

Knowledge with Flood Disaster Preparedness in Mojokerto District

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ABSTRACT

The high intensity of flooding in Indonesia makes people have to be aware of flood disasters. An important factor in flood disaster management is community preparedness which requires knowledge about flood disaster risks. The purpose of this study was to determine the relationship between the level of knowledge with flood disaster preparedness in the community. This research design is correlation analytic with cross sectional approach. The population of this study were all responsible family heads aged 20-50 years, totalling 143 families. In this study using simple random sampling ($n = 38$ people). The instrument used was a questionnaire. The results showed that most of the respondents had sufficient knowledge 25 people (65.8%), most of the respondents were alert to flood disasters 25 people (65.8%). The results of the Spearman Rho test analysis obtained a pvalue of 0.000 less than α (0.05) and a coefficient correlation value of 0.678 so that H1 is accepted, which means that there is a strong relationship between the level of knowledge and preparedness for flood disasters in the community. Knowledge will affect the community's concern to be ready and alert in anticipating disasters, especially for those who live in areas vulnerable to flooding.

Keywords: *knowledge, preparedness, flood disaster*

INTRODUCTION

Flood disasters that occur carry a consequence to affect humans and their environment. Vulnerability to flood disasters can be caused by a lack of proper flood disaster management, environmental impacts, or people themselves. The resulting losses depend on the community's resilience capacity to flood disasters (Aji, 2015). One of the important factors in flood disaster management is community preparedness, which requires knowledge about flood disaster risks. Disaster knowledge will be needed by people who live in flood-prone areas, because it can minimise the risk of flood disasters (Adiwijaya, 2017).

During 2018, there were 2,572 disaster events, resulting in 4,814 deaths and missing people, 10.239 million people affected and displaced. The series of major disaster events that hit Indonesia in 2018 is enough to be a whip for this nation to prepare itself

from the threat of disaster (SafetySign Indonesia, 2017). Data from BPBD Mojokerto District (2018) noted that Tambakrejo Village, Gebang Malang Village, Jabon Village, Mojoanyar Sub-district experience floods every year when rainfall is high. The 2018 rainy season recorded 5 floods that caused around 211 houses to be inundated due to heavy rains, flooding varied between 60-80 cm. Efforts made by BPBD Mojokerto Regency reviewed the location and evacuated.

Factors that influence flood preparedness are proper emergency planning and organisation, resources, division of tasks and responsibilities, inter-agency coordination, elemental readiness, training and public awareness (Aryo & Lubis, 2014). The most decisive factor is the mastery of rescue knowledge possessed by "oneself", family and surrounding community (Sarwono, 2019). Knowledge will affect the community's concern to be ready and alert in anticipating disasters, especially for those who live in areas prone to natural disasters and make the community more alert to anticipate the possibility of disasters to avoid casualties, property losses, and changes in community life in the future (Lindawati & Wasludin, 2017).

The impact if the community is not prepared for flood disasters, it will cause disturbances in the population aspect, including casualties / deaths, drifting, drowning, injuries, missing victims, refugees, outbreaks of diseases such as skin diseases, dengue fever, malaria, influenza, indigestion and isolated residents, government aspects, including damage or loss of documents, archives, equipment, office equipment and disruption of government operations, economic aspects, economic aspects, including loss of livelihoods, malfunctioning of traditional markets, damage or loss of property, livestock and disruption of the community economy, facilities/infrastructure aspects, including damage to houses, bridges, roads, office buildings, social and public facilities, electricity installations, drinking water and communication networks, and environmental aspects, including damage to ecosystems, tourist attractions, rice fields/agricultural lands, clean water sources and damage to embankments/irrigation networks (BNPB & JICA, 2015).

One solution to the problem of flash flood disaster threats that can be materially and immaterially detrimental can be through socialisation activities and simulations of flash flood disaster preparedness (Aini S & Pristiwandono, 2017). Disaster risk reduction efforts through preparedness exercises, structural and non-structural mitigation must be considered as an investment for business sustainability and development (Sarwono, 2019). Increased community preparedness is supported by the entire community to become a disaster-prepared community that can minimise casualties if a disaster occurs at any time (Juliin & Haksama, 2018). Based on the above background, researchers want to examine the relationship between the level of knowledge and preparedness for flood disasters.

