Health education on disaster triage as an effort to change the attitudes of people living in tsunami-prone areas

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ABSTRACT

Indonesia as an archipelagic country located on the equator, between the continents of Asia and Australia and between the Pacific and Indian Oceans. Indonesia's geographical location lies on an unstable earth plate. Indonesia is also one of the disaster-prone areas, so that people in coastal areas must know what disaster management is most important to provide. This encourages community knowledge to provide first aid in a disaster situation using the principle of triage. The purpose of this activity is for the community to know about disaster management, especially the triage system in disaster-prone areas. The target of this activity is the community in Kalibatur Village, RT 05 RW 02, Kalidawir District, Tulungagung Regency. The implementation of this activity was carried out by pre-test and post-test. Data analysis was performed using the Wilcoxon Signed Range test analysis. Statistical test results obtained p value = 0.001 < α = 0.05. After the implementation of health education and counseling, the community has a positive attitude and a change in attitude regarding disaster triage as an effort to deal with and control victims of preventive natural disasters.

Penyuluhan kesehatan tentang triase bencana sebagai upaya mengubah sikap masyarakat yang tinggal di daerah rawan tsunami. Indonesia sebagai negara kepulauan terletak di garis khatulistiwa, antara benua Asia dan Australia serta antara Samudera Pasifik dan Hindia. Letak geografis Indonesia terletak pada lempeng bumi yang labil. Indonesia juga merupakan salah satu daerah rawan bencana, sehingga masyarakat di daerah pesisir harus mengetahui penanggulangan bencana apa yang paling penting untuk diberikan. Hal ini mendorong pengetahuan masyarakat untuk memberikan pertolongan pertama pada situasi bencana dengan menggunakan prinsip triase. Tujuan dari kegiatan ini adalah agar masyarakat mengetahui tentang penanggulangan bencana khususnya sistem triase di daerah rawan bencana. Sasaran kegiatan ini adalah masyarakat di Desa Kalibatur, RT 05 RW 02, Kecamatan Kalidawir, Kabupaten Tulungagung. Pelaksanaan kegiatan ini dilakukan dengan pre-test dan post-test. Analisis data dilakukan dengan menggunakan analisis uji Wilcoxon Signed Range. Hasil uji statistik diperoleh nilai p = 0,001 < α = 0,05. Setelah dilaksanakan penyuluhan dan penyuluhan kesehatan, masyarakat memiliki sikap positif dan perubahan sikap terhadap triase bencana sebagai upaya penanganan dan penanggulangan korban bencana alam secara preventif.

INTRODUCTION

Indonesia is an archipelagic country located on the equator, between the continents of Asia and Australia, and between the Pacific and Indian Oceans. Indonesia's geographical location lies on an unstable earth plate, on the west

side of Sumatra, south of Java to the east of Indonesia, and rotates northwards through Nusa Tenggara, Maluku, and onward to Sulawesi (Darsono et al., 2016). This unstable earth plate has a great potential for earthquakes to occur on the deep sea floor which can cause tsunamis (Sarwadhamana & Jaka, 2023). This potential is even greater because most of the tectonic epicenters are located under the deep seabed, which is relatively close to the coast (Dodon, 2013). Indonesia is also one of the disaster-prone areas so that people in coastal areas must know what disaster management is most important to provide. This encourages the community to provide first aid in a disaster situation using the principle of triage (BNPB, 2016a).

Disaster Management defines a disaster as an event or series of events that threatens life either due to natural factors or non-natural factors as well as human factors resulting in casualties that require immediate treatment and need to be prioritized using a triage system (Kemenkes RI, 2016). Triage is an act of categorizing patients according to treatment needs by prioritizing those who most need to come first. However, triage can also occur in other health care settings where patients are classified according to the severity of their condition. *This action is designed to maximize and make efficient use of limited medical personnel and facilities but must be adjusted to the level of health education* (Novebri, 2017). The first parameter of critical preparedness factors for anticipating natural disasters is counseling, knowledge, and community attitudes toward disasters (Esperanza & Simanjuntak, 2019). Health education is a major factor and is the key to community preparedness for natural disasters. Health education that is owned can usually influence attitudes and awareness to be prepared in anticipation of disasters (Sopahaluwakan, 2006).

