

Challenges faced by the people in Bihar floods – A Qualitative exploration using Participatory Rural Appraisal (PRA) tools

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Received: 21st November 2019; **Accepted:** 27th December 2019; **Published:** 01st January 2020

Abstract: *Introduction:* It is important to assess the impact of floods in any region, since knowledge of which could facilitate health and other sector planning during disasters. People in disaster areas face various challenges including disease outbreaks, inadequate sanitation, lack of essential services, displacement and so on. *Objective:* To assess the challenges faced by the people during disasters using Participatory Rural/Research Appraisal (PRA) tools in rural areas of districts of Bihar. *Methodology:* Study was conducted during the period of August-September 2017 among the people residing in villages in Bihar. Data was collected using Participatory research tools such as Focus Group Discussions (FGD), In Depth Interviews (IDI) and cause outcome analysis. Thematic frame work approach was used for data analysis. *Results:* A total of four FGDs, eight IDIs and three cause outcome analyses were conducted. Challenges faced by the people in pre & post disaster phases include: Medical-Injuries, deaths/diseases especially among vulnerable population (pregnant & Children), Social- interruption of education, economic- loss of wages, less political support, psychological-depression and nutritional (deprivation). Outcomes of disaster found include loss of properties, livestock, occupation, food loss, diseases which indeed are challenges too. *Conclusion:* People in disaster settings face various challenges which include medical, emotional, social, psychological and so on. It is recommended that teams including Government and NGOs should conduct disaster services with broader scope of services beyond the routine care.

Keywords: Bihar floods India, Challenges, PRA tools.

Introduction

Flooding occurred throughout the Kosi River valley in northern Bihar, in the districts of Supaul, Araria, Saharsa, Madhepura, Bhagalpur, West Champaran and Purnea [1]. It is important to assess the impact of floods in this region, since knowledge of it could facilitate health and other sector planning during disasters.

In our study, we aimed to assess the challenges faced by the people in disasters-using PRA tools from Bihar floods. Participatory Rural/Research Appraisal (PRA) techniques are applied to facilitate interaction with the community members and to ensure their active engagement in the

process which is crucial to the success of any Community needs assessment initiative [2].

Not many studies have been published on the challenges faced by the people in disasters as a qualitative element. This study will help to identify the strengths, weakness of the systems in place now and would give an opportunity for the policy makers and stakeholders to develop the strategies for future disaster management.

Objectives: To assess the challenges faced by the people during disasters using PRA tools in rural areas of districts of Bihar.

Material and Methods

A qualitative research model was utilized to lay the framework of the study. It was conducted during the period of September 2017 when relief measures were undertaken in districts of Purnea & West Champaran, Bihar for about two months. Majority of the samples included women residing in villages in Bihar. Participatory research tools such as Focus Group Discussions (FGD), In Depth Interviews (IDI), Cause outcome analysis, cobweb analysis were used. Four FGDs were conducted among mothers, local leaders, Panchayat members and the team members. FGDs were conducted at the villages in the local language, Hindi and written informed consent was taken prior to the discussion. All the FGDs were recorded electronically and the key points during the interview were noted. Each FGD took an average time of 45 minutes. A sociogram was plotted to ensure equal participation of interviewees.

IDIs were conducted among Anganwadi workers; school teachers; Medical officer of the PHC; informal leaders and Panchayat members. Among the IDI’s, at which we reached the saturation point of our data, few of them were conducted in the camp centres and others at the interviewee’s residence. Informed consent was taken prior to the interview and the interview was recorded electronically. Each interview took an average time of 17 minutes. FGDs, IDIs and other PRA tools were conducted using an interview guide. The domains of enquiry mainly focused on open ended questions and were broadly divided into questions that pertained to challenges faced in different phases of disaster. The recordings were transcribed by a transcriber who was fluent in both English and Hindi and not a part of our study. The data was analysed using the thematic “Framework approach” [3]. The analysis was descriptive and was grouped in a few broad themes. On analyzing main themes of the study which started out broadly as pre-post disaster phases, new subthemes and sub categories emerged.

Data Collection Procedure: Qualitative data were collected by the study investigator and facilitated by study guide trained in qualitative research along with field workers. The data was analysed using the thematic “Framework approach”. The analysis was descriptive and was grouped in a

few broad themes. On analyzing main themes of the study which started out broadly new subthemes and sub categories emerged. Our study was approved by the Institutional Ethical Committee. After establishing rapport with the people, we explained the purpose and procedure of the study. Informed written consent was obtained from the participants.

Results

Qualitative: We used focus group discussions and key informant interviews to collect relevant qualitative data. The methods that are used include: Transect walk, Key Informant Interview, Focused Group discussion, cause outcome analysis.

Pre/ Inter disaster phase	During/ Post disaster phase
What are the health problems they continue to have?	How do the disasters affect their health – immediate & delayed effects
How do they prepare for emergencies?	Where do they get the medical treatment from?
Are they aware of the disaster mitigation measures?	Who are responsible for their losses?
Do they follow any social/ nutritional security measures?	Knowledge about the benefits they can avail
What kind of intervention measures adopted by them/ Government?	What are the environmental & sanitation measures they are adopting?

