Health Worker's Understanding of Haze Disaster Risk Management Collaboration in West Sumatra Province

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ABSTRACT

Forest fires cause a decline in the level of public health, either directly or indirectly. One of the public health services that requires good collaboration is health services at the Puskesmas. health workers on duty at the Puskesmas in dealing with disasters in their respective work areas. The collaboration target is integrated patient care for disaster victims. This study aims to determine the understanding of health workers in collaborative risk management for haze disaster in West Sumatra.

The design at this stage is cross sectional to identify the characteristics of the respondents (age, gender, type of profession, education), knowledge, attitudes, and collaborative actions to reduce haze disaster risk at the same time. The target population of this research is all health workers in several districts in West Sumatra Province. The affordable population of the study is health workers in areas categorized as vulnerable to haze in the province of West Sumatra. The sample determined in the survey phase of the research using the Lamesshow formula (Lemeshow et al., 1990). Based on the above formula, the total sample size is 50 samples, with an anticipated sample drop out of 10%, so the total number of samples is 55 samples. Collecting data using primary data by means of interviews with a questionnaire instrument. The statistical test used in this study is the chi square test, which is a statistical test used to test the relationship between the independent variable (independent) and the dependent variable (dependent) on a categorical scale.

The results of the quantitative research show that more than half of the knowledge level (60%) and positive attitude (51%) about collaboration in disaster risk management of haze haze are seen. And the actions or practices of more than half of the respondents or health workers have less action (64%) regarding collaboration for disaster risk management of haze. There is a relationship between the knowledge and attitudes of health workers with collaborative actions to mitigate the risk of haze disaster. Government involvement is needed to issue a collaborative policy for managing the risk of haze disaster to change the centralistic/spatial paradigm in disaster management. Health workers can improve their understanding of communication and motivation in collaborative disaster risk management for haze.

Keywords: understanding, collaborative, smoke, health workers

1. INTRODUCTION

Disaster is a hazard that can cause environmental damage or change. There are two types of disasters, namely natural disasters and man-made disasters. Natural disasters are the effects of natural hazards. The top natural disasters consist of typhoons, earthquakes, tornadoes, volcanoes, tsunamis, floods, fires, droughts, avalanches and landslides. Indonesia as an archipelagic country is prone to natural disasters such as earthquakes, volcanic eruptions, floods, and landslides. Natural disasters can affect human life either directly or

indirectly. The clinical manifestations may affect humans both physically and psychologically in short onset or soon or later depending on the cause of the catastrophic factors. The level of damage ranging from mild to severe or may require life. Health problems caused by natural disasters vary, ranging from physical trauma, fractures, bleeding, combinations, infections, septicemia. also manifested psychologically or mental disorders such as stress, insomnia, depression, and even schizophrenia (Undang-undang, 2007) .

Forest fires are one form of disturbance that is increasingly occurring. The negative impacts caused by forest fires are quite large, including ecological damage, declining biodiversity, declining economic value of forests and soil productivity, reducing the risk of micro and global haze disasters, and the smoke disturbing public health and disrupting transportation both land, rivers, lakes, seas and forests. Air (Tacconi, 2003)

The impact of forest fires has caused a decline in the level of public health, both directly and indirectly. The impact will be felt for children under five years old and the elderly (elderly). The direct impact of inhalation of smoke from forest fires is upper respiratory tract infection, while the indirect impact is the emergence of diseases in the muscle system and connective tissue, if the closure of forest fire smoke lasts for a long enough period. The increase in ARI is indirectly stimulated by the entry of smoke particles containing hazardous compounds such as SO2, NO2, CO and 03 so that it interferes with respiratory function and can interfere with health, especially in the upper and lower respiratory tract (WHO, 2008).

Environmental pollution, especially air pollution in several provinces on the island of Sumatra, is quite high, especially during the dry season and forest fires occur either intentionally or unintentionally, and fires most often occur in Riau and Jambi provinces, where the smoke spreads to neighboring provinces. Smoke that covers the sky for several days has the main potential for the spread of Acute Respiratory Infections (ARI). The high level of air pollution causes ARI to have the most numbers suffered by the community compared to other diseases, which is around 20.55%.(Kemenkes, 2013).

The community needs real help from the government, in this case is a fast-responsive health service from the Puskesmas and Hospitals. The form of health services includes the provision of masks to the public so that they can be used when doing activities outside the home, this seems to have not been intensively carried out by the government. Also set up health posts at the puskesmas and supporting puskesmas levels, including involving village midwives (for residents in rural areas) (Utomo and Buana, 2017) .

The Puskesmas which is the first referral for victims of the haze, especially as a member of the BPJS which requires referring to the first level health facilities, namely the puskesmas, must provide complete services as the first referral, for example the availability of medicines, breathing aids, and quick action for victims of ARI. The hospital as a referral place for the puskesmas must also provide good and complete services. Both in the form of medicine and medical equipment needed, because victims cannot wait to get medical help.