A health education survey by the Indonesian Ministry of Health showed that health education in the community was inadequate. The community does not fully know about health education by 67% and the people who know about health education by 33% (Kemenkes RI, 2016). Meanwhile, the results of RISKESDAS (2018) showed that 58% of the population knew the importance of health education and 42% paid little attention to health education for tsunami disaster management using the triage system.

According to the Disaster Management Agency (BNPB) (2016b), disaster data recorded in the territory of Indonesia in 2014 the number of disaster events was 456, consisting of 227 natural disasters (49%), 197 non-natural disasters (44%), and 32 social disasters (7%). The disaster caused a total of 1,669,247 victims, consisting of 957 dead, 1,932 seriously injured/hospitalized, 694,305 minor injuries/outpatient, 391 missing, and 1,001,662 refugees. While disaster data in 2015 the number of incidents (1,229), victims died and disappeared (226). Victims suffered and were displaced (765,694) and damage to settlements (10,714) (Rosyida, 2017). From the data obtained above, it shows that the community has improved in disaster management. So that repeated disasters provide lessons and experiences in disaster prevention.

Based on the results of a preliminary study conducted by researchers on December 5, 2022, using interview techniques regarding triage handling (distribution/classification of client priorities based on the severity of the client's condition/emergencies that require immediate action). Of the 20 heads of families living in Kalibatur Village, RT 05 RW 02, they said they had never been given health education about disaster triage. So that when there was a disaster 10 residents said they were confused and did not know what to do and 10 other residents said they were just waiting for the disaster evacuation team.

If the high number of tsunami natural disasters in Kalibatur village is not matched with good triage health education, disaster management, especially the triage system, will not work properly. The impact if health education is not given, the community will not be responsive to disasters, the community tends to save themselves, the community will be confused about what actions to take in the event of a disaster and the community does not understand the application of the correct triage system.

Due to the low number of triage health counseling, it requires handling through health promotion, counseling about the disaster triage system. As for the government's efforts to handle and control victims of preventive natural disasters by carrying out disaster simulations in disaster-prone areas by increasing efforts to educate disaster triage systems to prevent the risk of victims of natural disasters from getting worse, so that people are more responsive when there are natural disasters and can implement the system. disaster triage properly (Adiwijaya, 2017). The important thing in this activity is to provide accurate information to the public regarding the evacuation process when an earthquake and tsunami occurs, the creation and dissemination of evacuation routes which are critical facilities that must be owned in the earthquake and tsunami-prone areas (Khair et al., 2021). The activities in this research can be one of the efforts to achieve SDGs, namely goal 3 (Healthy and Prosperous Life). This service activity adopts a similar service activity that aims to provide knowledge about disaster management (Rahmi & Arif, 2013).

Devotion that has been done by Astuti (2022) with the results of the achievement of Earthquake disaster response counseling service at the Kasih Hati Mama Orphanage, gives a significant meaning because there is a difference between before and after being given counseling. The difference that occurred was a positive change, meaning that previously the knowledge of the participants was lacking and after being given it became good. Then the service that has been done by Ratchna et al. (2019), found that disaster simulation education and picture books about earthquakes and landslides had a positive effect on counseling participants.

The purpose of this service is to provide insight to the people who live in tsunami-prone areas in Kalibatur village because the lack of public information regarding earthquake and tsunami disaster triage has the effect of lacking

community knowledge and if a disaster occurs suddenly, it will claim more lives. Giving information to someone will make that person act better and positively (Arinaldi, 2015). Likewise with health education, it is hoped that the community will understand and be able to apply disaster triage wherever they are.