METHOD

This study uses a correlation analytic design using a cross sectional approach, namely the cause and effect variables that occur in the object of research are measured and collected at a certain time simultaneously (Notoatmodjo, 2012a). The population in this study were all responsible family heads aged 20-50 years in RW 1 Dusun Gebang Malang, Gebang Malang Village, Mojoanyar Subdistrict, Mojokerto Regency, totalling 143 households. The data obtained were analysed in the form of frequency distribution tables and percentages. Location This research was conducted in Gebang Malang Village, Mojoanyar Subdistrict, Mojokerto Regency. Research instruments are tools for researchers in collecting data (Arikunto, 2012). In this study, the instrument was a questionnaire to assess the level of knowledge of flood disaster preparedness in the community. The questionnaire consists of 15 questions. The questionnaire on flood disaster preparedness was 22.

FINDING AND DISCUSSION

Characteristics of Respondents

Table 1 Frequency distribution of respondents in Gebangmalang village, Mojoanyar - Mojokerto district in June 2020

Deskripsi	Frekuensi	Persentase (%)
Age		
20-29 years	12	31,6
30-39 years	20	52,6
40-50 years	6	15,8
Education		
Primary school	0	0
Junior high school	4	10,5
Senior high school	29	76,3
College	5	13,2
Employment Criteria		
Not working	0	0
Private	26	68,4
Civil servant	3	7,9
Self-employed	9	23,7
Farmer	0	0
Other	0	0
Whether or not to Receive Information		
Ever	38	100
Never	0	0
Information Source Criteria		
Health worker	0	0
Relatives, neighbours, friends (non-health)	29	76,3
Mass Media/Internet	9	23,7
Books	0	0
Knowledge		
Good	5	13,2
Enough	25	65,8
Less	8	21,1
Preparedness		
Alert	25	65,8
Not Alert	13	34,2
Total	38	100

Based on table 1, it can be seen that most of the respondents were aged 30-39 years, namely 20 people (52.6%), respondents have a high school education, namely 29 people (76.3%), respondents work privately, namely 26 people (68.4%), all respondents have received information about flood disaster preparedness, namely 38 people (100%), it

can be seen that almost all respondents get information from relatives, neighbours, friends (non-health), namely 29 people (76.3%), respondents have sufficient knowledge, namely 25 people (65.8%), and most respondents were alert to flood disasters, namely 25 people (65.8%).

Table 2 Cross Tabulation of Level of Knowledge and Preparedness for Flood Disasters in Gebangmalang Village, Mojoanyar - Mojokerto Regency in June 2020

Knowledge	Preparedness				Total	
	Alert		Not Alert		F	%
	F	%	F	%		
Good	5	100	0	0	5	100
Fair	20	80	5	20	25	100
Less	0	0	8	100	8	100
Total	25	65,8	13	34,2	38	100

Based on table 4.8, it shows that all (100%) respondents who have a good level of knowledge are alert to flood disasters, almost all (80%) respondents who have sufficient knowledge are also alert to flood disasters, and all (100%) respondents who have less knowledge are not alert to flood disasters. The results of the Spearman RHo statistical test obtained p value = 0.000 and α = 0.05 and the coefficient correlation value = 0.678 so that H1 is accepted, meaning that there is a strong relationship between the level of knowledge and preparedness for flood disasters in the community in Gebangmalang Village, Mojoanyar District, Mojokerto Regency.

DISCUSSION

Knowledge Level

Based on table 1, it can be seen that most respondents have sufficient knowledge, namely 25 people (65.8%). Based on table 1, it can be seen that most of the respondents were aged 30-39 years, namely 20 people (52.6%). The more age, the level of maturity and strength of a person will be more mature in thinking and working. In terms of public trust, someone who is more mature is trusted than someone who is not yet high in maturity. This is a form of experience and maturity (Wawan & Dewi, 2010). The age of the respondents should already have good experience and mental maturity, but the sufficient knowledge they have is not due to their age but due to the lack of proper information about flood preparedness so that there are still several points that are not known such as the causes of flooding, what needs to be prepared and important telephone numbers that must be kept where these three questions get the lowest score.

Based on table can be seen that almost all respondents have a high school education, namely 29 people (76.3%). Education is needed to obtain information such as things that support health so as to improve the quality of life (Wawan & Dewi, 2010).

Respondents have sufficient knowledge even though they have a high and middle education, this is because not all information about health is given in the learning curriculum in formal education including flood disaster preparedness so that even highly educated respondents do not necessarily know everything about flood disaster preparedness.

