Public relation knowledge about disaster management in the emergency response phase as an effort for disaster risk reduction

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Abstract. According to Sutopo, Head of the BNPD Data, Information and Public Relations Centre, the earthquake disaster that occurred in Palu, there were 1,948 fatalities, 843 missing, and it is estimated that many victims were buried in the estimated figures until they reached thousands (BCC Indonesia, 2018). The losses suffered are also estimated to be very large. Preparedness is one part of the disaster management process and in the current developing concept of disaster, the importance of preparedness is one of the important elements of proactive disaster risk reduction before a disaster occurs. (LIPI-UNESCO, 2006). The object of this research is the people of Palu who live in Temporary Resettlement in several locations, namely Petobo, Balaroa, Silae, Lero, and Kampung Baru. This study uses economic modelling methods to determine the relationship between variables and as many as 150 people are sampled in the collection of data needed. The variables of this study are age, education, occupation, and aspects contained in the disaster risk reduction index (Carreno et al., 2004). The conclusion is that age is very influential on emergency response planning and implementation of warning systems as well as community preparedness and training, on the other hand education and employment have no effect at all in the DRR index. Therefore, there needs to be an evaluation from both the local and central government, the community, and academics to think about ways to reduce disaster risk by increasing public knowledge of disasters.

1. Introduction

The magnitude 7.4 earthquake followed by the tsunami and liquefaction in Central Sulawesi, September 28, 2018 caused material losses of Rp18.48 trillion. The Center for Data and Information (Pusdatin) in the Palu earthquake also recorded 4,340 fatalities. The biggest losses were in the settlement sector. Nearly all buildings along the Gulf Coast of Palu were flattened by the tsunami. Buildings in the Petobo, Balaroa and Sibalaya areas affected by the liquefaction were severely damaged by the earthquake (Central Sulawesi Governor - Longki Djanggola, CNN Indonesia, 2019).

The Head of the LIPI Geotechnology Research Center, Eko Yulianto, explained that Indonesia has an earthquake zoning map. Especially in Central Sulawesi, especially on the path that was passed by the Palu Koro Fault Fault, which is in the category of red to brown which translates that the area is prone to earthquakes. The Palu Koro fault fault is a fault that divides Sulawesi into two western and eastern parts, and is an active fault. He also believes that the geographical conditions of the City of Palu make disaster preparedness and alertness a concern so that adverse impacts can be minimized (BBC Indonesia, 2018).
Because of the disaster has a massive impact and requires the public to understand disaster management. This was supported by Sutopo Nugroho's statement as Head of the BNPB Data, Information and Public Relations Center, 1,177 deaths were found in Palu, 153 people in Donggala, 65 people in Sigi, and 12 people in Parigi Moutong. Where all victims of the disaster itself are Indonesian citizens. While 2,549 people were reportedly seriously injured and are being treated at a local hospital. In addition 113 people were declared missing and 152 still buried under rubble. In addition to the large number of victims who have fallen in the cities of Palu, Sigi and Donggala, they have also lost material wealth such as houses. The number of refugees in 14 points reached 70,821 and as many as 65,733 houses were reportedly damaged. So that it forces the people who lost their homes to live in temporary shelters (huntara) that have been provided by the government. (Beritatagar.id, 2018). By seeing the many losses experienced, of course this makes a big stumbling block for the people of Palu City. Because due to the disaster that struck thousands of victims have caused the reduction in human resources. The number of victims who fell is none other than the lack of public knowledge about disaster mitigation.

Therefore, this research is made to be a benchmark for the government and the public about the knowledge in the community on the disaster management index so that it can be one source of information in conducting a risk management disaster. In addition, by knowing the disaster risk reduction index, it is a good step to minimize or can even reduce the number of victims who fall when one day the disaster hit Palu

2. Method

2.1 Questionnaires

According to Arikunto (2006: 151), "Questionnaire is a written statement that is used to obtain information from the respondent in the sense of a report about the person or things that he knows". Meanwhile, according to Sugiyono (2008: 199) "Questionnaire is a technique of data collection which is done by giving a set of questions or written statements to respondents to be answered". Questionnaire consists of two types namely, open questionnaire and closed questionnaire. In this study, researchers used an open questionnaire. Open questionnaire is a questionnaire that gives freedom to the object of research to answer. The object of this research is the people living in Temporary Shelter (HUNTARA).

