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ANALYSIS OF THE NEEDS FOR DEVELOPING A POCKETBOOK ON ERUPTION DISASTER MITIGATION BASED ON LOCAL VOCABULARY OF THE MOUNT MERAPI SLOPE COMMUNITY IN KABUPATEN KLATEN

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Abstract: Communication is one component of disaster mitigation, conveying information related to disasters is necessary in reducing disaster risk. The use of foreign vocabulary for disaster terms is difficult to understand for the elderly on the slopes of Mount Merapi, so this research aims to determine the need for a disaster mitigation pocketbook based on local vocabulary in reducing disaster risks and identifying local vocabulary for the Merapi Eruption disaster in mountain slope communities. Developing of a disaster mitigation pocketbook using the ADDIE model is Analysis, Design, Development, Implementation, and Evaluation, research is only in the first stage of the 5 stages, limited to the analysis stage. Respondents in this study were elderly people and elderly companions, in three villages on the slopes of Mount Merapi, namely Sidorejo, Tegalmulyo, and Balerante villages, which are villages directly affected by the eruption of Mount Merapi. The results of the needs analysis showed that 88% of elderly companions agreed with the existence of a disaster mitigation pocketbook based on local vocabulary, while for the elderly 86% agreed. The incorrect local vocabulary identification is the term "lava flood" in the local vocabulary "bena lenduth". Developinh a disaster mitigation pocketbook based on local vocabulary is expected to provide informative communication between elderly companions and the elderly in increasing disaster preparedness.

Keywords: Eruption, Pocketbook, Local Vocabulary

INTRODUCTION

Indonesia is a "Disaster Supermarket" because the country's territory consists of islands, so it is potentially prone to multi-risk disasters (Yulianto et al., 2021), (Research Center for Village Social Welfare and Connectivity, National Research and Innovation Agency, Yogyakarta Region Gedongkuning et al., 2022). Disaster is a phenomenon that occurs due to various trigger factors, threats (hazards), and vulnerabilities. These three things cause risk (Hayati et al., 2019).

Disasters are a series of events that threaten people's lives caused by natural factors or the impact of human activities, resulting in loss of life, material losses (property), and psychological impacts on the community, this is by Law No. 24 of 2007, in (Kartika et al., 2023). Indonesia is one of the countries with the most active volcanoes with an accumulation of 27% of the world's volcanoes being in Indonesia (Nur Imamah et al., 2023). The physiographic location of this country is in a series of volcanic rings which are the meeting point of two circum mountain ranges, namely the Pacific and Mediterranean. According to its geological location, it is at the meeting point of three plates, namely the Indian-Australian, Eurasian, and Pacific plates, by reviewing its location, Indonesia is in an active seismic zone that has an impact on the number of active volcanoes (Bramasta & Irawan, 2020)

Several islands in Indonesia are scattered with volcanoes, on Java island, there are 34 volcanoes of type A, B, and C (2023). Volcanoes in the very active and high-risk category are intensively monitored by the Center for Volcanology and Geological Disaster Mitigation (CVGDM), Mount Merapi is one of the stratovolcanoes (Dove, 2008; Lavigne et al., 2000; Sinaga, 2021)

Mount Merapi erupted more than 80 times from the 1600s to 2010 with a period of every 4 years (B & Kiswiranti, 2013). From early 2020 until April, Mount Merapi erupted 8 times (Sinaga, 2021), the rest period (response time) of Mount Merapi without erupting is in the range of 1-71 years according to the Geological Agency, 1979 (B & Kiswiranti, 2013).

