

IMPROVING THE ADOLESCENTS' CAPACITY WITH VIDEO AND DISASTER MITIGATION SIMULATION-BASED TRAINING

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Abstract

High cliffs in the mountainous area surround the village of Rahtawu make the area more vulnerable and prone to natural disasters. This community service empowered the youth in Rahtawu Village regarding disaster mitigation with interactive training method-based videos and disaster response simulations. The respondents to the community service activity consisted of 55 adolescents from four hamlets in Rahtawu Village. The stages of the community service activities included pre-test, video-based training, disaster mitigation simulation, and post-test. The questionnaire contains 20 questions about adolescents' knowledge and attitudes regarding disasters, disaster prevention, and the role of adolescents during disasters. The community service activity resulted in an increase in knowledge and attitudes both before and after the intervention, taking the form of video-based training and disaster mitigation simulations. The adolescents were very enthusiastic about following each discussion topic. Adolescents Understood the importance of disaster mitigation. The researchers expect these adolescents can spread knowledge about disaster mitigation in their surroundings.

Keywords: Adolescents, Disaster Mitigation, Training, Video

INTRODUCTION

A disaster is defined as an event or series of events that threaten and disrupt the life and livelihood of the community due to natural and/or human factors, resulting in loss of life, environmental damage, property loss, and psychological impact (Menteri Kesehatan Republik Indonesia 2007). Serious impacts of disaster events on society include a decline in quality of life, manifested through various health problems. Access to healthcare services is a critical determinant of survival during the early stages of emergency response, aimed at reducing morbidity and mortality rates during disasters. The National Disaster Management Agency (BNPB) and Indonesian disaster data for the period from June 1 to June 12, 2023 shows that Indonesia experienced a total of 1,741 disasters. The disaster caused many impacts, such as casualties, injuries, missing persons, displacement, and damage to houses and public facilities (Kurniawan and Fandayati, 2023).

Rahtawu Village has 4 hamlets, namely Dusun Wetan Kali with 8 Community Units, Dusun Gingsir with 5 Community Units, Dusun Semliro with 5 Community Units, and Dusun

Krajan with 7 Community Units, with 4 Community Associations. The village area sits between 700 and 1,602 meters above sea level. Geographically, high cliffs in the mountainous region surround the Rahtawu area that make the area more vulnerable and prone to natural disasters such as flash floods and landslides during the rainy season. This geographical condition causes Rahtawu Village to become one of the villages with high disaster potential. In 2011, a large-scale landslide disaster occurred in Dukuh Wetan Kali, causing significant harm to the community but no casualties. Rahtawu Village records landslide every year, albeit on a smaller scale. High rainfall intensity caused a landslide in Dusun Tumpul RT 4 RW 3 Desa Rahtawu, according to the latest data from 2024. The occurrence of disasters in Rahtawu Village necessitates disaster mitigation activities by the community (Kudus, 2020).

Mitigation is a series of efforts to reduce disaster risk, including physical development, raising awareness, and improving the ability to confront disaster threats (Menteri Kesehatan Republik Indonesia, 2007). Mitigation is an effort that has several objectives: to recognize risks, raise awareness of disaster risks, plan for response, and so on. In other words, disaster mitigation encompasses all efforts from prevention before a disaster occurs to handling after a disaster has occurred. The implementation of disaster mitigation is the responsibility of all members of society, including adolescents.

According to the Regulation of the Minister of Health of the Republic of Indonesia Number 25 of 2014, adolescents are residents in the age range of 10–18 years, during which they undergo physical, cognitive, and psychosocial changes (Menteri Kesehatan Republik Indonesia 2014). Adolescents are part of the productive elements of society, playing an important role in managing and running life in the community, including development in the health sector. Thus, adolescents must have the skills, awareness, and responsibility to sustain community life. Therefore, it is essential for parents and educators to take an active role in helping adolescents carry out their duties and responsibilities (Salsabila et al. 2024).

IMPLEMENTATION METHOD

On Sunday, October 13, 2024, the researchers conducted community service training on disaster mitigation, targeting adolescents aged 10 to 18 years at the Rahtawu Village Hall. The number of respondents participating in the community activity was 55 adolescents from Dusun Wetan Kali, Gingsir, Semliro, and Krajan.

This community service activity used the interactive training by applying videos and disaster mitigation simulations. The researchers conducted the entire series of activities over 4 hours, including the completion of pre-test and post-test questionnaires. The questionnaire contained 20 questions about adolescents' knowledge and attitudes regarding disasters, disaster prevention, and the role of adolescents during disasters. Data were analyzed using descriptive statistics.

At the initial stage of the activity, all participants filled out a pre-test questionnaire. The facilitator then provided an interactive disaster video-based training, after which the adolescence respondents directly practiced a simulation of a disaster scenario. The next activity involved a post-test, including the same questions as the pre-test, but randomized the

questions to prevent respondents from recalling the order of the questions and answers from the previous test. The researchers gave the respondents a questionnaire to measure their level of knowledge and attitudes towards disasters, disaster prevention, and the role of adolescents during a disaster. The questionnaire was administered following an interactive training session that included a video and a disaster response simulation.

