

Relationship of Family Knowledge With Flood Disaster Preparedness in Gampong Rambong Pinto District Woyla East Aceh West District

Anasril¹, Bustami², Dian Vera³, Adelina Irmayani Lubis⁴, Hafwa Ayuningtyas⁵

^{1,2} Lecturer of Poltekkes Ministry of Health Aceh

^{3,4,5} Lecturers of FKM Teuku Umar University, Indonesia

Anasril : anasrilsuri@gmail.com, Bustami : amitihar@yahoo.co.id

Dian Fera : dianfera@utu.ac.id, Adelina Irmayani Lubis : Adelina.Irmayani@utu.ac.id Hafwa Ayuningtyas :
afwahayuningtyas@utu.ac.id

Corresponden Author : Anasril ; anasrilsuri@gmail.com

Submitted: 23/7/2021 Conference: 17/10/2021 Accepted: 17/2/2022 Published online: 8/3/2022

Abstract : Disaster preparedness efforts are not only carried out by the government, the community also needs to carry out disaster preparedness in order to reduce losses due to disasters. Disaster preparedness can be defined as efforts that enable governments, organizations, communities and individuals to respond quickly and effectively to disaster events. Preparedness efforts for each individual or group are not the same depending on the level of disaster preparedness which is influenced by socio-demographic factors, social networks, and previous flood experiences. The level of knowledge about disaster preparedness that each individual has is different so that it will cause various responses when individuals face emergencies due to natural or non-natural disasters. A good level of knowledge will contribute to creating a sense of security and minimizing disaster victims. In this case, the community already has the initiative in dealing with the threat of disasters, especially floods. These efforts are manifested in various forms of activities. Starting from public awareness, mapping disaster-prone areas, making and preparing evacuation routes, flood early warnings, forming disaster preparedness groups and so on. This thesis aims to determine the relationship between family knowledge and preparedness to face flood disasters in Gampong Rambong Pinto, East Woyla sub-district. This type of research is descriptive analytic with the research design used is a *cross-sectional study*, with a sample of 30 families. Data analysis includes univariate analysis by looking for the frequency distribution, and bivariate analysis using *chi-square test* with a significance value ($\alpha = 0.05$). The results showed that there was a relationship between knowledge and disaster preparedness with a p value of 0.035 ($p < 0.05$). It is suggested to Health Officers in the working area of Woyla Timur Health Center, West Aceh Regency and also BPBD officers to further improve health promotion about the importance of preparedness efforts to face flood disasters.

Keywords: Knowledge, Preparedness, Flood Disaster

Introduction

Disasters are events or series of events that threaten and disrupt people's lives and livelihoods caused, both by natural factors and/or non-natural factors as well as human factors, resulting in human casualties, environmental damage, property losses, and psychological impacts.

Indonesia is one of the countries traversed by the circum of the Pacific and Mediterranean mountains which affect the topography of Indonesia. In addition, Indonesia is astronomically located on the equator which affects climate and weather such as the rainy and dry seasons. This geographical condition has resulted in Indonesia being one of the countries that

are prone to disasters that cause loss of life, psychological disorders, and property damage (BNPB, 2011).

The real impact of flooding is not only on physical environmental problems, but health status can also decline due to the emergence of diseases after the flood. Diseases that may appear after the flood include; Leptospirosis (rat urine disease), Chikunguya, Dangu Hemorrhagic Fever, diarrhea, ARI, Cholera, Dysentery, Malaria, and yellow fever.

Disaster preparedness efforts are not only carried out by the government, the community also needs to carry out disaster preparedness in order to reduce losses due to disasters. Disaster preparedness can be defined as efforts that enable governments, organizations, communities and individuals to respond quickly and effectively to disaster events. Preparedness efforts for each individual or group are not the same depending on the level of disaster preparedness which is influenced by socio-demographic factors, social networks, and previous flood experiences (Bustami, 2017).

The level of knowledge about disaster preparedness that each individual has is different so that it will cause various responses when individuals face emergencies due to natural or non-natural disasters. A good level of knowledge will contribute to creating a sense of security and minimizing disaster victims. In this case, the community already has the initiative in dealing with the threat of disasters, especially floods. These efforts are manifested in various forms of activities. Starting from public awareness, mapping disaster-prone areas, making and preparing evacuation routes, flood early warnings, forming disaster preparedness groups and so on.

