

Original Article



Experience and Suggestions Regarding Disaster Preparedness Among The Older People in a Rural Community of Bangladesh

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Abstract

Background: Older people are especially vulnerable to emergencies. Those with progressive loss of function in particular can have difficulty in adapting to challenges and coping with disruptions. **Objective:** To assess experience and suggestions regarding disaster preparedness among the older people in a rural community of Bangladesh. **Materials and Methods:** This cross-sectional descriptive study was conducted in Shahzadpur upazila of Sirajganj district from 1st July 2015 to 30th September 2015. Purposive sampling technique was adopted. Total 485 households were surveyed. One elderly in a household was interviewed to get relevant information. Collected data were cleaned and entered in computer for analyses. **Results:** Age of the respondents ranged from 60 to 79 years. Majority (53.4%) was female; 38.1% were housewives, 57.9% were illiterates, 54% lived in tin-shed houses and 73% had sanitary latrines. Regarding social status 88% got adequate food, 80% got necessary clothing, 33% got pocket money and 79% got support during illness. Most frequently observed disaster was flood. They managed their shelter by bed elevation, moving to higher places, staying on boat etc. They suggested that disaster preparedness should include dry food preservation, safe drinking water support, medical support, public shelter, making of dam in frequently affected area and support from government. **Conclusion:** With demographic changes growing number of disasters create problems for elderly. To solve these special problems, ageing issues should be taken into consideration.

Key words: Disaster Preparedness, Older People, Rural Community, Vulnerability.

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Introduction

In 1995, the World Health Organization has defined "disaster" as "any occurrence that causes damage, ecological disruption, loss of human lives or deterioration of health and health services on a scale sufficient to warrant an extraordinary response from outside the affected community or area". Disasters are not confined to a particular part of the world; they can occur anywhere and at any time. Emergencies and disasters do not only affect health and well-being of people; frequently, large number of people are displaced, killed or injured, or subjected to greater risk of epidemics. Considerable economic harm is also common. Disasters cause great harm to the existing infrastructure and threaten the future of sustainable development.

There are many types of disasters such as earthquakes, cyclones, floods, tidal waves, landslides, volcanic eruptions, tornadoes, fires, hurricanes, snowstorms, severe air pollution (smog), heat waves, famines, epidemics, building collapse, toxicological accidents (e.g. release of hazardous substances), nuclear accidents and warfare etc. Some can be predicted several hours or days before-hand, as in the case of cyclones or floods, others such as earthquakes occur without warning.

Disaster preparedness is ongoing multisectoral activity. It is the integral part of the national system responsible for developing plans and programmes for disaster management, prevention, mitigation, response, rehabilitation and reconstruction. It refers to measures taken to prepare for and reduce the effects

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of disasters. That is, to predict and, where possible, prevent disasters, mitigate their impact on vulnerable populations, and respond to and effectively cope with their consequences.

Advance planning and preparations help minimize the potential damages, loss of lives and properties. Pre-disaster activities may include interactions with the community organizations, internal meetings, the drafting of special disaster procedures and other activities that help to ensure that the community are adequately prepared for a disaster.

The world population has quadrupled to 7 billion people in just over 100 years. Today, people aged over 60 constitute 11 per cent of the global population. By 2050, this proportion will have doubled, to 22 per cent - that is, 2 billion older people. Populations are ageing most rapidly in developing countries. While the ageing population is to be celebrated, as it represents the triumph of development and improvements in healthcare, the combination of more extreme climate events and an ageing population has the potential to increase older people's vulnerability to risks and disasters, especially in low- and middle-income countries.¹

The World Health Organization estimates that the world's 580 million elderly people (aged 60 years and more) include around 355 million in developing countries. By 2020, when the total reaches 1,000 million, 710 million will be in developing countries and seven of the ten nations with the largest populations of older people will be developing countries.²

The ageing process is a change in which the physical, nervous and mental capacities of the human body gradually break down. The combination of these physical changes leaves the individual less able to cope with the activities of daily living. In an emergency, where survival may depend on being able-bodied, the capacity of older people to survive is already seriously compromised by the ageing process. The physical aspect of ageing has direct implications for the nature of the support older people will require and their capacity to access it. Poverty and exclusion remain the greatest threat to older people. Disasters make a bad situation worse. Older people describe a crisis of poverty and low status - being left invisible, excluded, and powerless-even before humanitarian disasters strike. Older people experience discrimination when these factors are not considered by service providers in emergency situations.³

HelpAge has found that the needs and capacities of older people and other vulnerable groups are consistently overlooked in disaster preparedness planning, and consequently during the response. To give just a few examples: early warnings are not reaching people who have hearing problems; bedridden people are not assisted to evacuate; and emergency stockpiles do not contain medicines commonly used by older people (such as for diabetics or heart disease). This report explains that by taking some simple measures to include older people in the planning and implementation of disaster preparedness and response activities, the impact of disasters on older people's lives and

livelihoods can be significantly reduced, and older people can be supported to build more resilient livelihoods.⁴

