

Research Article

A Phenomenological Study of Community Preparedness Experiences in Facing the Flood Disaster in Napai Village of West Woyla Sub-District of West Aceh DistrictBustami¹, Baharuddin²^{1,2}. Lecturers of Nursing Study Program at Meulaboh Health Polytechnic Aceh of Ministry of Health

Abstract: West Aceh District, one of the districts in Aceh province, Indonesia, is often affected by natural disasters. At the end of 2016, the number of flooded areas reached 139 villages in nine sub-districts, causing flood victims and displaced of 14,245 families, consisting of 49,856 people and one died. The most affected area in West Aceh was Napai Village of West Woyla sub-district since the village was traversed by Woyla River. The significant impact of floods was not only on the destroyed physical environment, but also on the declining health status of the families due to the emergence of post-disaster diseases. Therefore, aside from the government, the community should also make an effort for disaster preparedness to minimize the losses. Disaster preparedness can be defined as an attempt that allows the government, organizations, communities and individuals to respond quickly and effectively to any disaster. This study aimed to explain or explore the experiences of the community to flood preparedness in Napai Village, West Woyla sub-district. This was a qualitative study using a descriptive phenomenology approach. Respondents were the residents affected by floods located in the Napai area. The respondents were selected by using the purposive sampling technique, following the principles of appropriateness and adequacy. Data collection techniques involved standard procedural methods such as in-depth interview, focus group discussion and observation. The results of the study showed four important themes: the flood impact experienced by the community, the sources of knowledge of the flood prevention program, the community preparedness in coping with the flood disaster, and the government's role in dealing with the flood disaster. It is suggested that the BPBD improve the public preparedness in facing the flood disaster by conducting socialization and simulation of flood disaster management.

Keyword: Phenomenology, Experiences, Disasters, Flood, Preparedness

INTRODUCTION

The territory of Indonesia, which comprises archipelagic clusters, is situated within disaster-prone areas. As such, Indonesia has a very high disaster potential and also a great variety of disaster types. Moreover, the diversity of the population and the culture, along with its natural conditions, causes Indonesia to be in the risk of natural disasters, human-made disasters and other complex emergencies. Indonesia has been recorded to experience the ever-increasing disasters every year.¹

Natural disasters are any events or sequences of events caused by nature such as earthquakes, tsunamis, volcanoes, floods, droughts, typhoons, and landslides (Indonesian Law No. 24 of 2007). The consequences of natural disasters include death casualties, damage to health facilities, and health crises. The statistics from Indonesian Ministry of Health (2013)³ showed that the victims of natural disasters during 2013 consisted of 823 deaths, 2,748 heavily injured/hospitalized people, 154,870 slightly injured/outpatients, 192 missing, and 312,620 displaced.

Aceh as one of five flood-prone provinces in Indonesia, was hit by major floods in October 2016 affecting five districts i.e., Great Aceh, Aceh Jaya, Langsa, West Aceh, and Pidie. The

worst affected areas were Aceh Jaya, West Aceh, and Pidie with the death toll reaching 21 people and displacing tens of thousands.⁴

Further, West Aceh, one of the districts in Aceh province often suffering from natural disasters, was greatly damaged by floods at the end of 2016. The number of flooded areas stretched to nine sub-districts affecting 139 villages, in which the flood victims and displaced reached 14,245 families of 49,856 people, and claimed one death. The sub-districts in West Aceh heavily hit by the floods were Main Woyla and West Woyla since these two districts were traversed by Woyla River.⁴

The real impact of flooding is not only on the physical environment, but also on the health status which might be declining because of the emergence of post-flood diseases. Diseases that may arise after the floods are Leptospirosis (rat urine), Chikungunya, Dengue Fever, diarrhea, ARI, Cholera, Dysentery, Malaria, and yellow fever, among others.⁵

The level of knowledge about disaster preparedness for each individual varies; thus, a variety of responses will be generated once the individual faces an emergency of natural or non-natural disasters. A good level of knowledge will

contribute to create a sense of security and minimization of disaster victims. In this case, the community already has initiatives in dealing with the threats of disasters, especially floods. These efforts are manifested in various forms of activities, ranging from raising the community awareness, mapping of disaster prone areas, creating and preparing evacuation routes, early warning of floods, forming disaster prepared groups, and so forth.⁴

Research on the flood disasters in West Aceh is still lacking, therefore experience assessment on community preparedness in facing flood disasters has never been pursued. This is especially the case for the nursing profession working in the community settings whose role is significant in preventive measures of flood disaster management programs. The community nurses play the role of health implementers in order to achieve the health goals of improving the public health status through promotional and preventive efforts.⁷

The district of West Aceh has a high frequency of flooding that requires optimum preparedness attempts; however, previous research has indicated that the awareness on the importance of disaster preparedness and mitigation has not yet fully acquired by the community and their disaster preparedness was not obtained from training or government notices, rather from own experiences.

