



Community Empowerment by Socializing Disaster Management to Increase Knowledge Related to the Mount Raung Disaster in Jambewangi Village, Banyuwangi

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ABSTRACT

One of the natural disasters that often occurs in Indonesia is volcanic eruptions. Volcano disaster management in Indonesia is considered less than optimal because several areas are close to volcanoes and need to implement disaster management properly. Indonesia, with around 13,000 active volcanoes, has caused considerable losses. Mount Raung is an active volcano located in Panjen Hamlet, Jambewangi Village, Sempu District, East Java, with a peak reaching 3,332 meters above sea level and administratively included in three districts, namely Banyuwangi, Bondowoso, and Jember. The respondents used were 20 adolescents aged 18-21 years. The instrument used was a pre-test and post-test questionnaire in a Google Form. The pre-test found that adolescents' knowledge of disaster management needed to be improved. Post-test results found an increase in adolescent knowledge about disaster management to be good. Before respondents received empowerment in Mount Raung disaster management through socialization, they needed more knowledge about Mount Raung disaster management. After the socialization, the data showed that the majority of teenagers in Panjen Hamlet, namely 18 respondents (90%), had a good level of knowledge about Mount Raung disaster management. The implementation of socialization can overcome this problem because socialization is a process of learning, introducing, and disseminating knowledge, ways of life, or social values appropriate to the group to achieve a more developed personality. Socialization is effectively used as an information medium to increase adolescents' knowledge about disaster management.

KEYWORDS

Community Empowerment, Socialization, Disaster management, Mountain disaster

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1. BACKGROUND

Natural disasters are a series of natural events that can negatively impact humans,

disrupting physical and psychological health, causing environmental damage, loss of property, and even fatalities (Ibrahim et al.,

2020). One natural disaster frequently occurring in Indonesia is volcanic eruptions (Hafida, 2019). Volcanic eruptions can cause various disasters, including lava flows, mudflows, ash, forest fires, poisonous gases, tsunamis and earthquakes, and volcanic ash. Large rocks (boulders - gravel) usually fall around the crater up to a radius of 5 -7 km from the crater. In contrast, finer materials (dust) can fall hundreds or even thousands of kilometres from the crater due to being carried by wind gusts (Yuarsa, 2019). Volcanic ash can cause acute respiratory problems, including lung cancer, infrastructure damage, and water pollution (Rianto, 2019).

The implementation of natural disaster management in Indonesia is considered to be less than optimal. It is due to the public's need for more information about the importance of natural disaster management in each region. Lack of public knowledge regarding volcanic disaster management can result in inadequate efforts to anticipate the impact of natural disasters, resulting in many fatalities, losses, and disruptions to life (Pudjiastuti, 2019).

Indonesia, with around 13,000 active volcanoes, has caused significant damage. Over 10% of the population in volcanic disaster areas has a record of over 175,000

deaths from volcanic eruptions (Imansari, 2022). One of the active volcanoes in Indonesia is Mount Raung. Mount Raung is an active volcano located in Panjen Hamlet, Jambewangi Village, Sempu District, East Java, with a peak height reaching 3,332 meters above sea level and administratively included in three regencies: Banyuwangi, Bondowoso, and Jember (Dayu et al., 2021).

Interview results with 5 residents living in Panjen Hamlet stated that they have yet to be made aware of volcano disaster management, so the potential disaster from Mount Raung negatively impacts the region. Volcanic ash from the eruption of Mount Raung directly affects food crops and air quality. The community also feels a tremendous impact, especially concerning aviation activities (Solichah, 2021). Major impacts include severe infrastructure damage and increasing casualties (Afik et al., 2021).

Enhancing education about disasters is also good to be implemented in the educational realm to shape a young generation prepared to face disasters. Young people or teenagers are one of the nation's hopeful generations whose existence plays a very important role in nation-building, both in terms of economic, political, social and cultural development

with their abilities, knowledge, skills and expertise (Crisandye, 2018). Knowledge is one of the factors that influence the implementation of disaster management in an area. This research was conducted to understand and identify teenagers' knowledge in Panjen Hamlet about Mount Raung's volcano disaster management.

2. CASE REPORT

Mount Raung was reported to have experienced increased activity since June 21, 2015. Incandescent material began to spew on June 26, 2015, and eruptions occurred on June 4, 2015 (Dayu et al., 2021). On January 21, 2021, the activity level of Mount Raung was raised from Level 1 (Normal) to Level 2 (Alert) after a significant increase in visual and seismic activity was observed (Mujiyanto, 2023). The spewing of incandescent material from Mount Raung resulted in ash rain in the surrounding areas. It caused earthquakes, which are expected to disrupt the daily life of residents around the mountain (Yuarsa, 2019).