Table 1. Impact of Merapi Eruption

No	Eruption Time	Impact
1	January 18, 1954	64 people died, 57 injured, Boyolali-Magelang infrastructure damaged
2	May 08, 1961	6 people died, 19 livestock died, 100 houses were destroyed, and smelly rain in Yogyakarta and Magelang
3	October 8, 1967	Ash rain in the Magelang, Temanggung and Wonosobo areas
4	7 – 9 January 1969	3 people died, 19 houses damaged, one village destroyed
5	April 15, 1972	200 people died, and ash rained in Yogyakarta, Magelang, Klaten, Boyolali to Semarang
6	November 22, 1994	67 people died, 2 villages (Turgo Village and Tlogo Nirmolo) were destroyed by hot clouds
7	January 14-17, 1997	Ash rain in the areas of Sleman, Klaten, Boyolali, and Magelang
8	11 – 19 July 1998	Ash rain in Muntilan, Temanggung and Purworejo
9	May – June 2006	2 people died, 12,000 people were displaced and ash rain fell in Sleman, Magelang, and Boyolali
10	October – November 2010	332 people died, 1,705 people were injured, 2,447 houses were damaged
11	May 11, 2018	Ash rain in Sleman, Yogyakarta city, Bantul and Kulonprogo
12	January 29, 2019	Hot clouds and avalanches
13	March 27, 2020	Ash rain in Magelang Regency
14	January 4, 2021	Hot cloud avalanches and incandescent lava.

Source : (Arief Nurrachman, 2021)

The record of the Mount Merapi eruption in 2010 was the largest in the history of Merapi, this had an impact on severe damage in the area around Merapi. This eruption caused severe damage to residential areas and infrastructure, as many as 2,447 houses were severely damaged, and 6,427 houses were slightly damaged. The death people from the eruption 332 people, while the minor injuries were 1,412 people, and 293 people were seriously injured. The eruption of Merapi also had an impact on the psychological disorders of 4,874 people (Brotopuspito, 2011 (Salawane et al., 2019).

People living around Mount Merapi need to increase their vigilance to reduce the risk of volcanic eruptions which could occur at any time (Rahma, 2020). It is important for communities to understand the risks and potential impacts of disasters to build capacity so that crises can be resolved before a natural disaster such as a volcanic eruption occurs (Hayati et al., 2019).

The eruption of Merapi is a special concern for the government because the impact caused by the disaster affects people's lives. The government must protect the community by taking appropriate steps to reduce the risk of disaster as stated in the National Disaster Management Law. Law of the Republic of Indonesia Number 24 of 2007 concerning disaster management in situations where potential disasters occur consists of: (1) preparedness; (2) early warning; and (3) disaster mitigation. One of the implementations of disaster mitigation

policies is local wisdom, this aspect is an important part that needs to be considered (Usman et al., 2014). Local wisdom in disaster mitigation is able to reduce the number of fatalities as a result of volcanic eruptions, local wisdom has an important role in communication in a community of a society related to disaster mitigation (Andreastuti et al., 2019).

One category of local wisdom is language, which must be understood, used, and maintained so that it is not lost due to the development of the times (M. Zaqin, 2021). Language as a means of communication in disaster-prone areas is very important and necessary to convey information between the community and BPBD, the obstruction of the evacuation process before or during an eruption causes problems, this is because the community, especially the elderly (elderly age group) had different disaster terms with BPBD. Terms related to disasters use foreign vocabulary that is not easy for the general public to understand (Gadjah Mada University, 2019).

Disaster risk communication before, during, and after a natural disaster is a protective measure (Rød et al., 2012). Considering the importance of communication in disaster management in relation to communication as a function of socialization, education, coordination, and counseling, this communication must be easily understood by the community (Barata et al., 2018). Communication carried out by the Nanggroe Aceh Darusalam Community when an earthquake occurred followed by the receding sea water was a sign that a greater disaster was coming. So that the ancient people shouted "Smong" which meant giving the order to run to the mountainous area because the seawater had started to rise to the surface (Teguh Sulistiyani & Tsania Zulfa, 2023). In this study, the local language used in disaster management before and during a disaster, the use of local terms used by the elderly (elderly population).