Based on table can be seen that most respondents work privately, namely 26 people (68.4%). Work is not a source of pleasure, but more a way of making a living that is boring, repetitive and challenging. Meanwhile, work is generally a time-consuming activity. The environment of someone who works is different from someone who does not work. The environment is all the conditions that exist around humans and their influences that can affect the development and behaviour of people or groups (Wawan & Dewi, 2010). A person who works will have a more diverse environment than those who do not work, because in the environment of working people it will be easier to interact with other people who are not in the same environment in everyday life so that it will be easier to exchange information which will make their knowledge sufficient because not everyone knows about flood preparedness especially if there are no health workers in the environment.

Based on table can be seen that almost all respondents get information from relatives, neighbours, friends (non-health), namely 29 people (76.3%). Information obtained from both formal and non-formal education can provide short-term knowledge (immediate impact), resulting in changes and increases in knowledge (Fitriani, 2015). The information obtained by respondents previously came from non-health workers so that the truth could not be ascertained, other people who provided information tended to be based on personal experience of dealing with floods so that not all flood disaster preparedness was known by respondents.

Flood Disaster Preparedness

The results showed that most respondents were alert to flood disasters, namely 25 people (65.8%). Respondents who are alert to flood disasters are due to having good knowledge about flood disaster preparedness, in addition, the research location is a flood-prone area which always experiences flooding every year so that the village community has experience in dealing with flood disasters.

Respondents who are not prepared to face a flood disaster can be caused by a lack of knowledge about flood disaster preparedness, so they are not prepared when the rainy season comes, especially if the respondent's house does not experience the impact of flooding, which causes the head of the family not to be prepared. Although respondents have received information before, flood preparedness includes many things so that if the source of information obtained is not from competent parties in the field such as BNPB,

then not all information about flood preparedness is received by respondents, which makes many respondents' preparedness steps classified as not alert.

The lowest questionnaire scores were on the division of family roles and tasks (e.g. during a flood what are the roles of the father, mother, children, and household assistants), there are family members involved in flood disaster preparedness seminars/meetings/training, there are family members who have skills related to flood disaster preparedness, and keeping PLN numbers, police numbers, PAM, PMI, NGOs, firefighters. This preparedness received the lowest score, which means that families do not carry out this preparedness, so they only face flood disasters without any special preparations.

Relationship between Knowledge Level and Flood Disaster Preparedness

The results of the analysis show that all (100%) respondents who have a good level of knowledge are alert to flood disasters, almost all (80%) respondents who have sufficient knowledge are also alert to flood disasters, and all (100%) respondents who have less knowledge are not alert to flood disasters. The results of the Spearman RHO statistical test obtained p value = 0.000 and α = 0.05 and the coefficient correlation value = 0.678 so that H1 is accepted, meaning that there is a strong relationship between the level of knowledge and preparedness for flood disasters in the community in Gebangmalang Village, Mojoanyar District, Mojokerto Regency.

Knowledge will affect the community's concern to be ready and alert in anticipating disasters, especially for those who live in areas prone to natural disasters and make the community more alert to anticipate the possibility of disasters to avoid casualties, property losses, and changes in community life in the future (Lindawati & Wasludin, 2017).

Respondents who have good knowledge tend to be alert to flood disasters, as well as respondents who have sufficient knowledge, because knowledge can be used as a basis for action including preparedness in the face of flood disasters. Respondents who have sufficient knowledge but are not alert in the face of flood disasters are because they do not divide family roles before floods come, do not keep important numbers such as PLN, police numbers, PAM, PMI, NGOs, firefighters, and most importantly none of them have attended seminars or emergency training to face flood disasters, so they only have knowledge but do not materialise in action.

CONCLUSION

There is a relationship between the level of knowledge about flood disaster preparedness in the community in Gebangmalang Village, Mojoanyar Subdistrict, Mojokerto Regency. Good knowledge can be the basis for alert behaviour towards flood disasters.

Suggestions For Health Workers, It is expected for health workers to provide information about flood disaster preparedness in the community in collaboration with the BNPB region to provide counseling and simulations or training for the community with video media, leaflets, or booklets that contain visual elements so that respondents more easily understand how to be prepared for flood disasters.

Suggestions For the community, It is expected that the community will increase their knowledge about flood disaster preparedness by seeking as much information as possible from trusted sources, attending training related to emergencies in the community, so that the community can prevent flood preparedness appropriately.

Suggestions For Future Researchers, It is hoped that further researchers will develop research related to efforts to increase knowledge to change community behaviour for the better.

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