2.2 Sampling Technique

In this research, researchers use Probability Sampling. Where the definition of Probability Sampling according to Sugiyono [2011: 118 - 127] is a sampling technique that provides equal opportunities for each usur (member) of the population to be elected as a sample member. These techniques include, simple random sampling, proportionate stratified random sampling, disproportionate stratified random sampling, area sampling. In our observation, researchers use simple random sampling. Simple Random Sampling is stated simply because the sampling of members of the population is done randomly without regard to strata that exist in that population.

Simple random sampling is a technique for getting samples that are directly carried out on the sampling unit. Then each sampling unit as an isolated element of the population has the same opportunity to be sampled or to represent the population. The method is carried out if a population member is considered homogeneous. This technique can be used if the number of sampling units in a population is not too large. Lottery, ordinal, and random number tables can do the method of taking samples with simple random sampling.

2.3 Multiple Linear Regression

According to Sugiyono (2014: 277) that "Multiple linear regression analysis intends to predict how the condition (ups and downs) of the dependent variable (criterion), if two or more independent variables as a predictor factor are manipulated (raised the value down). So multiple regression analysis will be
done if the number of independent variables is at least 2 ".

In this study there are three variables in which the age, education and occupation variables. With the number of variables, of course the theory of multiple linear regression analysis becomes one of the right theories for managing data that has been obtained from observations that have been made.

2.4 Time and Place of Research
This research was carried out from June until September 2019. The place of research was held in shelters spread in the cities of Palu, Sigi, and Donggala.

3. Result and Discussion
3.1 Disaster Management
Disaster management is a dynamic, sustainable and integrated process to improve the quality of steps relating to disaster observation and analysis, mitigation prevention, preparedness, early warning, emergency response, rehabilitation and disaster reconstruction (Law No. 24/2007).

Disaster management according to the University of British Columbia is the process of forming or setting common goals and common values to encourage the parties involved (participants) to plan and deal with both potential and actual disasters. Disaster management according to the University of Wisconsin is a series of activities designed to control emergency disaster situations and prepare a framework to help people who are vulnerable to disasters in avoiding or overcoming the effects of the disaster.

Disaster management according to Nurjanah (2012: 42) as a dynamic process about the workings of disaster management functions such as planning, organizing, actuating, and controlling. How it works includes prevention, mitigation, and preparedness for emergency response and recovery.

The impact of disaster losses will also be affected by human resilience to disasters. For example, in areas that have a high level of hazard (hazard) and have a vulnerability / vulnerability (vulnerability) will not experience a large loss impact if human resilience to humans is also high. From this description, it can be understood that a disaster is a dynamic interaction between threats, vulnerabilities and capacities.

In general human roles in disasters include: (1) Inability and / or lack of willingness to prevent or reduce disaster threats, (2) Inability and / or lack of willingness to unravel vulnerabilities; even humans often increase vulnerability with a variety of behaviors that are insensitive and insensitive to potential disasters, and (3) Inability and / or lack of willingness to, increase abilities / knowledge in dealing with potential disasters.

The concept of disaster resilience is an evaluation of the ability of the system and infrastructure - its infrastructure to detect, prevent and handle hazards or disasters that arise. Thus, although the area is prone to disasters and has a large human population if balanced with good disaster resilience, the impact of disasters can also be minimized as much as possible. (Kharisma Nugroho, et al. 2012: BNPB).

Disaster Risk Management according to Syarif and Kondoati (2006) citing Carter (2001), is disaster management as an applied science (applicative) that seeks, by systematically observing and analyzing disasters to improve actions (measures), related to prevention (preventive), reduction (mitigation), preparation, emergency response and selection. Management in disaster relief is important for top management, which includes planning (organizing), organizing, leadership (directing), coordinating (coordinating), and controlling (controlling). Meanwhile according to Agus Rahmat (2006: 12). Disaster Risk Management is a series of activities that cover aspects of disaster planning and management, before, during and after a disaster, known as the Disaster Risk Management Cycle.