The media in delivering disaster mitigation are various types, one of which is a disaster pocketbook containing information related to disasters. Pocketbooks are a tool for delivering steps and efforts to reduce the impact of disasters. Utilization of pocketbooks to improve community preparedness related to the Merapi eruption disaster. The pocketbook used by BPBD in educating the community on the slopes of Mount Merapi uses disaster vocabulary that has become a foreign term for disasters in BNPB. Disaster terms are easily understood by people of young/productive age but for the elderly (over 65 years old), they still use local terms that are only understood and comprehended by people of the same age.

Disaster mitigation to improve preparedness for disasters that come at any time, so that the community has a responsibility not only for themselves but for communities that have limitations in dealing with disasters, one of which is the elderly who need assistance. Communication is one of the important methods in disaster mitigation activities, so knowledge and understanding are needed related to disaster terms according to BNPB and local disaster terms/vocabulary.

Based on these problems, elderly companions in disaster-prone areas need knowledge related to disaster terms in local languages/local vocabulary to provide understanding to the elderly about disasters by BPBD's direction to reduce the risk of Mount Merapi eruption disasters. Therefore, media is needed for a disaster mitigation pocketbook based on local vocabulary for the people on the slopes of Mount Merapi who are directly affected by the eruption of the mountain.

This study is an initial investigation into the development of a disaster mitigation pocketbook based on the local vocabulary of the Mount Merapi slope community. This study aims to determine the needs of the community (elderly companions and the elderly) for pocketbooks/media that facilitate community communication related to disasters. The purpose of the needs analysis is to identify basic problems regarding the need for media in this case a disaster mitigation pocket book based on

local vocabulary. This study uses the ADDIE method which consists of 5 stages, the initial stage is needs analysis, namely the analysis of problems in the community related to the development of disaster mitigation pocketbooks, libraries used as references and theories to be used.

LITERATURE REVIEW

Songhori, 2008 (Tambunan, 2021) needs analysis an activity that refers to the activity of collecting information to identify the needs of students, in this study the identification of community needs on the slopes of Mount Merapi. Conducting a needs analysis in developing a disaster mitigation pocketbook, can increase community knowledge, especially among the elderly, related to disasters, which is expected to reduce the risk of Mount Merapi eruption disasters.

The meaning of a pocketbook is a small book that can be stored in a pocket so that it is easy to carry (KKBI, 1990). A disaster mitigation pocketbook is a book that contains information about disaster management to reduce the risk of natural disasters, this book is a guideline and general knowledge to increase preparedness (BNPB, 2019)

Vocabulary is a component of language that contains information and is related to the meaning of words, which is the result of human activity. Vocabulary that represents the socio-cultural position of society into social events in society, especially those related to disasters in a geographical area.

RESEARCH METHODS

Research on the development of disaster mitigation pocketbooks uses the research and development (R&D) method. The purpose of using this method is to produce a product, and then test the validity and effectiveness of the product (Sugiyono, 2016) in (Yanto et al., 2022). This study uses the ADDIE model (Analysis – Design – Development – Evaluate), five stages in this model. This study is limited only to the needs analysis stage derived from initial observations in the research area and the product of the study is a disaster mitigation pocketbook based on local vocabulary.

Elderly people are members of society who have the highest vulnerability compared to other age groups, such as in (Nabil & Abhipraya, 2021), the elderly are a group at risk before, during, and after a disaster, this is due to the decline in the elderly's physical condition, serious illness (Faisal & Manalu, 2023).

Elderly companions in three villages on the slopes of Mount Merapi (Tegalmulyo Village, Sidorejo Village, Balerante Village), the number of elderly is 57 elderly with an age group of >75 years and 25 elderly companions who are on duty and responsible for the elderly when the Merapi eruption occurs. The sampling technique is purposive sampling where the determination of the sample is based on the purpose. Pocketbooks and foreign terms in disaster mitigation for productive age people can be understood easily but for the elderly with the terms of past disasters that are attached to the elderly. So, it takes an elderly companion who will be a liaison between BPBD and the elderly.

