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Cadres' Preparedness Ability to Prevent Communicable Diseases during Flood Disasters: Health Promotion Through Support Groups

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Abstract. Natural disasters that have both physical and psychological impacts are floods caused by human behavior. Disaster events caused by humans are things that need to be considered for immediate attention because it will cause some infectious diseases. Infectious diseases resulting from floods can be avoided by prevention activities that involve health cadres to take an active role in dealing with the problem of infectious diseases when floods occur. The study aimed to explore cadres' ability in communicable disease preparedness when flood disasters through support groups. A quasi-experimental study, one group pre-test, and post-test without a control group was applied in this study. Forty-three samples were involved in this study from Gebangmalang Village, Mojoanyar District, Mojokerto Regency. Inclusion criteria; 1) cadres who are willing to become respondents; 2) cadres living in the study area; 3) cadres present at the intervention. 1-month research time. The results of the research show that the mean of knowledge, attitudes, and skills before and after the intervention increased from 34.9% to 100% good, 46.5% to 100% positive, and 55.8% to 100% good. Cadres increased the infectious diseases controlling when the flood disaster occurred with a p-value of 0.001. Increasing the ability of cadres was due to the interrelatedness between the knowledge, attitudes, and skills of a cadre. Based on the findings, community of nurses should provide to be able to prepare activities before a disaster occurs to be able to minimize the impact that occurs as a result of a disaster

Keywords: Cadre ability; infectious disease; flood disaster; health promotion; support group

INTRODUCTION

Flooding in Indonesia has increased from year to year and caused anxiety for the community. It is estimated that in 2018 there will be at least 4000 flood events in Indonesia, and 80% occur within the last ten years. The highest number of floods in Java occurred in Central Java (467 incidents), in East Java (413 events), and West Java (374 events) (1). Flood disaster is a disaster caused by human activity itself, which is one of the essential concerns in preparing preparedness to overcome various problems that occur due to the flood disaster. Several issues regarding physical problems occurred following a flood such as diarrhea, ARI, DHF, skin disorders, etc. (2). Preparedness becomes an activity that is prioritized in reducing the risk of infectious diseases. Activities must be carried out by increasing efforts on how to prepare preparedness methods to minimize the impact of disasters and be given to the right targets (3).

Public health centers should provide health promotion to cadres about infectious disease preparedness when disaster is needed (4). Health promotion activities are activities carried out to prevent and promote healthy living for the community. Health promotion in many studies has been stated as a determinant of a person's self-awareness. Therefore health promotion will be an essential factor in promoting one's self-awareness to form good behavior (5,6).

The target in providing training or education on preparedness for infectious diseases when flood disasters are given to local communities to play an active role in managing their environment, in this case, is a health cadre where the flood disaster occurs. Health cadres have an excellent ability to carry out infectious disease preparedness during emergencies because they are required to be able to convey health information to the community to protect their environment (7,8). Health cadres need support from local health workers to provide health promotion through support groups. The support group method aims to teach health cadres through education and training on infectious disease preparedness when flood disasters by increasing the ability of health cadres because health cadres also have an essential role in providing protection or dissemination of information to the community directly. This method seeks to reduce the risk of infectious diseases by achieving broader goals by being introduced early to the community (9). This research was conducted to increase the active role of the community, especially health cadres, in providing health information to the local community in managing the environment properly and preparing what actions are needed to prevent infectious diseases caused by floods.

OBJECTIVE

The study aimed to explore cadres' ability in communicable disease preparedness when floods occur through support groups.

METHOD

A quasi-experimental study, one group pre-test, and post-test without a control group was applied in this study. A sample of forty-three samples was involved in this study from Gebangmalang Village, Mojoanyar District, Mojokerto Regency. Inclusion criteria; 1) cadres

who are willing to become respondents; 2) cadres living in the study area; 3) cadres present at the intervention.

The instrument in this study consisted of questionnaire A characteristics of respondents, which included age, gender, last education, and occupation. Questionnaire B knowledge consists of 10 statements with right and wrong answers. A minimum score was 0, and the maximum rating was 10. Questionnaire C attitude composed of 10 statements with Likert scale answer choices strongly agree, agree, disagree, disagree. D Skill Questionnaire consisted of 10 statements with choice of answers in the form of a Likert scale always, often, sometimes, never.

