Strengthening DIY Muhammadiyah SAR as a Preparation Step to Face Natural Disasters

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Abstract. Indonesia is one of the countries in the ring of fire- surrounded by volcanoes- which makes this country a location prone to natural disasters. In 2022, there were 3,494 natural disasters in Indonesia with 1,045 extreme weather events, 633 landslides, and 251 forest fires. The high incidence of natural disasters requires preparedness for all components of the Muhammadiyah search and rescue team, Special Region of Yogyakarta or DIY. This community service program was implemented using 3 methods namely preparation, implementation, and evaluation. The community service process was carried out by providing education and skill training to all supporting elements of the DIY Muhammadiyah SAR. The research participants actively participated in the overall agenda. 90% of all participants had understood the concept of disaster, and as a result, all participants acquired the skill of saving victims in water areas. This community service activity ran smoothly, and all elements enthusiastically participated. It is expected that it had meaningful benefits for the community.

Keywords: Natural Disaster, SAR Muhammadiyah DIY

1. Introduction

Indonesia is a vast country consisting of various islands that stretches from Sabang to Merauke [1]. In addition, Indonesia is located on the ring of fire surrounded by 452 volcanoes with a fairly high systemic activity status. This ring of fire condition is often given the nickname of ‘ring of fire’ that stretches across the Pacific Ocean in which a volcano can erupt at any time [2].

The geographical location of Indonesia causes it to become a mountain-disaster centre that cannot be denied. Some disasters that often occur in Indonesia include mountain eruptions, earthquakes, floods, climate change, droughts, and landslides [3]. The number of natural disasters in Indonesia in 2022 was recorded at 3,494. In 2022, 1,045 extreme weather events, 633 landslides, 251 forest fires, 28 earthquakes, 6 tidal waves, and 4 droughts were recorded. A large number of natural disasters in Indonesia caused 5.38 million people to suffer and displace, 851 people died, 8,725 people injured, and 46 people missing [4].

The high incidence of natural disasters in Indonesia requires a good disaster management concept. The disaster management system is carried out based on the disaster cycle consisting of pre-disaster, disaster, and post-disaster [5].

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When a natural disaster occurs, a quick response is needed to prevent victims of natural disasters. One of the activities in natural disasters is in the form of good disaster-post management. If the post management process is better, it will make the natural disaster response process faster, more precise, correct, and able to reduce the number of disabilities for victims of natural disasters [6].

Muhammadiyah search and rescue team, or SAR, DIY is an organization engaged in disaster management under Muhammadiyah organization. Muhammadiyah SAR DIY has a very big role in the process of disaster risk reduction and disaster management. Muhammadiyah SAR DIY has members spread throughout the Special Region of Yogyakarta (DIY) consisting of Kulonprogo Regency, Sleman Regency, Bantul Regency, Sleman Regency, and Yogyakarta City. The response given by volunteers during natural disasters must be processed quickly and precisely. The response is principled in the right coordination and communication system, and involves all stakeholders [7].

The coordination system run by the DIY Muhammadiyah search and rescue team when providing natural disaster response always coordinates with the team of all members in DIY. The division of the team is made according to the needs and expertise of each member. The expertise that is often deployed is the assessment team, residential team, kitchen team, and psychosocial team. The various problems commonly faced by the team deployed at the location are cultural barriers, especially the language. Based on the results of an interview with the treasurer of Muhammadiyah SAR DIY revealed that there were significant obstacles when the team was deployed, namely that there were still members who did not understand post-management concepts such as assessment, information data, and integrated communication systems.

The purpose of this community service activity was to equip partners with knowledge and skills in handling natural disasters.

2 Methodology

This community service program was carried out at Muhammadiyah SAR DIY with the target partners of all supporting elements of Muhammadiyah SAR volunteers. The activity was carried out for 2 days offline. The activity was carried out at the headquarter of the Muhammadiyah SAR DIY with 40 volunteers.