Collecting data and ensuring maximum protection for toddlers or children against smog is very necessary because at least from the data above, children are the most victims of this haze disaster. Provide protection for pregnant women, if continuously exposed to air pollution, pregnant women can experience various health problems. This happens because the pollutants that pollute the air can be inhaled by pregnant women or pregnant women, enter the lungs, make the respiratory tract inflamed, and even enter the blood circulation. (Kemenkes.RI, 2015).

To minimize the natural impact of disasters on humans or society, health workers play an important role in the aftermath of a disaster, especially in emergency and recovery situations. Early and prompt intervention is urgently needed to prevent people from suffering more or even dying. Collaborative practice among health workers is needed for optimal handling in the event of a natural disaster.

According to Keith in Arif (2013) the key to quality health services at an efficient cost is to increase the effective collaboration of health workers. Collaboration is a process where professionals mutually arrange collective action on patient care needs that is built voluntarily and there is a negotiation or discussion of professionals. Collaborative practice should be considered as a partnership that has formal and informal contracts with the main goal of providing optimal care to patients.

The challenges of implementing Interprofessional Collaboration in Indonesia are differences in social interactions of the community, historical and cultural differences between professions, ego, arrogance and the principle of collegiality, concerns about diluted professional identity, ineffective communication patterns, variations in the implementation of educational standards and competency standards of each profession and there is no ideal role model. Other things that also influence are health services, policy makers and community support

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2. METODE

The research design was cross sectional to identify the characteristics of the respondents (age, gender, type of profession, education), knowledge, attitudes, and collaborative actions to reduce the risk of haze disaster at the same time. The target population of this research is all health workers in several districts in West Sumatra Province which are categorized as vulnerable to haze in West Sumatra Province. The sample set in the study amounted to 55 samples. Collecting data using primary data by means of interviews with a questionnaire instrument. The analysis used in this research is univariate, bivariate and multivariate analysis. The statistical test used in this study is the chi square test, which is a statistical test used to test the relationship between the independent variable and the dependent variable on a categorical scale.

3. RESULT

a. ***Characteristics of respondents***

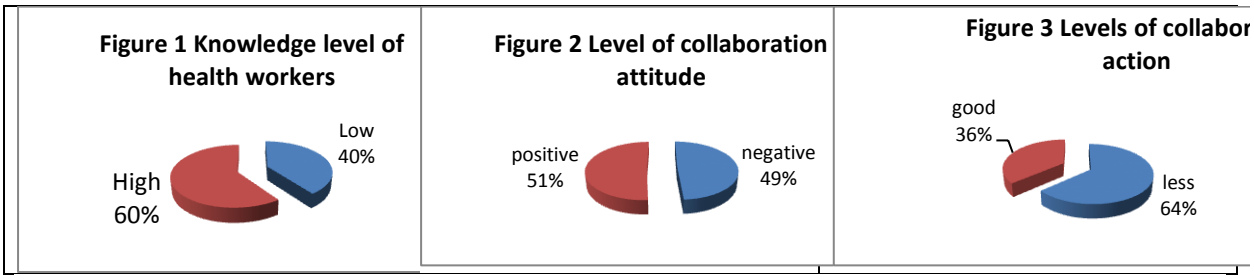
Characteristics of health workers respondents are seen from 3 variables, namely gender, health professional category and health worker education level. The results showed that 67.3% were female, with 45.5% with a sanitarian profession and education in general D4/S1 of 63.6%.

b. ***Level of knowledge, attitude and collaborative action***

The results showed that more than half of the respondents had high knowledge (40%) to understand the collaborative concept in disaster management. Low understanding shows the reasons for the need for collaboration (40%), risk reduction efforts (58.2%) and strategies to assess the magnitude of health problems caused by the haze disaster (70.9%).

The results showed that more than half of the respondents or health workers had a positive attitude (51%) about collaboration in managing haze disaster risk. disaster risk management (40%), and response to instructions from regional leaders (76.4%).

The results of Figure 1 show that more than half of the respondents or health workers have less action (64%) regarding collaboration in managing the risk of haze disaster. It is seen that there is still a lack of responsiveness about collaborative activities such as involvement in disasters and responsibility (40%), advice from disaster risk management leaders is rare (43.6%) and the importance of health services is rare (50.9%), strengthening assessments health systems in disasters are rare (50.9%) and rarely receive disaster management information (50.9%)



c. ***Relationship between knowledge and attitude and collaborative action***

Bivariate analysis was carried out to see the relationship between the knowledge and attitudes of health workers with the actions of health workers in collaboration for disaster risk management of haze. The results of the bivariate analysis are shown in the table below

Table 1. Relationship between knowledge and actions of health workers on collaborative disaster risk management

collaborative knowledge	Collaborative Action		Total (f / %)	P value
	Less (f / %)	Good (f / %)		
low	11 (50)	11(50)	22 (100)	0,153
High	24 (72.7)	9 (27,3)	33 9100)	
Total	35 (63,6)	20 (36,4%)	55 (100)	

Actions that are less collaborative are actually higher with high knowledge of health workers (72.7%) than those with low knowledge (50%). To prove the significance of the

relationship between knowledge of health workers and respondents' actions in disaster risk management, the chi square test was carried out. The results of the chi square test showed the value of p = 0.153 (p> 0.05). This shows that there is no relationship between the knowledge of health workers and the actions of health workers in collaborative risk management for haze disaster.

