



Capacity Building of Gupit Village Community Through Disaster Mitigation and Psychological First Aid

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ABSTRACT

Background: Flooding is a hydrometeorological disaster that has the potential to cause physical, social, economic, and psychological losses to communities. Lack of knowledge about flood mitigation can increase the risk and impact of disasters at the community level. Gupit Village, Nguter District, Sukoharjo Regency, Central Java, is one of the areas potentially affected by flooding, requiring community capacity building through education and preparedness practices. This community service activity aims to increase community knowledge and preparedness regarding flood disaster mitigation and psychological first aid.

Methods: The activities employed an educational and participatory approach through interactive lectures, leaflets, demonstrations, simulations, discussions, and a question-and-answer session. The materials covered flood risks and mitigation, preparedness before, during, and after a flood, preparing a disaster preparedness bag, and the basic principles of psychological first aid (PFA). Evaluation was conducted using pre- and post-test questionnaires.

Results: Evaluation results showed an increase in knowledge after the education. Participants demonstrated a better understanding of flood mitigation, disaster preparedness kits, and the basic principles of providing psychological first aid.

Conclusion: Education combined with demonstrations and simulations can be a potential approach to increase community knowledge and preparedness in facing flood disasters as well as the ability to provide simple psychological first aid.

KEYWORDS

flood; disaster preparedness; mitigation; psychological first aid; community service.

INTRODUCTION

Floods are a common hydrometeorological disaster that can have a wide-ranging impact on people's lives. The impacts of floods include not only damage to infrastructure and loss of property, but also health problems, disruption to community activities, and psychological impacts (International Federation of Red Cross and Red Crescent Societies, 2023). Sukoharjo Regency is one of the areas at risk of various disasters. According to

data from the Sukoharjo Regency Regional Disaster Management Agency (BPBD) Operations Center (Pusdalops) included in the activity report, 999 disasters were recorded between 2011 and 2024, including floods, extreme weather, landslides, droughts, and forest and land fires. There were 172 recorded flood incidents. Sukoharjo Regency's geographical location, along the Bengawan Solo River and with several low-lying areas, also increases the potential risk of flooding (BPBD Sukoharjo, n.d.).

In addition to environmental and geographic factors, community preparedness is a crucial component in disaster risk reduction. Preparedness encompasses a community's ability to recognize risks, prepare emergency plans, know evacuation routes, prepare emergency supplies, and take appropriate action before, during, and after a disaster (Fadilah et al., 2026). Observations and interviews show that the community still faces limited knowledge regarding flood risks and mitigation. Another problem identified is a suboptimal understanding of disaster preparedness and minimal community involvement in preparedness activities, particularly in reaching vulnerable groups such as the elderly, pregnant women, and children. Preparedness is not only related to physical aspects, but also psychological ones. Disasters can trigger various psychological responses, such as fear, anxiety, sadness, and stress. Therefore, the community also needs to acquire basic knowledge about psychological first aid (PFA). PFA is a form of initial support provided to individuals experiencing stress or difficult situations after a traumatic event. Those who can provide psychological first aid include trained members of the public, volunteers, and health professionals (Fitriyani & Anjaly, 2023). The principles of PFA include helping to create a sense of safety, meeting basic needs, actively listening, providing empathetic support, and connecting individuals with appropriate services when needed.

Based on these issues, this community service activity was implemented through flood mitigation education, a demonstration of how to assemble a disaster preparedness bag, and psychological first aid education and simulations. The activities are expected to increase public knowledge and strengthen their capacity to respond to potential flooding.

METHOD

The community service activity used an educational and participatory approach. The intervention was designed to provide knowledge and practical experience to the community regarding flood disaster preparedness, disaster preparedness bags, and psychological first aid. The activity was carried out on Friday, June 26, 2026, in Gupit Village, Nguter District, Sukoharjo Regency, Central Java. The activity was carried out from 8 A.M until finished. The target of the activity was the community of Gupit Village, Nguter District, Sukoharjo Regency, Central Java. The activity was attended by community members who were participants in the outreach.

Activity Stages

The activity was implemented in several stages:

1. Preparation

The preparation phase includes coordinating the implementation team, coordinating with village officials and the Sukoharjo Regency Regional Disaster Management Agency (BPBD), preparing materials, educational media, leaflets, questionnaires, and equipment for a disaster preparedness bag demonstration.

2. Implementation

The material was delivered using an interactive lecture method with the aid of leaflets. The main topics included the definition and causes of flooding, the risks and impacts of flooding, flood mitigation efforts, preparedness before, during, and after a flood, preparing a disaster emergency kit, evacuation routes and measures, the definition and purpose of psychological first aid, the principles of empathetic communication, and basic actions in providing initial psychological support.

3. Demonstration

A demonstration was conducted on the contents and preparation of a disaster preparedness bag. The items presented included drinking water, ready-to-eat food, personal medications, a flashlight and spare batteries, a power bank, a change of clothes, a mask, and important documents stored in a waterproof container. Participants also received a demonstration on psychological first aid. Participants were introduced to the principles of creating a sense of security, introducing themselves and establishing contact, actively listening, meeting basic needs, providing reliable information, and connecting individuals with needed services.