The validity test on 30 questions was carried out on 32 cadres in the Work Area of Gayaman Public Health Center, Mojokerto Regency. The results showed that both internal consistency and intra-class correlation were good with r count values, ie ranges starting from the lowest 0.311 to the highest of 0.830, which is greater than the value of r table (0.2960), meaning that each item is said to be valid. Reliability test results showed that the results of Cronbach's Alpha 0.754 were supposed to be reliable because the Cronbach's Alpha calculated value was more significant than 0.7.

Researchers collected data with the following steps: 1) selecting research subjects according to inclusion criteria, 2) providing research information as clearly as possible to research subjects, 3) asking for approval from respondents to be the subject of the study by giving an informed consent sheet, 4) fill out Questionnaire A and pre-test questionnaire B, C, D to all respondents on July 18, 2018. The following are carried out:

First session: 1) Formulate topics that can be discussed together in groups, namely the topic of preparedness for infectious diseases when disasters; 2) Decide on people who can join in the group, namely health cadres who meet the inclusion criteria; 3) Maintain group focus. Better focus on one or two activities. Some alternative activities that can be chosen are: sharing feelings and experiences, exchanging information and sources of strength, discussing new ways to solve problems, finding ways to reduce stress and anxiety; 4) Start and try the initial step, starting with the small one. The number of people in a group is very influential on group effectiveness. Need to pay attention to member involvement in group activities; 5) Give a group name. Names should define goals or group interests. We recommend that the name of the group be made exciting and easily understood by others; 6) Define group relations with professional individuals. Sometimes group members feel unable to follow the course of the group without a professional who helps. In this case, the researcher is a health worker; 7) Maintain anonymity and confidentiality. Anonymity and confidentiality in the support group, depending on the topic. For example, in a group of survivors, sometimes they do not need to provide detailed identity. Confidentiality is a practical way to maintain privacy in groups. So, in this case, it should be emphasized to the survivor group that there is hope to be able to maintain confidentiality.

Nonetheless, some groups are very flexible in this regard; 8) Decide how the meeting will be held. This needs to be decided with the group as required. It can be once a week, a month, or just a few meetings a year. The thing to consider is that the meeting can be a support for group stability, while the distance between meetings should provide enough time for group members to think ahead regarding activities in the next session; 9) Prepare a list of possible activities. This includes reading literature relating to groups or visiting other group members to provide support or exchange ideas; 10) Think of helping each other. From the beginning, the group offers opportunities for each member to be able to contribute and feel an appreciation of the contribution. Some ways that can be done include talking to all members about existing programs and ideas, rotating tasks among existing group members, and deciding essential matters together.

Second session: Education of infectious diseases such as; diarrhea, ARI, skin, infections carried out by lecture, discussion, and question and answer. **Third session:** Preparedness training for the prevention of infectious diseases when disasters are carried out in tutorials and demonstrations. **Fourth Session:** Supervision of health cadres in demonstrating preparedness for contagious diseases when disasters. After the intervention phase is carried out, then the respondent is in the internalization phase on August 1 - 6, 2018, to be able to study independently related to the material that has been taught.

Statistical tests for all analyses had a significance level of 95% (alpha 0.05). It was post-tested on August 7, 2018. The data were analyzed using the Wilcoxon test. The study was approved by the research and has conducted ethical tests. Besides, it passed the ethical test and obtained a research permit from the Institute of Health Science Bina Sehat PPNI, Mojokerto

RESULTS

Characteristic of respondents

The mean age of the respondent is 39.28 years, which is the age in the middle adult category, the SD value; 8.221, where the SD value is stated to be higher than 0, the respondent's age data varies. The minimum age of respondents is 22 years, and the maximum age of respondents in this study is 54 years.

