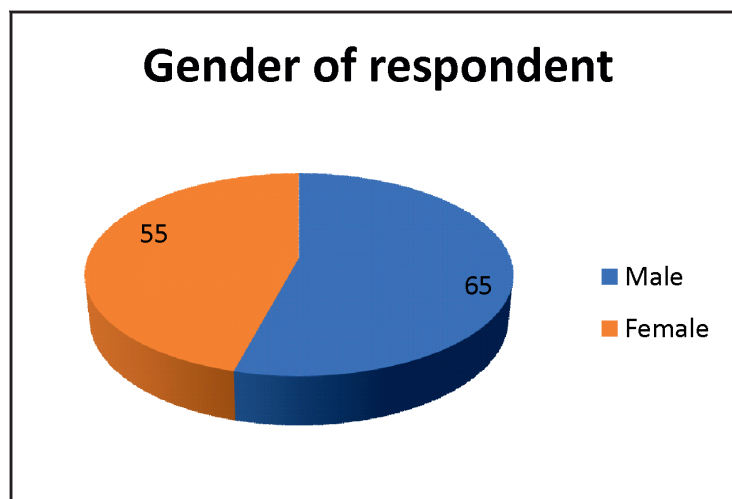
The study used quantitative research method to gain accurate results of the study. Primary and secondary sources have been included in this method. Primary research conducted from the people of Kashipur village, Varanasi, Uttar Pradesh where 120 respondents found using purposive sampling method. Survey (questionnaire) has been conducted in order to get the results as per the objectives. These results later presented in the tabular and graphical format to analyse and reach the conclusion of the research. Secondary source includes journals, books, websites relate to the research topic.

## Results and Discussion

Classification of the respondent based on the Demographic Profile:

**Table 1: Gender of the respondent**

<i>Sr. no.</i>	<i>Gender of the respondent</i>	<i>No. Of respondent</i>	<i>Percentage</i>
1.	Male	65	54.2
2.	Female	55	45.8
	Total	120	100

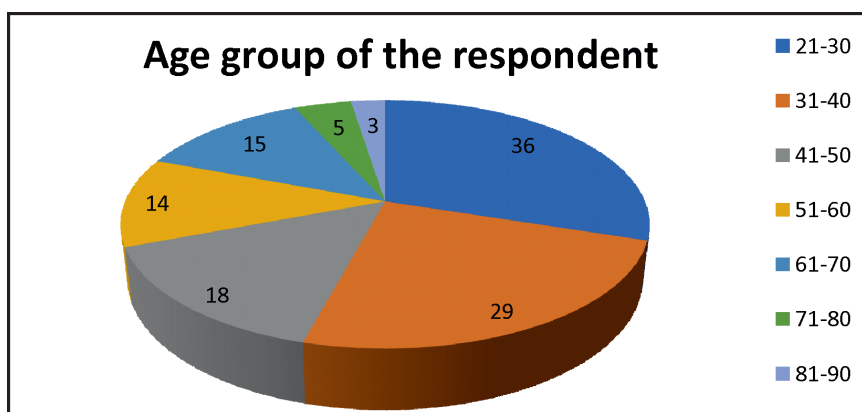


**Figure 1: Gender of the Respondent**

The table 1 and figure 1 reveals that most of the respondents i.e.54.2% were male while 45.8% respondents were female.

**Table 2: Age group of the respondent**

Sr. no.	Age group of the respondent	No. of the respondent	Percentage
1	21-30	36	30
2	31-40	29	24.1
3	41-50	18	15
4	51-60	14	11.6
5	61-70	15	12.5
6	71-80	05	4.1
7	81-90	03	2.5
	Total	120	100



**Figure 2: Age group of respondents**

The survey reveals a diverse age distribution among 120 respondents. The majority, 30%, fall within the 21-30 age group, followed by 24.1% in the 31-40 range. Older age groups show decreasing percentages, with 4.1% in 71-80 and 2.5% in 81-90 (table 2 and figure 2).

### ***Health problems during disaster***

During the disaster some health problems experienced by the people of Kashipur are as follows-

**Table 3: Health problem/diseases during disaster**

<i>Sr. no.</i>	<i>Health problems</i>	<i>No. of respondent</i>	<i>percentage</i>
1	Cholera	12	10
2	Blood pressure	09	7.5
3	Diarrhoea	18	15
4	Malnutrition	61	50.8
5	Conjunctivitis	07	5.8
6	Heart problem	04	3.3
7	Jaundice	09	7.5
total		120	100

Table 3 reveals that 20 per cent of respondent were suffered from cholera during the flood. 7.5 per cent of the total respondent reported about the problem of blood pressure and 15 per cent of the respondent said that diarrhoea is the one of the disease which affected their health. More than half i.e. 50.8 per cent of the respondent told that due to the inadequate food supply problem of malnutrition was also occurred. As the food was distributed by the government officers during the flood, was not a balanced diet. About 5.8 per cent of the respondent reported that during the disaster some people also suffered from conjunctivitis. Only 3.3 per cent of the respondent who were aged, reported heart problem, as they could not bear the loss of their crop, houses, etc. about 7.5 per cent of the respondent reported that people also get affected by jaundice during the disaster.