METHOD

The target of this activity is the community in Kalibatur Village, RT 05 RW 02, Kalidawir District, Tulungagung Regency, totaling 30 heads of families or representatives of heads of families (shown in Figure 2). The target data was obtained from the secondary data of the RT head. The activity implementation phase is divided into 3, namely the planning, implementation and evaluation stages (Figure 1).
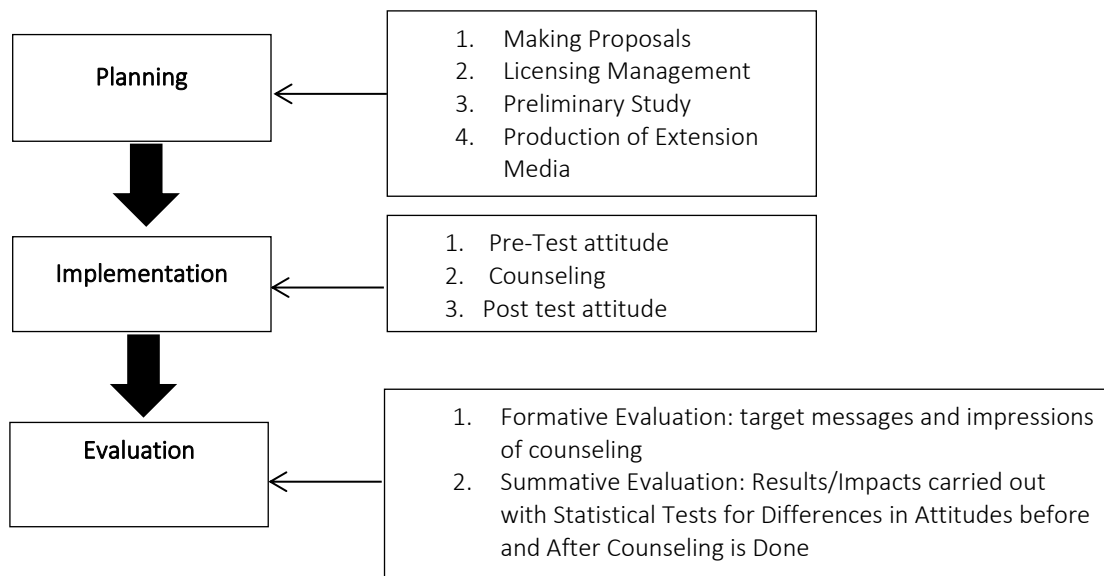
Planning	1. Making Proposals 2. Licensing Management 3. Preliminary Study 4. Production of Extension Media
Implementation	1. Pre-Test attitude 2. Counseling 3. Post test attitude
Evaluation	1. Formative Evaluation: target messages and impressions of counseling 2. Summative Evaluation: Results/Impacts carried out with Statistical Tests for Differences in Attitudes before and After Counseling is Done

Figure 1. Stages of Community Service Activities

Figure 2. Target groups of Community Service Activities

The planning stage is the activity preparation stage where at this stage the service team coordinates with village officials and the local RT head to obtain target data and distribute activity invitations. The implementation phase is the implementation phase which is carried out at the Village Hall. The number of targets present during the implementation was 21 people. The activities carried out by the service team are providing health education about Triage and distributing attitude questionnaire sheets (pre-test and post-test). The questionnaire was adopted from Notoatmojo (2014) . The attitude aspects contained in the questionnaire are cognitive, affective and conative with attitude criteria namely: a positive attitude if the T value ≥ 50 and a negative attitude if the T value < 50. The evaluation stage is the stage to assess the results or impact of extension activities (Ristiyani, 2014). There are 2 types of evaluation used, namely formative evaluation and summative evaluation. Data collection for formative evaluation was carried out qualitatively with a phenomenological approach, in which the service team asked the target about messages and impressions during counseling. Summative evaluation was obtained from the processing of pre-test and post-test questionnaire data. Data processing is done by editing, namely by re-examining the data from the observer. Coding is done by giving a code to each characteristic then the data collected is given a score and the data is arranged in tabular form. The next process is data analysis. Data analysis was performed using the Wilcoxon Signed Range test analysis.

RESULTS AND DISCUSSION

Characteristics of the targets in this study include age, education, occupation, community attitudes before health education and people's attitudes after health education summarized in Table 1. The target characteristics based on the age of most of the respondents aged 31-40 years amounted to 13 respondents (61.9%). Characteristics of the target based on education, almost half of the respondents had elementary school education, a total of 10 respondents (47.6%). Characteristics of the target based on the work of most of the respondents working as fishermen with a total of 11 respondents (52.4%).

Table 1. Target Characteristics

Characteristics	N	%
Age (year)		
17-30	2	9.5
31-45	13	62
46-50	4	19
>50	2	9.5
Gender		
Nale	17	81
Female	4	19
Education		
SD	10	48
SMP	7	33
SMA	2	9.5
PT	2	9.5
Work		
Fisherman	11	52
Private	9	43
ASN	1	5

According to Azwar (2013), Attitudes are influenced by several factors including personal experience, the influence of other people who are considered important, the mass media, educational institutions and emotional factors. According to Yuliano (2019) attitude is a readiness or willingness to act and not the implementation of certain motives .