Research conducted by Ajmain (2019) regarding the relationship of knowledge to disaster preparedness in families in Kuala Langsa Village, West Langsa District, showed the results of the *Pearson chi-square* statistical test at a 95% confidence level ($\alpha = 0.05$) obtained p-value = 0.000 ($p < 0.05$) which means that there is a significant relationship between family knowledge and disaster preparedness. The results of this study are certainly one of the references for the importance of increasing public knowledge about disasters in disaster preparedness.

The results of this study indicate that the magnitude of the impact of one's knowledge on preparedness in dealing with flood disasters. So that the main step in preparedness to face flood disasters is to increase public knowledge, especially heads of families about flood disasters and readiness in dealing with flood disasters.

The Aceh Disaster Management Agency (BPBA) stated that flooding was the most dominant disaster occurring in Aceh Province in early 2021 which was triggered by high-intensity rainfall. There were 18 flood events recorded during January 2021 throughout Aceh (Antara News, 2021). Some of the districts that experienced severe flooding include Aceh Tamiang, East Aceh, North Aceh, and Langsa.

One of the sub-districts in West Aceh that experienced severe flooding is the East Woyla sub-district. Gampong Rambong Pinto is one of the villages in East Woyla District which has been regularly flooded every year. The number of family heads in Gampong Rambong is 30 families and the population is 89 people. In 2019 there were 6 flood events, while in 2020 there was an increase of 8 times. Information from the gampong gechik (village head) and community leaders the impact of the floods experienced included disruption of population mobility, school activities and disruption of the fulfillment of daily needs. It also has an impact on the emergence of health problems such as diarrheal disease. Even from an economic point of view, it was a huge loss.

Methods

The research design used is a *cross-sectional study*. The population in this study were all heads of families in Gampong Rambong Pinto, East Woyla District, West Aceh Regency, amounting to 30 people. Collecting data using a questionnaire. Data analysis was performed using correlation analysis (*bivariate*). The statistical test method used is *the chi square test*.

Results

Family Head Knowledge

Knowledge of respondents is categorized into two categories, namely good and poor. Categorized as good if the score is 6-10 , and less if the score is 0-5 . The results of knowledge measurement can be seen in the following table:

Table 1. Frequency Distribution of Respondents Based on Knowledge Category

No	Category	Frequency (n)	Percent (%)
1	Well	12	40
2	Not enough	18	60
Amount		30	100

Source: Primary Data Year 2021

Based on the table above, it can be seen that the majority of family heads in Gampong Rambong Pinto have knowledge in the less category, namely 18 people or about 60% about flood disaster preparedness .

Preparedness

Preparedness is categorized into two categories, namely ready and not ready. Categorized as ready if the score obtained is 6-10 and less ready 0-5. The results of preparedness measurements can be seen in the following table:

Table 2. Frequency Distribution of Respondents by Preparedness Category

No	Category	Frequency (n)	Percent (%)
1	Ready	13	43.3
2	Not Ready	17	56.7
Amount		30	100

Source: Primary Data Year 2021

Based on the table above, it can be seen that most household heads have preparedness to face flood disasters in the less prepared category, namely 17 people or 56.7%.

Relationship between Knowledge and Preparedness for Flood Disasters

The relationship between knowledge and preparedness for flood disasters is said to be meaningful if the p value is less than 0.05. The results of the analysis can be seen in the following table:

Table 3. Relationship between Knowledge and Preparedness for Flood Disasters

Knowledge	Preparedness				Amount		p
	Ready		Not enough ready				
	n	%	n	%	n	%	
Well	8	66.7	4	33.3	12	100	0.035
Not enough	5	27.8	13	72.2	18	100	
Total	13		17		30		

Source: Primary Data Year 2021

The table above shows that of 12 family heads who have good knowledge, 8 people (66.7%) of them have preparedness in the almost ready category and 4 people (33.3%) are in the less ready category. have less knowledge, 13 people (72.2%) of them have preparedness in the less ready category. The results of the *chi-square* test showed that the value of $p=0.035$ ($p<0.05$). The decision taken is to accept H_a , meaning that there is a relationship between the knowledge of the head of the family and preparedness to face flood disasters.

Discussion

The results of the univariate analysis for knowledge showed that most of the knowledge of the head of the family was in the less category, namely 18 people (60%). Knowledge in this category is not sufficient to cause a good health behavior.