RESEARCH METHODS

This study used a qualitative method with a descriptive phenomenology approach. The qualitative method is a way to explore and understand a central phenomenon.¹⁹ It intends to understand the phenomenon of what is experienced by research subjects i.e., behavior, perception, motivation, action, etc.²⁰

The qualitative methods used in this study were observation, group discussion, interview, and review of documents.²¹ Further, phenomenology is defined as a study to provide an idea of a meaning from the experiences of some individuals about a particular concept.²²

The study was conducted in West Woyla Sub-district from August to September 2017. The Napai Village residents were the most often and severely affected by the floods in West Woyla of about 195 households (Population Report of West Woyla Sub-district in 2016).

Respondents here means any individuals providing information related to the research questions. The selection of the respondents or the sample was based on the topic and purpose of the study. The respondents in this study consisted of ten (10) people who were affected by the flood disaster in Napai Village with the following criteria:

1. Respondents were community leaders and residents of Napai Village and had experienced flooding
2. Respondents were able to communicate well in order for the questions to be properly answered.

Data collection as the stages of the study in searching and

collecting data from the sample involved several techniques of standard procedural methods, such as in-depth interview, focus group discussion, and observation. FGD (Focus Group Discussion) refers to a process of gathering information of a particular problem specifically conducted through group discussions.²³ Field Notes, according to Bogdan & Biklen 1982 (in Moleong 2013)¹⁶, include written notes on what is heard, viewed, experienced and thought out during data collection, and reflection on data of qualitative research. Here, the study employed some instruments such as recording equipment, a video recorder (handy-cam), a tape recorder, group discussion guidelines, and field notes.

Data analysis techniques used in the qualitative study comprised transcripts of interview results, data reduction, analysis, data interpretation, and triangulation. According to Norman K. Denkin, triangulation refers to the use or a combination of a variety of methods employed to study any interrelated phenomena from different perspectives and points of views. To date, the Denkin's concept has been used by qualitative researchers in various fields. In his theory, triangulation involves four things as follows:¹²

1. Triangulation method
2. Inter-research triangulation (if the study is done in groups)
3. Triangulation of data sources
4. Triangulation of theories

RESULTS

The thematic analysis found four themes related to the experiences of community preparedness in coping with the flood disaster, they are: the impact of floods experienced by the community, the sources of knowledge obtained by the community about flood prevention program, the community efforts in dealing with floods, and the role of government towards flood preparedness efforts. Below are the descriptions of the themes:

Theme 1. The impact of floods experienced by the community

Floods usually bring about huge adverse impact to the community including the damages of properties, the disruption of community activities, the decline in economic activities, the incidence of various diseases, and the death toll. The respondents here mentioned several issues of the aftermath of the disaster, such as damages of buildings and home furnishings, damages of places of worship, the establishment of public awareness, becoming accustomed to the disaster, being able to predict the arrival of floods by themselves, and troubled feelings.

1. Damages of buildings and furniture

One respondent revealed that the floods had destroyed the people's properties i.e., buildings and home furnishings, and the submerged goods could not be saved in time: "*When the flood came, the doors and windows of my house got damaged. And, there was not enough time to save home appliances and furniture like fridge and TV.*" (01)

2. Damages of places of worship

Two respondents then expressed that the flood had also hit public facilities. Some mosques were heavily flooded by water as high as two meters, as described below:

"...because major floods also destroyed the mosque, reaching up to 2 meters high." (02)

"The mosque has also been hit by 2 meters floods every year." (04)

3. The self-awareness of the community

Despite above two negative effects, one respondent stated one quite positive impact of the flood which was the awareness of the people of what to do in the event of a flood disaster. The following is the statement:

"The awareness of the community itself has aroused, like, oh, we must elevate the goods, we must evacuate, and we must help each other." (05)

4. Becoming accustomed to the disaster

Further, the floods also led the people to become used to the flood disaster, as admitted by two respondents:

"We've already understood of what we should do in cases of flooding. Once the flood hits, we honk the horns of our motorbikes continuously, and then prepare the boat. We're used to it, so we're not too panicky." (03)

"Yes, indeed, we've become accustomed to, so it's like a normal occurrence every year. Sometimes [the flood] comes more than 5 times a year." (01)

5. Being able to predict the arrival of the flood by themselves

Three respondents also claimed that the people have been able to project the coming of the flood by themselves. They stated that:

"Indirectly, we've naturally studied it [the flood], and we've estimated the highest flood level. So, a lot of home appliances are to be placed higher than that." (03)

"When it rains, we are ready preparing to evacuate." (06)

"If it rains from morning to evening, we won't be able to sleep at night. We're ready to wait for the flood [laughing]." (10)

6. Troubled Feelings

Two respondents described their feelings everytime the flood hit their areas. They were very anxious to think about the soul, the wealth, the heavy flood, and the difficulty of finding a place to evacuate.