### ***Health problems after the disaster***

After the disaster, due to low immunity level and unhygienic conditions several diseases spread over the village. Flooding increases the risk for water borne illness such as typhoid fever, cholera, etc.

**Table 4: Health problem/diseases occurred after flood**

<i>Sr. no.</i>	<i>Health problems</i>	<i>No. of respondent</i>	<i>Percentage (%)</i>
1	Malaria	21	17.5
2	Typhoid	41	34.1
3	Dengue	03	2.5
4	Measles	12	10.0
5	Tuberculosis	18	15.0
6	Jaundice	23	19.1
7	Paralysis	02	1.6
Total		120	100

Table 4 reveals that about 17.5 per cent of the respondent reported that they had suffered from malaria and 2.5 per cent of the respondent suffered from dengue as standing water also drawn the mosquitoes which carry the above-mentioned diseases. About 34.1 per cent of the respondent said that they had typhoid fever after the flood. Some of the respondent i.e. 10 per cent reported that after the disaster their children had suffered from measles, 15 per cent of the respondent told about the problem of tuberculosis, while 19.1 per cent of them suffered from jaundice and 1.6 per cent of the people got paralyzed.

### Support by the government

Flooding increases several problems as the victims have lost their houses, cattle, crop & stored cereal, so, during the flood they do not have proper food, safe drinking water etc. when disaster occurred in 2012 some relief material was distributed by the government. This relief material usually hands over to the Lekhpal of the village for the distribution. As according to the beneficiaries this material is listed below-

**Table 5: Material provided by the government**

Sr.no.	Relief material	Opinion of the respondent				Total no. of the respondent	%
		Yes	%	No	%		
1	Blanket	34	28.3	86	71.6	120	100
2	Food supplement	95	79.2	25	20.8	120	100
3	Drinking water	102	80.5	18	15	120	100

Table 5 reveals that most of the respondent i.e. 71.6 per cent complained that they did not get the blanket distributed by the Lekhpal and Pradhan as according to the respondent these blanket were distributed to the close persons of the Pradhan, while 34 per cent of the respondent reported that they got the blankets, when it was asked about the food supplement, 79.2 per cent of the respondent told that the food was given by the Tahsil officers (e.g, Nayab Tehsildar, Registrar Kanoongo, and Lekhpal etc.), but 20.8 per cent of the respondent reported that they did not get the food and drinking water was provided by the government, as the water was polluted due to the flood, while only 15 per cent of the total respondent denied.

The relief material has provided to the suffered people only during the disaster, but after the disaster no relief material has given by the government, while the people still need some help for preparing the houses and other things.

### Health Care Services provided by the Government

The thousands of the people were facing the several health problems due to the natural disaster and they need health care services, but there was no proper arrangement done by the government. As according to the respondent, they had several problems but due to the lack of health care services they suffered very much sometimes ANM of the community hospital had come given the medicine to the suffered. But this was not sufficient for them as to access the health problem of thirty-five hundred people only one person is not sufficient, and diagnosis and treatment of the communicable disease must be done by the doctors of community hospital of that area. More than 95 per cent of the respondent reported that they did not get health care services, only 5 per cent of the respondent told than after the disaster some medicines haven given by the ANM. As according to some respondent ANM did not go to every house for the distribution of the medicine, she just sits in a particular house and give it to the fewer people. It is really very strange to know that the needy people are still not getting the health care services properly.

### Relief Material Provided by the Indian Red Cross Society (IRCS)

The Indian Red Cross society is one of the largest humanitarian organizations in India. IRCS has a variety of welfare and other activities of promotion of humanitarian values. The society provided the relief material to the people affected by natural disaster. In several areas of Sitapur district eg, Mallapur, Kashipur, Asaipur, Rampur Mathura, Tikauna, etc., the IRCS has distributed some relief material (table 6) in November, 2012, at Kashipur.

**Table 6: Material distributed by IRCS**

<i>Sr. no.</i>	<i>List of Material</i>	<i>Quantity</i>
1	Cotton blanket	55
2	Bed sheet	80
3	Towel	25
4	Kurta – pajama	55
5	Sari	55
6	Dhoti(male)	55
7	Plastic role	02
8	Kitchen set	25
9	Mosquito net	25
10	Mat	25
11	Stove	25

The above material was distributed during the disaster.