The stages of the community service process began with a preparation by coordinating with the Muhammadiyah SAR management. Coordination activities determined the priority of problems faced by partners and the schedule of activities. Preparatory activities were agreed to be carried out offline at the headquarters of SAR Muhammadiyah DIY, and water rescue skill training was carried out at Sermo reservoir in Kulonprogo Regency.

Community service activities on the first day were implemented. The offline activity began with a direct opening from the Head of the Emergency Response Division for Rehabilitation and Reconstruction of the Muhammadiyah Center leader. The next activity was the provision of material namely the concept of natural disasters, psychological strategies for volunteers in natural disasters, assistance to victims of natural disasters, and the concept of intervention in the community.

The second day activity was related to improving the skills of Muhammadiyah SAR DIY volunteers. In this activity, all volunteers received material for helping victims in the water with the concept of deepening water rescue. The last stage was an evaluation with a joint final discussion to see how far the progress of water rescue education and training was.
3 Result and Discussion

Based on the results of coordination with the management of the Muhammadiyah SAR DIY, it was decided that it was necessary to increase the capacity of all elements to improve knowledge and skills. The number of participants in this community service activities was 40.

Community service activities were carried out for two days. Activities are described below.

1. First-day activities

Community service activities were carried out at Tarumini MDMC DIY. The first day activities were related to the provision of educational materials to all participants related to knowing natural disasters to help victims of natural disasters. In addition, participants also received practicum material on cardiopulmonary resuscitation in victims who experienced cardiac arrest. Educational activities can be seen in Figure 1.

![Figure 1. Education process to participants.](image1)

![Figure 2. Education process and skill demonstration.](image2)

2. Second-day activities

The activities on the second day were entirely related to improving the skills of participants' abilities in assisting victims who were in the water. The activity was carried out in Sermo reservoir in Kulonprogo Regency. The activity began with the concept of housing preparation for volunteers when involved in a natural disaster. It had the function of providing an overview to participants on the importance of coordinating post-management. The coordination post preparation activities can be seen in Figure 3.

All participants received materials related to the concept of reach, throw, row, go, and tow (RTRGT) in rescuing victims in the water. Participants got material on coordination skills in the use of speed boats to get in the water. The activities can be seen in Figures 4, 5, and 6.

In the final stage, community service activities ended with a joint evaluation. The evaluation was carried out in joint discussions related to the course of activities starting from providing education and skills for participants. This agenda can be seen in Figure 7.

![Figure 3. Public kitchen coordination post skill process.](image3)

![Figure 4. RTRGT process.](image4)
The results showed that all participants had participated in the activity. The activity of providing education to participants was the first step to increase the knowledge of participants. Providing education to the community is a tangible manifestation of making people aware of the importance of disaster problem management. With more knowledge, the community is able to improve their attitudes and behaviors [8].

Providing education is also an easy way to give to the community. Educational media by providing demonstration method provide convenience in transferring knowledge. The demonstration and discussion approach directly provides a real experience and increases knowledge and skills of the community [9].

The problem arising from partners was related to the psychological resilience of volunteers when at the site of natural disasters. The approach of providing theoretical assistance, decision-making skills, and stress management can reduce the psychological condition of volunteers. The approach to relaxation and remembrance can reduce the level of stress. Strengthening stress management can reduce signs and symptoms of stress felt by the community [10].

Increasing the knowledge and psychological resilience of volunteers will manifest in a good disaster response process. Natural disasters require a quick response by volunteers. A better disaster management process begins with good knowledge and psychological state. It will make the disaster response process faster, more precise, correct, and able to reduce the number of disability and death of natural disaster victims [6].

4 Conclusion

The community service activities went smoothly, as evidenced by all participants participating in the activity for two days in total. This activity shows very significant benefits to the community by increasing the knowledge and skills possessed by participants. There needs to be continuous activities to increase the capacity of volunteers.

This community service activity ran in collaboration with the Community Service Institute of Universitas Muhammadiyah Yogyakarta with the Muhammadiyah SAR DIY. We would like to express our deepest gratitude to all elements involved.

Reference


[4] Data Informasi Bencana Indonesia, BNPB 2022