The majority of respondents were women as much as 95.3%. The highest education of respondents was graduated from high school as much as 58.1%. Most of the 79.1% of respondents did not have a permanent job. These results indicate that most of the respondents are women with no permanent jobs who also have graduated from high school, so there is still a need for promotive and preventive activities that focus on health cadres especially by looking at the level of education, such as efforts to promote health through a support group that aims to behavior changes that can be seen in (table 1)

Table 1. Characteristic of respondents

Characteristics respondents	(n=43)	
	f	%
Age		
Mean (3.28)		
SD (8.221)		
Min-Max (22 – 54)		
Gender		
Male	2	4.7
Female	41	95.3
Education		
Graduated from elementary school	4	9.3
Graduated from junior high school	11	25.6
Graduated from high school	25	58.1
College	3	7.0
Work		
Does not work	34	79.1
Farmer	3	7.0
Private / entrepreneur	3	7.0
PNS	3	7.0
Total	43	100

Cadres' knowledge, attitude, and skill on disaster preparedness

Knowledge of health cadres before being given a health promotion was enough 48.8% to be 100% good after being given a health promotion through the support group. The attitude of most health cadres before being given health promotion was negative as much as 53.5% to be 100% positive after being given a health promotion through the support group. While cadre skills before health promotion were as excellent as 55.85 to 100% after being given health promotion through support groups, which can be seen in (table 2).

Table 2. Cadres' ability to health

Ability		Before		After		*P-value*
		f	%	f	%	
Knowledge	Good	15	34.9	43	100	0.001
	Enough	21	48.8	0	0	
	Less	7	16.3	0	0	
Attitude	Positive	20	46.5	43	100	0.001
	Negative	23	53.5	0	0	
Skills	Good	24	55.8	43	100	0.001
	Not good	19	44.2	0	0	

DISCUSSION

The results of this study show that health promotion through the support group has a significant effect on knowledge, attitudes, skills. Health promotion will have an impact if the use of behavioral and technical change theories is not appropriate (10). An effort to improve the behaviors needed for an approach to support health cadres (11). There are three components in promoting optimal health, including; good knowledge, positive attitude, and good skills. These three components are things that are needed by everyone in having functional abilities (12).

Changes that occur in each component has made a health cadre have a excellent ability in infectious disease preparedness during a disaster, in which a cadre can play a role following his role to be able to disseminate health information regarding any infectious diseases that need to be watched when a disaster to the broader community (13). The ability of health cadres is very necessary, in this case doing good preparedness to prevent the occurrence of infectious diseases that usually occur when disasters.

The improvement of cadres' ability was associated with increasing knowledge. Knowledge is information or information that is known or realized by someone based on sensory observation (14). A person's knowledge influences the way he views things and makes it easier to accept or adopt positive behaviors. Knowledge is influenced by several factors, including education, media, and information exposure. Health promotion is one part of the educational effort that takes place in the process of changing the attitude and behavior of a person or group and also the attempt to mature humans. The attitude from someone to a stimulus or object. The attitude is a readiness or willingness to act and not an implementation of a particular motive. Attitude is a determining factor to improve behavior. Attitudes arise from various forms of assessment and experience. Approaches are developed in three models, namely affection, behavioral tendencies, and cognition. The affective response is a physiological response that expresses an individual's preference for something (15).

Skills are the ability to do things well. While the cadre skills before health promotion were as excellent as 55.85 to 100% after being given health promotion through the support group. Skills are the practical ability to apply theoretical knowledge in certain situations. The process of changing one's skills involves the following, namely perception, readiness, guided responses, mechanisms, seemingly complex responses, adjustment, and creation (7,8). Skills can continue to increase if an activity is repeated. Health cadres have a good ability to carry out infectious disease preparedness during disasters because they are required to be able to convey health information to the community to protect their environment. The limitation of this study is that the number of respondents is reduced due to not participating in intervention activities so that they make a small sample. This research can be used as a reference for health service programs in health promotion or disease prevention by involving the participation of the community so that the maximum success of the activity. This research is also beneficial for health cadres in preparing themselves for disasters. The limitation in this study is that it didn't involve a control group, so there were no comparable data.

CONCLUSION

There is a change in the ability of cadres in infectious disease preparedness when floods occur through support groups. Programs related to promoting and prevention efforts need to be reviewed by paying more attention to the region as a target place. The health office also needs to do integration related to health education provided to health cadres using comprehensive methods according to the needs of the community and utilizing a variety of more interactive and applicable media, both for the health workers themselves and the community that focuses on improving the ability of health cadres in preparedness infectious diseases when floods occur.

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