There are several factors that influence knowledge including education, occupation, age, interests, experience, culture of the surrounding environment, and information. When viewed from the characteristics of the respondents, most of the family heads have an elementary education background, which is 46.7%. The educational background of the head of the family is of course still very low, making it very difficult to receive and process the information. If education is low, individuals rely more on experiences from both previous people and their personal experiences. So that the latest developments in knowledge are difficult to obtain and understand. Likewise, disaster preparedness should be understood by all family heads, especially in disaster-prone areas.

According to Heni (2014) preparedness is a preparation for planning about preventive actions against disaster events and possible disaster events. Planning is carried out based on all the needs needed in an emergency supported by existing resources to be able to meet these needs. Resources here also include one's knowledge.

Knowledge is the main and important factor that is the key to preparedness actions. Knowledge possessed by individuals or the community can usually influence people's attitudes and community awareness to have a ready and alert nature in anticipating disasters, especially for those who live in disaster-prone areas.

Bivariate analysis that has been carried out using the *chi square* test shows that there is a relationship between knowledge and disaster preparedness with a p value of 0.035 ($p < 0.05$). These results indicate that the better one's knowledge, the better the preparedness to face disasters, and vice versa if the knowledge is not good, the preparedness is also less.

The results of this study are in accordance with previous research conducted by Firmansyah (2016) which showed that there was a relationship between knowledge and preparedness behavior in dealing with floods and landslides in adolescents aged 15-18 years, with a value of $p = 0.000$ ($p < 0.05$). Knowledge and preparedness behavior have a positive relationship direction ($r = 0.531$), meaning that the higher the knowledge, the preparedness behavior will also increase.

Conclusion

Based on the results of research and discussion, it can be concluded that the majority of family heads have knowledge in the less category, namely 18 people or about 60%, most family heads have preparedness in the less ready category, namely 17 people or 56.7%. From the results of the bivariate analysis, it is known that there is a relationship between knowledge and preparedness to face flood disasters with a p value of 0.035 ($p < 0.05$).

References

- Ahmadi, Umar Fahmi. (2013). Public Health: Theory and Application. Jakarta: Raja Grafindo Persada.
- Ajmain (2019) The Relationship of Knowledge to Disaster Preparedness in Families in Kuala Langsa Village, West Langsa District. JP2K. Journal of Health Education and Practice. Vol 2 No 2 (2019)
- Arikunto, S. (2018). Research Procedure A Practical Approach. Jakarta : Rineka Cipta
- BNPB, (2011). Guidelines for Preparation of Disaster Management Plans <http://www.bnpb.go.id>
- BNPB. (2018). Disaster Preparedness Guide for Families. <http://www.bnpb.go.id>
- Budiman, & Riyanto, A. (2014). Capita Selecta Knowledge Questionnaire and. Attitudes in Health Research. Jakarta: Salemba Medika
- Bustami & Baharuddin. (2017). A Phenomenological Study of Community Preparedness Experiences in Facing the Flood Disaster in Napai Village of West Woyla Sub-District of West Aceh District
- International Journal of Medical Science and Clinical Invention. Vol. 5 No. 3 (2018) | Page No.: 3610-3615 | <https://doi.org/10.18535/ijmsci/v5i3.10>
- Dodon (2013). Community Preparedness Indicators and Behavior in Densely Populated Settlements in Anticipating Various Phases of Flood Disasters. In the Journal of Disaster Planning". Bumi Lestari Journal, Vol. 1 No.1, September 201
- Kurniyanti, Mizam Ari. (2012). The Role of Health Workers in Disaster Management. Scientific Journal of Health Media Husada Vol 1. No. 1. August 2012.
- Lindawati and Wasludin (2017). The Relationship of Knowledge and Attitudes About Flood Disasters Towards Preparedness In Health In The Gondrong Village Community, Tangerang City. Journal of Medikes (Health Information Media). Vol 4 No 2 (2017).
- Mubarak, WI (2011). Health Promotion for Midwifery. Jakarta: Salemba Medika.
- Notoatmodjo, S. (2012). Health Promotion Theory & Applications. Jakarta: Rineka Cipta
- Paidi. (2012). *Management of Natural Disaster Risk Management in Indonesia* . Number 321 July-August 2012
- Pancawati, Heni. (2014). *Disaster Management (Disaster Management)* . Purwokerto

Regional Inews (2021). *In early 2021, four city districts in Aceh were hit by floods* . <https://www.idntimes.com/news/indonesia/>
Sulistyaningsih, W, (2015). *Public awareness to reduce disaster risk. Unfortunately* . Ejournal.umm.ac.id.