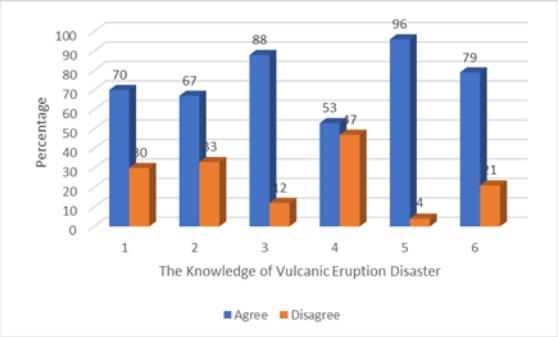
The data collection technique in this study was a survey with a questionnaire instrument using a questionnaire sheet for the elderly and elderly companions. The questionnaire was used to determine the opinions of elderly companions and the elderly regarding the need for a local vocabulary-based mitigation pocketbook. The data analysis technique used in this study was a descriptive analysis technique. This research instrument consists of material aspects, linguistic aspects, and presentation aspects.

RESULTS AND DISCUSSION

Analysis of the need test for a local vocabulary-based disaster mitigation pocketbook for the people on the slopes of Mount Merapi consists of 3 aspects, namely disaster knowledge, and the need for media use (disaster mitigation pocketbook) to reduce the risk of Mount Merapi eruption disasters. This analysis was conducted on two types of respondents, namely the elderly

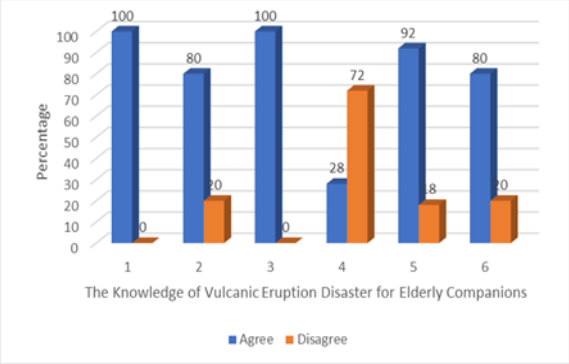
and elderly companions. There is a high need for a local vocabulary-based disaster mitigation pocketbook among the elderly and elderly companions on the slopes of Mount Merapi. The results of the disaster knowledge analysis are shown in Figure 1.

Figure 1. Knowledge of Mount Merapi Eruption Disaster in Elderly Respondents



The results of the study showed that the knowledge of the elderly in disasters is high, related to the understanding of eruptions, 70% of respondents understand, the question that Mount Merapi is an active volcano in Java 67% agree. The volcanic eruption disaster is one of the disasters that cannot be prevented because it is a volcanic activity that has nothing to do with human activity 95% of respondents agree. Signs that a mountain will erupt are earthquakes and rumbling sounds, the majority of respondents agree 96% and the impact of the eruption includes dead people, injuries, and loss of property according to respondents 79%.

Figure 2. Knowledge of Mount Merapi Eruption Disaster in Elderly Respondents

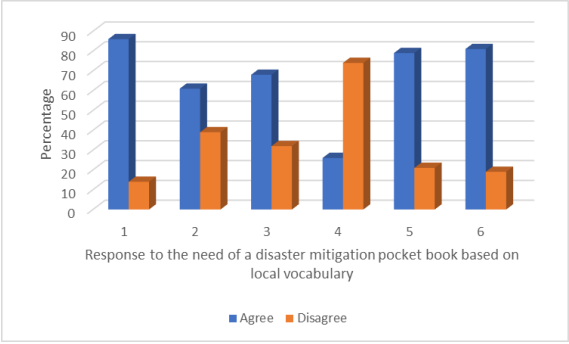


The same thing in the elderly companion respondents who provided information related to knowledge about the eruption of Mount Merapi, in the first question all respondents gave an answer agreeing to the meaning of volcanic eruption by 100%, Mount Merapi is the most active volcano on the island of Java 80% answered agree and 20% answered disagree, the third question that the volcanic eruption disaster is a disaster that cannot be prevented by humans respondents answered 100% agree.