With the increasing frequency and severity of natural disasters, many countries are realizing the importance of disaster preparedness and response planning and management. Preparedness measures can significantly reduce the impact of disasters on people's lives, livelihoods and assets, while some disasters like floods can be prevented entirely by investing in flood-resistant infrastructure. Robust preparedness plans enable a rapid and more effective response when a disaster is unfolding. Robust disaster preparedness plans also can mean fewer casualties and injuries, and help people to protect their assets, allowing for quicker and less costly response and recovery operations.⁵

Although older people are a very diverse group, many are especially vulnerable to emergencies and hazards. Those with progressive loss of function in particular can have difficulty adapting to challenges and coping with disruptions. Demographic change combined with a growing number of disasters creates special problems for the elderly as well as the poor. To address these special problems, ageing issues should be taken into consideration in all development policies and programs, including those related to disaster management, using a participatory approach to ensure that older people have a voice.⁶ Considering these issues one cross sectional study was designed to assess the experience and suggestions regarding disaster preparedness among the older people in a rural community of Bangladesh.

Materials And Methods

This descriptive cross-sectional study was conducted in Nolua, Barabil, Shorishakol and Moshipur villages under Shahzadpur Upazila in Sirajganj district of Bangladesh. Elderly people aged 60 years and above living in the study area were the study population. The study was done from 1st July 2015 to 30th September 2015. A total of 485 households were surveyed. The household lacking any elderly was excluded from the survey. Purposive sampling technique was adopted. Data collection was done using a pre-tested semi-structured questionnaire. One elderly residing in the household was selected purposively and interviewed face-to-face to get relevant information. Collected data were checked, cleaned, coded and entered in the computer for analyses. For data analyses SPSS and MS Excel programs were used.

Results

Among the total 485 respondents 136 (28.0%) had age 60-64 years, 89 (18.4%) had 65-69 years, 163 (33.6%) were in age group 70-74 years and the rest were in the age group 75-79 years. Regarding sex it was seen 259 (53.4%) were female. All (100.0%) were Muslims. Majority [185 (38.1%)] were housewives, 146 (30.1%) were farmers, 24 (4.9%) were weavers, 32 (6.6%) were businessmen, 33 (6.8%) were drivers and 38 (7.8%) were unemployed. Majority [281 (57.9%)] of the respondents did not have any formal education. However, 81 (16.7%) had primary, 97 (20.0%) had secondary and 26 (5.4%) had higher secondary and above levels of education. Regarding monthly family income 202 (41.6%) opined

5,001-10,000 taka and 185 (38.1%) said it taka 5,000 or less (Table I).

Table I: Socio demographic characteristics of the respondents

Characteristics	Frequency	Percentage
Age in years		
60-64 years	136	28.0
65-69 years	89	18.4
70-74 years	163	33.6
75-79 years	97	20.0
Sex		
Male	226	46.6
Female	259	53.4
Occupation		
Housewife	185	38.1
Farmer	146	30.1
weaver	24	4.9
Businessman	32	6.6
Drivers	33	6.8
Unemployed	38	7.8
Others	27	5.6
Education		
No institutional education	281	57.9
Primary	81	16.7
Secondary	97	20.0
HSC and above	26	5.4
Monthly family income		
5000	185	38.1
5001- 10,000	202	41.6
10,001- 15000	50	10.3
15001-20000	16	3.3
>20000	32	6.6

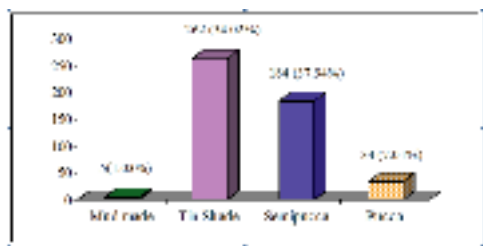


Figure 1: House type of the respondents

Regarding house type it was seen that 262 (54.02%) were living in tin shade houses, 184 (37.94%) in semi-pucca houses, 34 (7.01%) in pucca houses and the rest 5 (1.01%) were living in mud-made houses (Figure 1). All (100.0%) used tube well water for drinking and cooking. Majority [352 (72.6%)] had sanitary latrines (Figure 2). Majority [375 (77.3%)] of the respondents had nuclear families and the rest 110 (22.7%) had joint / extended families (Figure 3).