Transect walk:

- We identified key informants
- We formed teams to explore the village
- Made observations of major landmarks including poor housing, sanitation and socio economic conditions
- Interacted with the villagers

Key Informant Interview:

- a. The in-depth interviews were conducted with each interview lasting for about 15-20 minutes. Key informants in the village include Anganwadi workers; school teachers; Medical officer of the PHC; informal leaders and Panchayat members.

- b. An interview of these key members was held. One of these key informants were selected from those villages where FGD is not being done.
- c. An interview schedule was prepared and administered in the local language to collect relevant data. The interview lasted for not more than 30 minutes.
- d. The interview was recorded after taking consent from the participant and the recordings were kept confidential.

Some of the striking statements heard during the interviews are as follows:

- Local leader-“Flood came and people movement was frightening, food materials got destroyed”
- Local mother 1- “Pregnant women and children are worsely affected, education is very difficult, monetary problems are there and getting a job is very tough”
- Local mother 2-“Flood used to come, but this time we didn’t get announced in prior for prevention or mitigation, so we are not prepared”
- ASHA worker- “I feel that children are not healthy and there are lots of communicable

diseases. Flood will come and go, so difficult to live in this place.”

Focused Group discussion: Focussed group discussion was conducted among mothers, local leaders, Panchayat members and the team members;

- a. FGDs conducted in a randomly selected sample of villages (4 out of 10 villages)
- b. FGD lasted for about 30 minutes
- c. Each FGD comprised of a maximum of 10 participants (minimum 8 participants) from within the village. The study population comprised of the following groups of people
 - a. Local leader
 - b. Adult females: 35 – 60 years
 - c. Female youths: 15 – 24 years
- d. A topic guide had been developed for the purpose of the focus group discussions in the local language.
- e. The entire proceedings of the FGD were recorded after taking consent from the participants for the same.
- f. The FGD captured details - the challenges faced by disaster victims which is summarized in table 2.

Table-2: Challenges faced by the people in disasters				
Challenges faced	Disaster preparedness	Impact	Emergency	Re construction/ Rehabilitation phase
Medical	Nil		Injuries, deaths especially vulnerable population got affected- Pregnant & Children	20-25 days Health services are getting better because of our CTF-Caritas teamwork
Social	Had experience of previous flood, still this is quite big	Field got shattered, Cattle loss		Education-interruption due to closure of schools
Economic	No previous emergency/ evacuation measures			Occupation-loss of wages
Psychological	-	Stressed		Depressed
Nutritional	Not planned before	Food loss- Paddy		Difficult to retrieve
Political	No warning/ announcements	Bribe		
Others	-		Communication & transportation got affected	

Cause Outcome Analysis:

Causes of disaster - including due to overflowing of river, natural calamity, curse of God, sins

Outcomes of disaster - including loss of properties, lives, livestock, injuries, food loss, diseases

Discussion

The flood killed 250 people and forced nearly 3 million people from their homes in Bihar. More than 300,000 houses were destroyed and at least 340,000 hectares (840,000 acres) of crops were damaged [4]. Villagers in Bihar ate raw rice and flour mixed with polluted water. Hunger and disease were widespread. The damages incurred during the North Indian floods include lack of access to essential services like water, loss of power and communication, disrupted transportation and stagnation of water causing increase in mosquito breeding. Disease outbreaks following floods are more common in areas of inadequate sanitation, overcrowding and displacement. Short term health effects due to flooding have been studied but long term effects are currently not well understood. The term Participatory Rural Appraisal (PRA) was coined by Robert Chambers who went on to define PRA as “A family of approaches and methods to enable rural people to present, share and analyze their knowledge of life and conditions to plan and act”. PRA is a process of knowing the community with full participation of the community members. PRA enables the information seekers (researchers) to appreciate the behavior and attitude of the community towards a given issue.

In a study to find the impact of flooding in Bihar, India on Women similar results were found which

show that women lack information about flood warnings and have less access to relief material [5], but they have not explored individual challenges in all domains. Also in our study we have included people in PRA from all sectors which will help the policymakers for the implication. Some of the recommendations made in line with “Addressing the health impacts of climate and environmental change” [6] were: Need for maintaining hygiene in their daily lives; Use of boiled water for drinking to prevent water borne and communicable diseases; Imparted knowledge on nutritive value of locally available cheap food items. We undertook this research to find the existing challenges faced by people of Bihar, India. Articles to analyze these challenges using PRA tools remain few. Further this research would enable teams including Government and NGOs conducting disaster services to broad base the scope of services beyond the routine care.

Conclusion

Based on the observations and results of PRA tools it was evident that people face various challenges which include medical, emotional, social, psychological and so on. It was observed that people were badly affected by the flood, and majority are living in impoverished conditions.

Financial Support and sponsorship: Nil

Conflicts of interest: There are no conflicts of interest.

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Cite this article as: Surekha A, Suguna A and V Pretesh K. Challenges faced by the people in Bihar floods – A Qualitative exploration using Participatory Rural Appraisal (PRA) tools. *Al Ameen J Med Sci* 2020; 13(1): 45-48.

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