Age is an individual that counts from the time of birth to the time of birthday, the more mature a person's level of maturity and strength, the more mature he thinks and works, and the older a person is, the more experience he experiences (Mubarak, 2015). The older you get, the more your comprehension and mindset will develop, so that the knowledge you get will be better (Chotimah, 2019).

Knowledge is a very important domain for the formation of one's actions. Knowledge is the result of human sensing, or the result of knowing someone about an object through their senses (Harigustian, 2021). According to Notoatmodjo (2013), experience is a source of knowledge where the experience gained the more experience gained the more knowledge one has.

Subject characteristics based on people's attitudes before health education, almost all respondents had a negative attitude before health education, a total of 17 respondents (81%). Characteristics of the subject based on people's attitudes after health counseling Most of the respondents had a positive attitude after health education several 15 respondents (71.4%). The result is summarized in Table 2.

Table 2. Results of Attitude Measurement before and After Counseling

Attitude Before Counseling	N	%
Positif	4	19
Negatif	17	81
Attitude After Counseling		
Positif	15	71.4
Negatif	6	28.6

The usefulness of this community service activity can be assessed from the results of interviews with messages and impressions during counseling. Some of the targets said that initially, they did not understand the importance of disaster triage but after the counseling was carried out they understood, as in the following interview excerpt:

"……At first I didn't understand the benefits, but now I know the importance……"A1
"……Maybe so that we can always be safe if there is a disaster huh……"A11
"……Good,,,,,,I'm glad there is counseling activity……."A9

The big picture that can be found is that most of the community initially has a negative attitude about disaster triage, this condition is exacerbated by the lack of information obtained due to minimal counseling about disaster (Nuzuar, 2017).

The usefulness of this community service activity can be seen from the short-term evaluation, namely measuring attitudes before and after counseling. The Wilcoxon Signed Rank Test statistical test is used to analyze changes in attitudes before and after counseling is carried out. Statistical test results obtained p value = 0.001 < α = 0.05 (see Table 3). The conclusion obtained is that there are differences in attitudes before and after conducting Health Counseling on Disaster Triage in Tsunami-Prone Areas, Kalibatur Village RT 05 RW 02, Kalidawir Tulungagung District.

Table 3. The Wilcoxon Signed Rank Test

No	Attitude	Before		After		Influence Test Results
		n	%	N	%	
1	Positif	4	19	15	71.4	p values=0.001
2	Negatif	17	81	6	28.6	α = 0.05
	Amount	21	100	21	100	

Education is a person's stage in improving the ability to think and experience, the lower a person's education will certainly affect the acceptance of the knowledge an individual gains (Kusuma & Surakarta, 2021). The level of education is one of the factors that influence a person's attitude, with a high level of education, a person will be able to accept new knowledge and apply it so that he has a better attitude, in contrast to a low level of education, a person will find it difficult to accept new knowledge and be easily influenced (Nursalam, 2008).

Based on the facts and theory above, there are more negative attitudes in individuals with elementary school education, because at this level of education, individuals lack experience both in learning experiences and experiences from other people, besides that in Kalibatur Village there are few educational facilities and the location is far away causing the community some have low education.

Someone who works full activities such as manual worker will only have a little free time and this is the most common factor in society that influences attitudes (Wawan, 2011). Work is something that is sought by every individual to fulfill his economy, but the density of work causes individuals to not have time to look for new information and read new things (Djafar et al., 2016).

Based on the facts and theory above, there is conformity where many fishing communities have negative attitudes because individuals who work as fishermen spend almost all of their time at sea and they have a short time on land just to rest at home so that they have time to attend counseling and read books to adding very little information, plus very rarely health counseling is held in the village, it reduces the information obtained so that it affects attitudes

CONCLUSION

Communities in Kalibatur village whose average livelihood is fishermen and whose education level is only up to elementary school. The lack of health education and outreach activities regarding triage has resulted in the community being unfamiliar with disaster triage and its methods. Before this community service activity was carried out, the community had a negative attitude towards this activity. However, after conducting educational and outreach activities on triage, the community has a positive attitude and shows enthusiasm and curiosity about disaster triage. Statistical test results obtained p value = 0.001 < α = 0.05. The conclusion obtained is that there are differences in attitudes before and after conducting Health Counseling on Disaster Triage in Tsunami-Prone Areas, Kalibatur Village RT 05 RW 02, Kalidawir Tulungagung District.

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