The fourth question was when Mount Merapi erupted did it have a direct impact on the area respondents' 72% disagreed. Related to the early signs of a volcanic eruption is an earthquake and a rumbling sound around the mountain the majority of respondents answered agree 92%. The impact of the volcanic eruption disaster is the loss of life, serious or minor injuries, and material losses (damage to homes and loss of property) respondents answered 80% agree.

The image below shows that elderly respondents gave their opinions and decisions regarding the use of media to reduce the risk of the Mount Merapi eruption disaster.

Figure 3. Response to the Need for Disaster Mitigation Pocket Books among Elderly Respondents

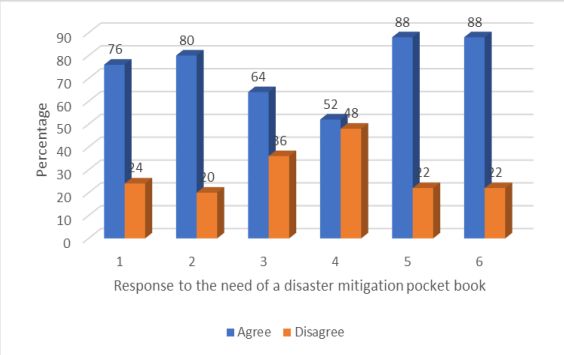


From the results of the study, the first question of elderly respondents gave an 86% agreement statement regarding knowledge about disasters on the slopes of Mount Merapi is important, the respondents' responses about the importance of the community having a guide in reducing disaster risks, one of which is a book issued

by BPBD, 61% agreed while 39% disagreed with the book media.

Local wisdom is a method for reducing disaster risks that is very effective because the target of this study is the elderly 68%. In the book published by BPBD, only 26% of respondents thought it was easy to understand, but 74% were not easy to understand because they used foreign terms. Local vocabulary/language in disaster terms is easy to understand by respondents, this is shown in the study of respondents who stated that they agreed 79%. The pocket book from BPBD which already has several disaster terms for the eruption of Mount Merapi was replaced with local vocabulary terms, which was responded positively by 81% of respondents.

Figure 4. Response to the Need for Disaster Mitigation Pocket Books from Elderly Companion Respondents



Respondents accompanying elderly people provided opinions regarding the need for disaster mitigation pocket books gave a statement of agreement 76% related to knowledge about disasters on the slopes of Mount Merapi is important, respondents' responses about the importance of the community having a guide in reducing disaster risks, one of which is a book issued by BPBD 80% agreed while 20% disagreed with the book media. Local wisdom is a method for reducing disaster risks that is very effective because the target of this study is the elderly 64%. In the book published by BPBD, only 52% of respondents thought it was easy to understand, but 74% were not easy to understand because they used foreign terms.

Local vocabulary/language in disaster terms is easy to understand by respondents, this is shown in the study of respondents who stated that they agreed 88%. The pocketbook from BPBD which already has several disaster terms for the eruption of Mount Merapi was replaced with local vocabulary terms, which was responded to positively by 88% of respondents.

Based on the results of the needs test data from the elderly and elderly companions, the analysis related to the availability of disaster mitigation pocket books has been published by BPBD, but according to respondents, both the elderly and elderly companions, the pocketbooks are less understandable/not easy to understand and comprehend foreign disaster terms, especially the eruption of Mount Merapi. Therefore, it is necessary to develop a disaster mitigation pocketbook by utilizing local language/vocabulary so that it is easy to understand and comprehend by respondents, namely the elderly and elderly companions.

CONCLUSION

The results of the study showed that for knowledge related to the Mount Merapi eruption disaster, elderly respondents and elderly companions had good knowledge related to the disaster. The need for media is by the problems in the field to reduce disaster risk and increase preparedness, this is shown from the results of the study which states that the disaster mitigation pocket book guide already exists from BPBD but does not meet communication needs because it uses foreign terms in disasters. The use of local vocabulary in disaster mitigation is an alternative to facilitate communication between the elderly, elderly companions, and the government in reducing disaster risk.

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