"Surely, we'll feel worry when talking about floods, and mostly the men. If it happens at night and the river overflows, the men will be busy monitoring and saving children as well as things. And, yes, we also get troubled looking for a safe place to evacuate. Anxiety is sometimes present when the flood starts reaching the closet, where the stuff like TV that has been elevated will also be affected." (07)

Most respondents also expressed their fear of floods due to the rapid flow of water in the Woyla River. Here is one excerpt of

their statements:

"The flow used to be not too big, but now, when the river water overflows, it goes into the whole village. So, the rapid flow of the river during the rainy season will also be experienced by all villagers." (08)

In addition, another mentioned that he felt confused of what to do once the flood arrived.

"... [the flood] now seems to be different from that in the 90s when the water was not too high. At present, I am rightly confused as to why the flood can cause the water level to one meter high despite hitting just several minutes. That's why, all the belongings would be easily submerged." (09)

Four respondents then expressed their regret that they did not receive immediate and sufficient assistance, as shown below.

"Even after the floods, there was a huge issue among the people. At the time, the aids arrived late, and the basic foods given were inadequate. Imagine that 2 kilos of cooking oil were supplied for the whole village, and salted fish for only half a kilo." (01)

Theme 2. Sources of knowledge gained by the community about the flood prevention program

Knowledge is any information obtained from experiences. The results of the FGD on ten respondents showed that the sources of knowledge of flood prevention program were from: 1) the experiences in overcoming floods, 2) the mass media i.e., TV and newspapers, 3) the information from the Search and Rescue (SAR)/ Regional Disaster Management Agency (BPBD) team, and 4) the socialization from the village officials.

1. The experiences in overcoming floods

All respondents said they gained knowledge on flood disaster preparedness based on their experiences during floods, as represented below:

"Even today, we don't really know the so-called structured program on flood prevention from the government or its procedures. We don't even know whether or not the program actually exists, what we understand is that any time the flood comes, we need to firstly evacuate." (02)

2. Mass media (TV and newspapers)

Two respondents admitted that they got knowledge of flood preparedness from mass media such as newspapers and television. Here is some excerpt:

"I have also read about floods from the newspaper and watched them on TV." (03)

3. Information from the SAR/BPBD Team

A respondent mentioned that the source of knowledge about the flood prevention program was obtained from the SAR/BPBD team during the rescue, as expressed here:

"There was indeed a visit from the SAR/BPBD team providing

some information on flood prevention issue, such as if we wanted to help those trapped by the flood or if the electricity had not been turned off. Clearly, the purpose for the SAR/BPBD team's visit was to provide suggestions [on flood prevention]."(06)

4. Socialization from the village administrative officials

Further, all respondents agreed that they obtained knowledge on flood preparedness from the village admin officials through some socialization. Below is one of the excerpts:

"There was some socialization from the village officials; however, the community has basically very experienced in facing the floods." (01)

Theme 3. Community Preparedness Efforts in Dealing with Floods

The efforts of community preparedness in coping with floods varied according to the experiences during the flood disaster. The efforts included: 1) Cleaning the environment and disposing of waste in its designated place, 2) Self-evacuation, 3) Placing the goods in higher positions, and 4) Cleaning the floor and furniture

1. Cleaning the environment and putting the garbage in its place

Flooding is not entirely inevitable, but the community can take actions to reduce the aftermath. Two respondents said that the preventive measures taken were cleaning the environment and disposing of waste in its designated place. Below are their statements:

"In order for the diseases not to spread out, we immediately clean the environment from any garbage." (01)

"...cleaning up the environment and throwing out garbage in its right place." (09)

2. Self-Evacuation

All respondents described the most important action to do during the flood was evacuation. Here are their responses:

"Every time the flood hits us, the very first thing to do is evacuation." (01)

"Yes, the most important effort that we had been done when the flood came was that we had to manage the people who were trapped or unable to evacuate." (06)

2. Placing the goods in higher positions

Another example of the community preparedness efforts in dealing with floods was by putting the goods or home furnishings higher, as stated below:

"We've been conditioned to putting stuff, like TV, at least one meter above to prepare for floods. Upstairs also has some cupboards to store things."(07)

"On that issue [flood preparedness], I have my own predictions when it is cloudy and light rain season. I would start to place my trade tools into the boat." (07)

3. Cleaning the floor and home furniture

One activity made after the flood was cleaning the floor and home furniture, as described below:

"If the floods had gone, all the people would be cleaning the houses. It also helped raise friendship among the community as well as togetherness." (01)

"When else would we clean our refrigerators? During massive community self-help, of course [laughing]." (02)

Theme 4. The role of the government on flood preparedness efforts

In the event of a flood disaster, the government has an important role to reduce the impact caused by the disaster. Some of the efforts that have been made by the government involved: 1) Building the embankment, 2) Dredging rivers, 3) Relocation of settlements, 4) Preparing the flood-mitigating team, 5) Supplying public kitchen and logistics, 6) Procurement of flood tools, and 7) Health services of Puskesmas (Community Health Center)

1. Building embankments

Five respondents stated that the government helped erect embankments in overcoming floods, as shown in below excerpts:

"There was some preparation made by the government, which was making of a dike."

"Because the mitigation system was only using the usual foundation at the time, so the dike could not stand. Moreover, it's hard to make a dike along the river. [The riverbank] is too long..." (04)

2. Dredging the river

Another role of the government in the infrastructure, as mentioned by all respondents, was river dredging. Some of their statements are described below:

"Every year the river will be dredged." (05)

"The most important thing to change the water flow at the time was dredging. River dredging has been very, very useful."(02)

3. Resettlement relocation

In addition, all respondents stated that the government was planning to relocate the settlements to other higher and safer places, away from the flood. Here are some of their expressions:

"There was, indeed, a government plan to relocate people's settlements." (01)

"... but the problem was that not all residents had the areas for relocation in the new place. So, people chose not to relocate." (08)

4. Preparing for a flood-mitigating team

It was also revealed that the village had its own flood-prevention team, consisting of the village officials and the village youth, as shown in below statement:

"Because the floods have been frequent and the people have

been used to, the community then set up a flood-alert team at the village level. But, it's not an official one, just on a voluntary basis." (01)

5. Procurement of flood tools

Three respondents said the procurement of equipment prepared by the government to overcome the flood included the boat, tools, and ambulance. Below are the excerpts:

"Yes, [the government] provided the boats, but they came late [laughing]." (04)

"The [government's] preparation included boats and tents." (03)

6. Supplying public kitchen and logistics

The respondents also mentioned that the government's preparedness in handling the flood disaster was the availability of public kitchen, as described below:

"So, when we got affected by the flood, the government would provide public kitchens and other necessities such as mosquito nets. However, they were still insufficient and did not meet the needs of all the displaced." (09)

"Health workers also came to our village checking our health, in order to prevent any disease after the flood." (06)

Three other respondents further stated that the government's first logistic assistances included simple foods such as snacks, as expressed in one excerpt here:

"Some had already evacuated in some emergency posts. More or less, the government did provide some aids. And, the very first aids were some mineral water and snacks, like biscuits or Indomie (instant noodles). Those were the countermeasures from the government." (01)

7. Health services from Puskesmas

One of the efforts made by the government to fulfill the basic needs of flood survivors was the emergency response action. The emergency action was carried out by the health care of Puskesmas. The role of health care was necessary to prevent or minimize the impact of post-flood diseases. The respondents' statements on Puskesmas' services are as follows:

"Puskesmas' role was no less important. So, after every flood disaster, there would be free treatment from the Puskesmas as well as free medications. And, the health workers mostly concerned on children under five years." (02)

"The preparedness should be from the government, including providing facilities such as rubber boats, Puskesmas, and health services posts." (06)

"The important role of Puskesmas is preventing the adverse effects of post-flood diseases" (01)

From the aforementioned results, it can be seen that the preparedness actions undertaken by the community were basically carried out after they had suffered huge losses and damages by natural disasters. Another study also found that throughout the years, many people still relied on the preparedness and mitigation to the government and neglected

individual preparedness (Matsuda and Okada, 2006).

The disaster risk reduction conducted by the government, according to Sagala et. al. (2014), should also consider the community preparedness in reducing the disaster risks. To date, the efforts made by the government have been numerous; however, the floods keep occurring. It is necessary that the role of the community be improved, so that the flood issue can eventually be solved, two of which are by not littering everywhere or constructing buildings along the riverbank

The Gratitude Expression

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