RESULTS

The community service results consist of respondent demographic characteristics such as ages, sex types, and education levels. Table 1 shows the demographic characteristics of the participants.

Table 1. the Respondent Demographic Characteristics

Characteristics	f	%
Age (years old)		
10 - 12	3	5,4
13 - 15	37	67,3
16 - 18	15	27,3
Sex types		
Male	24	43,6
Female	31	56,4
Education levels		
Primary	3	5,4
Junior	36	65,5
Senior	16	29,1

Source: primary data, 2024

Table 1 shows most respondents are aged between 13 and 15 years old, 67.3%; most respondents are female, 56.4%; most respondents have junior high school educational level. The video-based disaster mitigation training assessments consisted of two variables: knowledge and attitude based on pretest-posttest of 55 respondents. Table 2 shows the results.

Table 2. The Results of Pretest-Posttest Knowledge Scores

	Mean	Std deviation	Max	Min
Knowledge				
Pre-test	11,50	1.320	16	9
Post-test	15,08	1.207	17	13
Attitudes				
Pre-test	12,30	1.460	17	11
Post-test	17,50	1.265	19	16

Source: primary data, 2024

The table shows the mean of pretest-posttest scores of both variables with knowledge pretest of 11.50 and knowledge posttest of 15.08. The attitude before the intervention is 12.30 and after intervention is 17.50.

DISCUSSION

Video-based disaster mitigation training aims to improve the knowledge and attitudes of respondents (youth) in Rahtawu Village regarding disasters. Sri Wahyuningsih (2019) explain that training has a positive and significant impact on the productivity of the community/employees because instruction is a process to enhance the community's competence and train the community's abilities, skills, expertise, and knowledge to perform tasks effectively and efficiently to achieve goals (Wahyuningsih, 2019).

One of the indicators of training success in this community service activity was the youth's active participation in asking questions and responding to the facilitator's inquiries. Dewi et al (2024) revealed the youth's enthusiasm for asking questions and their active response to the facilitator's correct questions. A theoretical-pragmatic and practical-pragmatic approach serves as the training method. The researchers implemented the theoretical-pragmatic approach by presenting theories about disasters and several methods to present the material, such as (1) lectures to convey material that requires theoretical clarity, and (2) screening disaster videos to enhance participants' understanding of the presented material. The practice sessions employed the practical-pragmatic approach, incorporating activities such as disaster simulation practice, discussions, and the completion of pre- and post-tests. The researchers conducted disaster simulations to equip respondents with skills and heighten their understanding of the significance of disaster preparedness (Idrus, S., Kusman, M. R., Kapita, H., Papuangan, M., Darwis, F., Mulya, E. R., & Gafur 2022).

The advantages of training using video media include the ability to detail events in a thorough and realistic manner and the possibility of repetition. Imamah's (2023) explains video media has emerged as a significant alternative in dental and oral hygiene education. Policymakers can utilize it to formulate health communication strategies, enabling educators to accept information from mass media or online platforms (Imamah, Dewi, and Ulfa 2023). Video-based disaster training becomes a strategic step in enhancing the awareness and skills of adolescents related to disasters.

Disaster mitigation simulation activities provide participants with the opportunity to mimic training activities related to their responsibilities. The simulation process can actively stimulate participants to focus more on understanding the information provided, so that the level of knowledge of adolescents not only reaches the stage of knowing but also the stage of being able to apply disaster mitigation activities and all the information to the situations encountered in the field (Retnawati, Widajanti, and Nugrahaeni 2014).



Figure 1. the Disaster Training

Source: personal documentation, 2024

No obstacles hindered the implementation of disaster training for adolescents in Rahtawu Village. The researchers carried out the planned training program smoothly and based on the planned schedule. This activity received a positive response from the adolescence participants, proven by their enthusiasm in attending the disaster mitigation training. Another supporting factor was the excellent coordination between the community service team and the respondents, and the healthcare workers in the disaster-prone area of Rahtawu Village, to facilitate the participation of adolescents in the disaster mitigation training activities. These supporting factors enabled the successful execution of the activities.



Figure 2. The Disaster Simulation

Source: personal documentation, 2024

CONCLUSION

Community service activities with disaster training based on video and disaster simulation could improve the knowledge and attitudes of adolescents towards disaster potential in Rahtawu Village and provide alternative community-based disaster mitigation efforts. Delivering disaster material, which explains various disasters and their causes, disaster mitigation efforts, and community-based counseling, increases the knowledge and attitudes of adolescents. Expert speakers conducted direct disaster mitigation simulations to further enhance the participants' understanding, which included disaster introduction, familiarizing the evacuation route for self-rescue, and discussing disaster response methods.

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