4. Evaluation

Evaluation is conducted through a pre-test before the material is delivered and a post-test after the entire series of education, demonstrations, and simulations are completed. The evaluation is used to determine changes in participants' knowledge levels regarding flood mitigation, disaster preparedness bags, and psychological first aid.

RESULT

The activity was attended by 15 community members who participated in the outreach. Participants demonstrated active engagement throughout the event. Participation was evident through discussions, Q&A sessions, demonstrations, and simple practices related to disaster preparedness, including demonstrations of emergency bags and psychological first aid.

Table 1. Pre-test and post-test result

Pre-test			Post-test		
No	Category	Participants	No	Category	Participants
1.	Low	12	1.	Low	0
2.	Moderate	3	2.	Moderate	5
3.	Good	0	3.	Good	10

Based on the pre-test results, the majority of participants were in the low category (12 participants, 80%), followed by the moderate category (3 participants, 20%), with no participants reaching the good category (0%). Following the intervention, the post-test results indicated a significant improvement, with participants in the good category increasing to 10 (66.7%) and those in the moderate category to 5 (33.3%). Notably, no participants remained in the low category (0%). Based on the evaluation results, participants' knowledge increased after the educational activities. Participants who previously had limited knowledge about flood mitigation, disaster preparedness bags, and psychological first aid demonstrated improved understanding after participating in the series of educational activities and demonstrations.

DISCUSSION

Educational activities on flood mitigation, disaster preparedness bags, and psychological first aid are forms of promotive and preventive interventions aimed at strengthening community capacity in facing disasters. The approach used not only focuses on providing information but also involves demonstrations, simulations, and discussions so that participants have the opportunity to connect the material to situations they might face. The main problem identified before the activities was the community's limited knowledge regarding flood mitigation. Preparedness is not only related to the availability of facilities and infrastructure but is also influenced by the community's level of knowledge and attitudes towards potential disaster risks (Hutapea et al., 2025). Adequate knowledge is an important component of preparedness because it can help individuals recognize risks, determine appropriate actions, and reduce panic when an emergency occurs. The flood mitigation material provided covered actions before, during, and after a flood. Participants were introduced to several simple measures, such as keeping drains clean, not littering, protecting water catchment areas, identifying evacuation routes, and following official information from authorities. Education about these measures is crucial because disaster mitigation is not solely the responsibility of the government but also requires community involvement. The disaster preparedness bag demonstration provided participants with practical experience on the equipment needed to prepare before a disaster strikes. The preparedness bag can help people quickly access basic necessities when evacuation is necessary (Fitria et al., 2023). The materials provided included drinking water, ready-to-eat food, personal medications, a flashlight, spare batteries, a power bank, clothing, a mask, and important documents in a waterproof container. The demonstration approach was an important part of the activity because participants not only received verbal information but also saw firsthand examples of the equipment needed (Damayanti, 2024). This method can make it easier for participants to remember information and apply it in a community context. Another focus of the activity is psychological first aid (PFA). Disasters can cause psychological stress and various emotional responses. Therefore, communities need to have basic skills to provide psychological support to individuals experiencing difficult situations. In this activity, participants are given an understanding of several basic PFA principles, including creating a sense of security, introducing themselves, asking for permission to communicate, actively listening, not pressuring victims to recount traumatic experiences, meeting basic needs, providing reliable information, and connecting victims with professionals if needed (Red Cross Red Crescent Movement MHPSS, 2019). Empathetic communication skills are a crucial part of providing PFA (Wang et al., 2021). Participants are introduced to the importance of listening without judgment and avoiding statements that can make individuals feel misunderstood. Active listening skills also help individuals feel heard and valued. Based on research by Sholihah & Imamah (2024) the majority of respondents with good knowledge and attitudes demonstrated a high level of preparedness in the face of flooding. The study also demonstrated a significant relationship between community knowledge and attitudes and pre-flood disaster preparedness. These results indicate that increasing community knowledge and attitudes can be an effective strategy in strengthening community preparedness against the threat of flooding, this is in line with the research of Susilawati et al., (2026) that flood preparedness education through counseling and visual media has been proven to be effective in increasing community knowledge by up to 96.7% in understanding the causes of flooding.

The results of the activity evaluation showed an increase in knowledge after the education was provided. These findings suggest that a combination of interactive lectures, audiovisual media, leaflets, demonstrations, simulations, and discussions can be an appropriate approach for community-based disaster education. The active participation of participants during discussions and practical exercises also contributed to the activity. Participant engagement enabled a two-way learning process and provided opportunities for participants to clarify any information they did not understand. However, this activity has limitations. Evaluation focused primarily on changes in knowledge immediately following the education, thus not being able to demonstrate whether this knowledge has resulted in long-term changes in preparedness behavior. Furthermore, the activity did not conduct a follow-up evaluation of the community's ability to evacuate under actual field conditions. Future activities could be developed through field simulations, the formation or strengthening of disaster preparedness cadres, the development of family preparedness plans, and regular monitoring to determine the sustainability of community knowledge implementation.

CONCLUSION

Evaluation results indicate an increase in community knowledge after participating in the activities. Participants gained a better understanding of flood risks and mitigation, disaster preparedness kits, and the basic principles of psychological first aid. Education needs to be implemented regularly and developed through evacuation drills, the formation and strengthening of disaster preparedness cadres, and community mentoring so that increased knowledge can be translated into sustainable preparedness behaviors.

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