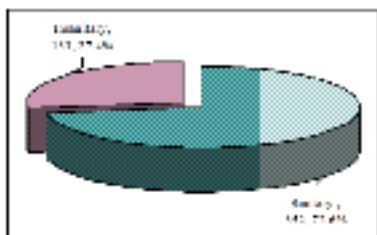


Figure 2: Latrine type of the respondents

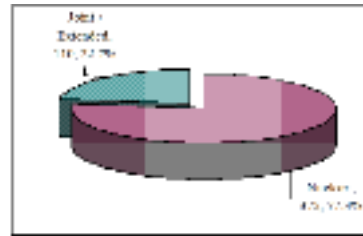


Figure 3: Family type of the respondents

Table II reveals that 428 (88.2%) of the responded mentioned to get regular adequate food and 259 (53.4%) mentioned of getting favorite food occasionally. Regarding clothing it was seen that 388 (80.0%) mentioned of getting necessary clothing in time and 299 (61.6%) mentioned of getting help in washing clothes. About one third [162 (33.4%)] mentioned of getting pocket money, 381 (78.6%) said to get support during illness and 283 (58.4%) said of getting invitation on religious, social, cultural program. Most [461 (95.1%)] respondents mentioned of not getting any social facility (Table II).

Table II: Distribution of elderly people by support from family and society

Support	Frequency	Percentage
Food support		
Regular adequate food	428	88.2
Favorite food occasionally	259	53.4
Clothing support		
Necessary clothing in time	388	80.0
Help in washing cloths	299	61.6
Sleeping place		
Bedroom	372	76.7
Veranda	89	18.4
Others	24	4.9
Monthly pocket money	162	33.4
Support during illness	381	78.6
Decision making role		
Always	202	41.6
Most of the time	32	6.6
Occasionally	154	31.8
Never	97	20.0
Invitation on religious, social, cultural program	283	58.4
Social facilities		
Old age allowance	8	1.6
Pension	8	1.6
Freedom fighter allowance	8	1.6
Get nothing	461	95.1
Member of any association in the locality	16	3.3

* Multiple responses existed

All (100.0%) of the respondents experienced disaster several times in their lifetime. Of the disasters flood and violence was experienced by 485 (100.0%) respondents, 378 (76.9%) experienced fire, 73 (15.1%) experienced war, 65 (13.4%) experienced earthquake, 24 (4.9%) tornado and 24 (4.9%) experienced famine. Only 81 (16.7%) mentioned of Provision of disaster forecasting. Voluntary organization was mentioned by 40 (8.2%) responded as to provide forecast about disaster and another 40 (8.2%) mentioned of radio. Regarding Problem aroused during disaster all (100.0%) said of shelter, 453 (93.4%) said Food, 428 (88.2%) mentioned Sanitation, 404 (83.3%) mentioned Transport, 396 (81.6%) mentioned of Financial problems, 372 (76.7%) opined Health related problems and 162 (33.4%) mentioned mental problems. Only 18 (3.7%) respondents said to have shelters nearby (Table III).

Table III: Distribution of elderly people by previous experience during disaster

Experience	Frequency	Percentage
Types of observed disaster		
Flood	485	100.0
Tornado	24	4.9
Earthquake	65	13.4
Setting fire	373	76.9
War	73	15.1
Violence	485	100.0
Famine	24	4.9
Provision of disaster forecasting	81	16.7
Disaster forecasted by		
Voluntary organization	40	8.2
Radio	40	8.2
Problem aroused during disaster		
Shelter	485	100.0
Food	453	93.4
Transport	404	83.3
Sanitation	428	88.2
Financial	396	81.6
Health related	372	76.7
Mental	162	33.4
Nearby public shelter present	18	3.7

* Multiple responses

Table IV: Distribution of elderly people by management of different commodity during disaster

Measures of management	Frequency	Percentage
Management of shelter		
Bed elevation	323	66.6
Moved to higher place	94	19.4
On boat	41	8.5
Bamboo bed	233	48.0
Others	10	2.1
Management of food		
Previously preserved food	293	60.4
Food from neighboring house	226	46.6
Purchased from market	163	33.6
Other	90	18.6
Management of drinking water		
Boiling water	129	26.6
Flood water	259	53.4
Tube well	176	36.3
Deep well	18	3.7
Others	31	6.4
Management of livestock		
Transfer to safe place	372	76.7
Sold them	84	17.3

* Multiple responses

They managed their shelter by bed elevation as mentioned by 323 (66.6%) respondents, 94 (19.4%) said of moving to a higher place, 41 (8.5%) mentioned staying on boat and 233 (48.0%) mentioned of making bamboo bed. They managed their food from preserved food as said by 293 (60.4%) respondents, 226 (46.6%) got from neighboring house and 163 (33.6%) purchased from market. They got no relief. More than a half [259 (53.4%)] drank flood water, 129 (26.6%)

boiled water and 176 (36.3%) drank tube well water. They transferred their livestock to safe place [372 (76.7%)] and 84 (17.3%) sold them at last (Table IV).