3.2 Disaster Management Index
Disaster management is the process of forming or setting common goals and common values to encourage the parties involved (participants) to plan and deal with both potential and actual disasters.
Some of the disasters can be predicted when they will occur, but there are still disasters which until now has not found an accurate detection. Therefore, disaster management is needed to minimize casualties, both lives and property. With disaster management, it is hoped that the community will be able to understand and apply it in their daily lives. The disaster management index consists of:

3.2.1 Organization and Coordination of Emergency Operations
Coordination is a form of cooperation between related parties who are commanded by a leader such as a minister or president to ensure that the activities are carried out with proper harmony among the members themselves. This coordination needs to be carried out so that the activities carried out are structured and on target, whether or not disaster management is determined by coordination between relevant parties such as BNPB, BPBD, PUPR and others. Organizations that play a role in disaster management are Non-Government Organizations (NGOs) or NGOs. In disaster management, it is very much needed the participation of NGOs and NGOs directly involve the community because the organization does not have political interests in it so that it can easily participate in helping the community.

After conducting the research, we tried to manage the data with multiple linear regression analysis. Where the analysis consists of three types, namely R Square, Test-F, and Test-T. As for the results of the analysis of R Square obtained is 3.4%. Which means that age, education, and employment have an influence on people's understanding of the organization and coordination of emergency operations by 3.4%. Therefore, it can be ascertained that the 96.6% is influenced by being influenced by other variables or by variables that are not thorough. While the results obtained from the F-Test are that age, education, and stimulant work (jointly) do not affect the community's understanding of the organization and coordination of emergency operations caused by. In addition, for the results of the T-Test is for the age variable obtained results are, for the education variable is, and for work is. It can be concluded that age, education, and occupation do not have an influence on the community's understanding of living in temporary shelters (shelters) about the organization and coordination of emergency operations.

3.2.2 Emergency Response Planning and Implementation of Warning Systems
Disaster emergency response planning is carried out so that disaster management can be controlled and in accordance with expectations and can handle the impacts that include recovery and evacuation of victims, property, fulfillment of basic needs, protection, refugee management, and restoration of infrastructure and facilities. Emergency response planning prepared by BNPB and implemented by relevant government agencies. The early warning system in question is those issued by BMKG such as extreme weather; extreme climate; dangerous sea waves; and tsunami. The implementation of this early warning must prioritize the safety of the community in order to minimize the loss of both property and lives. Therefore, the delivery must be timely and easily known by all members of the community.

After conducting the research, we tried to manage the data with multiple linear regression analysis. Where the analysis consists of three types, namely R Square, Test-F, and Test-T. As for the results of the analysis of R Square obtained is 8.8%. Which means that age, education, and employment have an influence on people's understanding of the organization and coordination of emergency operations by 8.8%. Therefore, it can be ascertained that the amount of 91.2% is influenced by being influenced by other variables or by variables that are not thorough. Whereas the results obtained from the F-Test are that age, education, and stimulant work (jointly) influence the emergency response planning and implementation of the warning system caused by. In addition, for the results of the T-Test is for the age variable obtained results are, for the education variable is, and for work is. It can be concluded that only age has an influence on the community of understanding of living in temporary shelters (hutentara) about emergency response planning and implementation of warning systems.

3.2.3 Updated Simulation and Inter-Institutional Response Test
The renewal of the simulation in question is to carry out an activity that illustrates or is similar to the potential for a disaster event and how to deal with or overcome it to the community periodically according to the type of potential disaster in the area. What is meant by the response test is a form of collaboration between government agencies and the community in providing responses and reactions and applying it in the field. If the response from each government agency is good, the handling will be more efficient.

After conducting the research, we tried to manage the data with multiple linear regression analysis. Where the analysis consists of three types, namely R Square, Test-F, and Test-T. As for the results of the analysis of R Square obtained is equal to 1.6%. Which means that age, education, and employment have an influence on people's understanding of the renewal of inter-agency simulation and response tests of 1.6%. Therefore, we can be sure that 98.4% is influenced by being influenced by other variables or by variables that are not thorough. Whereas the results obtained from the F-Test are that age, education, and stimulant work (jointly) do not affect the community's understanding of the renewal of the simulation and the inter-agency response test caused by. In addition, for the results of the T-Test is for the age variable obtained results are, for the education variable is, and for work is. It can be concluded that education and occupation do not have an influence on the community's understanding of living in temporary shelters (huntara) about the renewal of simulations and inter-agency response tests.