Volcanic ash from the eruption of Mount Raung directly affects food crops, especially tobacco, which is sensitive to air quality issues. Many airports were closed due to the eruption of Mount Raung. The closed airports include Juanda International

Airport Surabaya, Abdurrahman Saleh Airport Malang, Notohadinegoro Airport, Blimbingsari Airport Banyuwangi, and Ngurah Rai International Airport Bali.

3. METHODS

The respondents in this study were 20 teenagers. The inclusion criteria set by the researcher are:

- 1) Teenagers aged 17-21 years
- 2) Both male and female genders
- 3) Teenagers who reside and are currently living in Panjen Hamlet.

Exclusion Criteria:

- 1) Teenagers who are less than 17 years old
- 2) Individuals who are older than 21 years
- 3) Teenagers who reside in Panjen Hamlet but are not currently in Panjen Hamlet.

The intervention was carried out through the following stages:

- 1) The opening led by the moderator
- 2) Speeches by the local neighbourhood head and supervising lecturer
- 3) Pre-test
- 4) Presentation of material by the event implementer
- 5) Question and answer session for respondents to the speaker
- 6) Post-test
- 7) Closing

4. RESULTS

Implementation of Socialization

Before the socialization implementation, respondents must complete a pre-test questionnaire via Google Forms. The pre-test is used to determine the level of knowledge of teenagers in Panjen Hamlet about natural disaster management. After filling out the pre-test, respondents received socialization about disaster management. Socialization was conducted using lecture methods with leaflets, PowerPoint presentations, and natural disaster management guideline books as media. The socialization implementation was concluded with a post-test activity where respondents were required to fill out a post-test questionnaire to determine if there was increased knowledge about natural disaster management before and after the socialization implementation.

Evaluation of Socialization

Table 1. Knowledge of Volcanic Natural Disaster Management

Knowledge	Before		After	
	n	%	n	%
Good	0	0	18	90
Fair	6	30	2	10
Poor	14	70	0	0
Total	20	100	20	100

Table 1 shows that before the implementation of socialization, most teenagers in Panjen Hamlet, which is 70%, had poor knowledge of natural disaster management. After the socialization implementation, most teenagers in Panjen Hamlet have good knowledge of natural disaster management, which is 90%.

5. DISCUSSION

Table 1 shows that before the empowerment of Raung Mountain disaster management through socialization, most teenagers in Panjen Hamlet, which are 14 respondents (70%), had insufficient knowledge about Volcano Disaster Management. All respondents were unable to answer the pre-test questions correctly. This data proves that before the respondents received empowerment in Raung Mountain disaster management through socialization, they needed more knowledge about Raung Mountain disaster management. After the implementation of socialization, data shows that most teenagers in Panjen Hamlet, 18 respondents (90%), have good knowledge about Raung Mountain disaster management.

Knowledge results from knowing, which occurs after a person senses a certain object, enabling them to answer questions

and make decisions. Sensing occurs through the five human senses: sight, hearing, smell, taste and touch. Most human knowledge is obtained through the eyes and ears (Notoatmodjo, 2018). One external factor that influences knowledge is the presence of information media. Information can be obtained from formal and non-formal education, thereby increasing knowledge and generating motivation to make changes (Putri, 2022). Another factor influencing knowledge is education. Education can influence a person, including behaviour towards lifestyle patterns, especially in motivating attitudes and conducting development. Education consists of formal education and non-formal education. One form of non-formal education that can enhance knowledge is the provision of socialization (Zuliyanti, 2019).

The lack of information media about disaster management that teenagers can access in Panjen Hamlet results in a lack of knowledge about volcano disaster management. This condition leads to a need for more awareness and motivation for respondents to implement Raung Mountain disaster management in Panjen Hamlet. The implementation of socialization can overcome this problem because socialization is one process of learning,

introducing, and disseminating science, lifestyle or social values appropriate for the group to achieve a more developed personality through lecture methods using PowerPoint media, leaflets and guidebooks. This socialization involves the sense of sight and hearing so that the process of receiving information is faster because it involves more than one sense (Lahamit, 2021). Improving respondents' knowledge about Raung Mountain disaster management can increase community awareness in implementing volcano natural disaster management.

6. CONCLUSION

Teenagers' knowledge about volcano disaster management in Panjen Hamlet is an effort to increase insight, raise awareness, and motivate preparedness in handling natural disasters. Implementing socialization by lecture methods using leaflet media, PowerPoint, and guidebooks can be an additional information source for teenagers in Panjen Hamlet. Socialization with additional media can improve memory and understanding of the material because it involves more than one sense, effectively increasing teenagers' knowledge.

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AUTHOR CONTRIBUTIONS

Substantial contributions to conception, data collection, data analysis, and writing: Akhmad Yanuar Fahmi and Melania Belqis. Drafting or revising the article critically for important intellectual content: Melania Belqis.

CONFLICT OF INTEREST

The author declares that there is no conflict in the preparation of this article.

DATA AVAILABILITY STATEMENT

The data obtained in this study is available from the author and is not published for certain reasons; namely, there

are private data of respondents that are confidential.

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