Picture 1: Plastic water container given by IRCS Picture 2: Mosquito net given by IRCS

## Discussion

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In flood, most of the people of Kashipur faced several health problems due to poor sanitation, lack of drinking water. Many communicable diseases spread over in Kashipur. Not only their physical but their mental health has also been affected by the natural disaster. The biggest risk is contamination of water sources and infectious as polluted water come in contact with wounds while there may be an increase in incidence in these diseases.

## Impact of flood on human health problems in Uttar Pradesh

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The data presented in Tables 3 and 4 highlights the significant health challenges faced by the residents of Kashipur during and after the disaster, shedding light on the immediate and lingering impacts on their well-being.

During the disaster, malnutrition emerged as a critical issue, affecting more than half of the respondents (50.8%), likely exacerbated by the distribution of unbalanced diets by government authorities. Cholera, diarrhea, and jaundice were also prevalent, illustrating the vulnerability of the population to waterborne diseases and inadequate sanitation conditions.

After the disaster, the health landscape remained grim, with a surge in diseases linked to the aftermath. Typhoid fever, a waterborne illness, afflicted a substantial

portion (34.1%) of the respondents, while malaria and jaundice were also prevalent. The occurrence of measles, tuberculosis, and paralysis underscores the post-disaster challenges, emphasizing the impact on both infectious and non-communicable diseases.

The findings underscore the urgent need for comprehensive disaster management strategies, including improved healthcare infrastructure, access to clean water, and nutritional support. Public health interventions should address not only the immediate health concerns during disasters but also the long-term consequences that arise in their aftermath, fostering community resilience and well-being.

### **Support of government and NGOs in providing healthcare services**

The government's role in providing support during and after the disaster, as outlined in the data presented, appears to have been mixed. While relief material, such as food supplements and drinking water, was reportedly distributed to a significant percentage of respondents, there are concerning disparities in the distribution of essential items like blankets. The perception among respondents that certain relief materials were distributed based on personal connections with local authorities raises questions about fairness and transparency in the relief efforts.

Moreover, the lack of sustained support post-disaster, particularly in terms of ongoing relief materials for reconstruction and rehabilitation, underscores a critical gap in the government's disaster response. The respondents' continued need for assistance in rebuilding their homes and lives emphasizes the importance of long-term support beyond the immediate aftermath of a disaster.

The absence of adequate healthcare services is another major concern highlighted in the discussion. Insufficient medical attention, with only 5% of respondents reporting receiving health care services, indicates a failure in the healthcare system's responsiveness to the disaster-affected population. The limited reach of health services, as described by respondents, raises questions about the capacity and effectiveness of the healthcare infrastructure in the affected areas.

The intervention by the Indian Red Cross Society, as presented in Table 6, signifies the involvement of non-governmental organizations in disaster relief. While their efforts in distributing various relief materials are commendable, collaboration between government agencies and NGOs is crucial for a more comprehensive and effective disaster response. The data underscores the need for improvements in government-led disaster management strategies, ensuring equitable distribution of relief materials and enhanced healthcare services for affected communities.

## Conclusion

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In conclusion, the data from Kashipur show that floods have a significant and complex effect on human health in Uttar Pradesh. The vulnerability of affected populations is highlighted by the immediate challenges of malnutrition and waterborne diseases during the disaster, followed by a spike in post-disaster illnesses. Despite supplying some relief supplies, the government's response exposes inequalities and inadequacies in the distribution process, underscoring the need for a more open and just approach to disaster management.

The inadequate assistance provided after a disaster, concerning both continuous aid and medical care, exposes a significant deficiency in the endeavors to enhance resilience. There is an urgent need to improve disaster response strategies due to the limited reach of healthcare services and documented disparities in the distribution of relief materials. To guarantee a more thorough and efficient approach, cooperation between NGOs and government agencies should be enhanced, as demonstrated by the work of the Indian Red Cross Society.

Enhancing the healthcare system, distributing relief supplies in a more equitable and transparent manner, and setting up long-term support systems for impacted communities are among the recommendations. The government ought to place a high priority on a proactive approach to disaster relief that takes into account both immediate and long-term needs and involves local communities in the organization and management of relief activities. These steps will help the area become more resilient, less vulnerable to health issues, and better equipped to handle future disasters.

## Limitations and Future Scope

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The study found limited to the Kashipur Village, the study could not reach more areas due to time constraint but future research can be held in more areas. Some respondents showed lack of cooperation during the survey. Future studies on the long-term health effects of Uttar Pradesh's floods should look at recovery trends, implications for mental health, and the efficacy of post-disaster interventions. Furthermore, looking into community-based resilience plans and assessing the function of technology in disaster response might yield insightful information that improves disaster management initiatives in the future.

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