3.2.4 Community Preparedness and Training
Disaster preparedness is a series of activities carried out to anticipate disasters through organizing as well as through effective and efficient steps. Such preparedness can be identified through community training and simulations conducted. Community training in the form of knowledge about disaster, how to save themselves, as well as equipment that needs to be prepared.

After conducting the research, we tried to manage the data with multiple linear regression analysis. Where the analysis consists of three types, namely R Square, Test-F, and Test-T. As for the results of the analysis of R Square obtained is 3.3%. Which means that age, education, and employment have an influence on people's understanding of community preparedness and training by 3.3%. Therefore, it can be ascertained that the danger of 96.7% is influenced by being influenced by other variables or by variables that are not thorough. Whereas the results obtained from the F-Test are that age, education, and stimulant work (jointly) do not affect the community's understanding of community preparedness and training as much as that caused by. In addition, for the results of the T-Test is for the age variable obtained results are, for the education variable is, and for work is. It can be concluded that only age has an influence on the community's understanding of living in temporary shelters (huntara) about community preparedness and training.

3.2.5 Rehabilitation and Reconstruction Planning
Rehabilitation is the improvement and restoration of all aspects of public or community services to an adequate level in post-disaster areas with the main objective of normalizing or running properly all aspects of government and community life in post-disaster areas. Rehabilitation is carried out through activities: improvement of the environment of the disaster area, improvement of public infrastructure and facilities, provision of assistance to repair community homes, psychological social recovery, health services, reconciliation and conflict resolution, recovery of socio-economic culture, restoration of security and order, restoration of government functions, and recovery public service function.

Reconstruction is the formulation of policies and efforts as well as concrete steps that are well planned, consistent and sustainable to rebuild permanently all infrastructure, facilities and institutional systems, both at the government and community level, with the main objective of growing economic, social and cultural activities, upholding the law and order, and the rise of the role and participation of civil society in all aspects of community life in post-disaster areas. The scope of the reconstruction consists of a physical reconstruction program and a non-physical reconstruction program.

After conducting the research, we tried to manage the data with multiple linear regression analysis.
Where the analysis consists of three types, namely R Square, Test-F, and Test-T. As for the results of the analysis of R Square obtained is 3.1%. Which means that age, education, and employment have an influence on community understanding of rehabilitation and reconstruction planning by 3.1%. Therefore, it can be ascertained that the 96.6% is influenced by being influenced by other variables or by variables that are not thorough. Whereas the results obtained from the F-Test are that age, education, and stimulant work (jointly) do not affect the community's understanding of rehabilitation and reconstruction plans as much as those caused by do. In addition, for the results of the T-Test is for the age variable obtained results are, for the education variable is, and for work is. It can be concluded that age, education and occupation have no influence on the community's understanding of living in temporary shelters (huntara) about rehabilitation and reconstruction planning.

4. Conclusion
Based on the results of the analysis in the section above, it is explained that the lack of public knowledge related to disaster management is due to the lack of implementation of risk reduction from the government. The lack of implementation can be seen from several perspectives, including the following:
1. Community understanding related to the agency tasked with disaster management is still lacking, as well as the community's knowledge about the distribution of disaster status, there are still many people who do not know about the distribution of the status of the disaster.
2. Community knowledge related to BMG duties and community satisfaction with BMKG services is still lacking for the community as well as a lack of community satisfaction with government services in meeting their needs.
3. Community knowledge about simulations, updating tests, and inter-agency response tests can be concluded that the majority of the community already understands the roles of organizations and organizations working in the field of humanity.
4. Community understanding of preparedness and community training in disaster risk reduction is still lacking, such as lack of knowledge about how preparedness is done in dealing with disasters and do not yet know what types of preparedness exercises are. On the other hand, the public already knows that the provision and preparation of materials, goods, and equipment to fulfill the recovery of infrastructure and facilities is an important aspect of disaster preparedness.
5. Based on all the diagrams that describe the planning of repairs and reconstruction, it can be concluded that there is still a lack of community understanding regarding rehabilitation and reconstruction in the post-disaster affected areas.

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