Table V: Distribution of elderly people by the knowledge on disaster preparedness and their suggestions

Attributes	Frequency	Percentage
Necessity of disaster preparedness		
	485	100.0
Disaster preparedness necessary for		
For saving life	416	85.8
To minimize losses	157	32.4
Preventing diseases	94	19.4
Assurance of livelihood	32	6.6
Suggestions for disaster preparedness		
Dry food preservation	275	56.7
Safe drinking water support	237	48.9
Medical support	210	43.3
Establishment of public shelter	129	26.6
Making dam in frequently affected area	55	11.3
Proper sanitation	48	9.9
Transportation support	40	8.2
Employment support	32	6.6
Support from government and NGO	36	7.4

* Multiple response

All (100.0%) the respondents opined that disaster preparedness is necessary. Majority [416 (85.8%)] said it is necessary for saving life, 157 (32.4%) said minimizing losses, 94 (19.4%) said of preventing disease and 32 (6.6%) mentioned assurance of livelihood. They suggested that disaster preparedness should include dry food preservation as mentioned by 275 (56.7%) respondents, 237 (48.9%) suggested safe drinking water support, 210 (43.3%) suggested medical support, 129 (26.6%) said to establish public shelter, 55 (11.3%) mentioned of making dam in frequently affected area, 48 (9.9%) mentioned of proper sanitation measure, 40 (8.2%) mentioned transportation support, 32 (6.6%) mentioned employment support and 32 (7.4%) suggested support from government and NGO. There were multiple responses (Table V).

Discussion

This study was conducted to find out the social status of elderly, previous experiences of elderly during disaster and knowledge and attitudes of elderly toward disaster preparedness. Among the respondents (53.4%) were female. The sex ratio was found to be 0.87 (males/females). It is lower than national sex ratio which is 0.97 male(s)/female (2017 est.).⁶ Majority (38.1%) were housewives. This was due to the fact that data collection was done in a time when many of the male members of the household were away from their houses. More than a half (57.9%) of the respondents were illiterates i.e. 42.1% were literate to some extent. This was lower than the national figure. Bangladesh literacy rate for 2015 was 65.1%.⁷ The reasons may be that the study place is a rural area and the respondents were elderly people.

This study found 54% respondents lived in tin shed house and 38% lived in semi pucca house. In another study by Journal of Applied Science found 66% elderly lived in tin shed house.⁸ About 73% of the respondents had sanitary latrines in their houses and 100% respondents had tube well for drinking water. But national data says that 77% elderly were drinking water from tube well.⁸ Majority (77%) was from nuclear families.

In terms of social status 88% elderly got regular food and 53% got favorite food occasionally, 80% elderly got necessary clothing in time, 62% got help in washing clothes, 33% got monthly pocket money and 79% got support during illness. It was seen that 42% elderly always took decision about their family, but 20% had no role in decision making. The 1998 ESCAP survey reports about 50 percent of older males in rural areas play a dominant role in making major and or most household decisions.⁹ About 58% elderly told about getting invitation on religious, social and cultural usually. Most (97%) said that they are not members of any association in their locality and all said that they don't take part in any social work.

All of the respondents observed at least a disaster in their lifetime. They observed flood, setting fire, violence, war, tornado etc. Most frequently observed disaster was flood. Most of the elderly said at that time there was no provision of disaster forecasting except by voluntary organization and Radio. During disaster they faced problems of shelter, food, transport, sanitation, financial and health related etc. All elderly claimed that health care was not accessible during disaster. They managed their shelter by bed elevation, moving to a higher place, staying on boat, by making bamboo bed etc. They also claimed there was no public shelter. They managed their food from previously preserved food, neighboring house and they got no relief. They drink flood water directly, boiling flood water and tube well water. Most of them had live stocks and they transferred them to safe place or sold them at last.

All the elderly agreed that disaster preparedness is necessary. They said it is necessary for saving life, minimizing loses, assurance of livelihood, preventing disease.

They suggested that disaster preparedness should include dry food preservation, safe drinking water support, medical support, public shelter, making of dam in frequently affected area, proper sanitation measure, transportation support, employment support, and support from government and NGO.

Conclusion

Elderly population is the asset of any nation. They have experience, wisdom and knowledge which can be used for the national reconstruction. Older people should be regarded as valuable human resources as they are doing huge services at home and outside. Their residual capacity and rich experience should be properly utilized for the overall socioeconomic development. But with the demographic changes growing number of disasters creates special problems for elderly as well as poor. To find out these special problems, ageing issues should be taken into consideration in all development policies and programs, including those related to disaster management, using a participatory approach to ensure that older people have a voice.

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