Table 2. Relationship between attitudes and collaborative actions for disaster risk management

Collaborative Attitude	Collaborative Action		Total (f / %)	P value
	Less (f / %)	Good (f / %)		
low	12 (44,4)	15(55,6)	27 (100)	0,009
High	23 (82.1)	5 (17.9)	28 (100)	
Total	35 (63,6)	20 (36,4%)	55 (100)	

Based on table 1, it can be seen that the less collaborative actions were higher in the positive attitude of health workers (82.1%) than the negative attitude (50%). To prove the significance of the relationship between the attitude of health workers and the respondent's actions in disaster risk management, the chi square test was carried out. The results of the chi square test showed the value of p = 0.009 (p < 0.05). This shows that there is a relationship between the attitude of health workers and the actions of health workers in collaborative risk management for the haze disaster.

DISCUSSION

Collaborative understanding of disaster risk management Haze for health workers

Every health worker needs to have adequate knowledge and skills to be able to work. quickly, accurately, and precisely in team work. The results showed that more than half of the respondents or health workers had a high level of knowledge (60%) about collaborative risk management for haze disaster. This is because health workers still know a lot of the duties and responsibilities that must be in the event of a disaster and what their authority is. So that it is difficult to carry out activities when in a work team.

Knowledge is the most influential thing in the interprofessional collaboration process, because good knowledge will make it easier for someone to improve skills and influence new views and values as well as coordination of health services, appropriate use of specific clinical resources, health outcomes for chronic diseases, and health services. and can support the safety of disaster victims (Schneider, 2012).

To achieve better health outcomes, the target for disaster victim safety needs to be understood and implemented in intervening in natural disasters. The goals include 1)

maintaining accuracy in victim identification, 2) improving effective communication, 3) improving high alertness drugs, 4) ensuring proper location, conformity of procedures, 5) minimizing the risk of nosocomial infections acquired from health services, 6) minimizes the risk of additional casualties (Maharani, Asrial and Purba, 2020).

This explains that attitude is something that needs to be grown and developed through the learning process. This study shows that more than half of the respondents or health workers have a positive attitude (51%) about collaboration in managing the risk of haze disaster. There are still many respondents who do not agree with the implementation of the collaboration which explains their respective duties and authorities. The interaction between understanding, motivation and attitude is very useful in taking action to manage the haze disaster. Understanding will lead to new awareness and motivation, motivation to grow attitudes to change individual behavior. The learning process within the individual can bring development or change in attitude for the better. Therefore, health workers need to have a positive attitude towards interprofessional collaboration so that it can be done by holding seminars, workshops or trainings that can support the attitude of these health workers (Green and Johnson, 2015).

In order to manage the occurrence of natural disasters, it is necessary to properly prepare skilled health workers with the ability to work in teams and have good communication skills, the ability to work in teams, together with influencing factors, need to be taught and trained to students of health professions since they are in school. lectures so that after completing their education, they are ready to work in teams. While the learning materials to develop and train skills include modules, teachers as facilitators, media as triggers, resources (simulated patients, real patients, manequins, libraries) and assessment schemes.

Collaborative actions or practices provide integrated treatment with one goal. This study shows that more than half of respondents or health workers have less action (64%) regarding collaboration in managing haze disaster risk. Many things have not been carried out by the health workers, especially effective communication and leadership, so that there are often overlaps in the implementation of disaster programs. Service governance in providing health services does not overlap in roles and functions as service providers with different professional backgrounds (Susilaningsih *et al.*, 2017). Overlapping services between professions occur due to a lack of communication between health workers in teamwork. This means that health workers who have bad actions and lack of good teamwork will disrupt

health services so that interprofessional collaboration is needed in order to maximize services that provide satisfaction to health service users.

Actions that are still lacking are caused by factors of knowledge and attitudes in understanding the concept of collaboration. This study found that there was a relationship between the collaborative actions of health workers in managing the risk of haze disaster. So the effort that can be done is to provide collaborative training for health workers to provide understanding and motivation in disaster risk management. This training will use modules that have been validated by experts.

The natural disaster module should start with a background on teamwork and interprofessional communication. The introduction or background of the module should inform the importance of the content in the module. Providing collaborative factual data using YouTube video media related to collaborative implementation makes the module more interesting and complete. The aims and objectives involving the competencies to be achieved after this module must be clearly defined. The topics to be covered must be relevant to the objectives of the module. The learning strategies or methods used can be in the form of lectures, group discussions, role plays and clinical skills practice simulations, assignments, workshops / seminars, and reflection (WHO, 2010).

By teaching and training modules on health and disease problems that are closely related to natural disasters, it is hoped that graduates will be able to work effectively in teams to solve health problems in the event of natural disasters. In principle, the IPE assessment related to the natural disaster module remains based on an assessment of attitudes, knowledge and skills in both scientific and collaborative aspects. Health workers studying the natural disaster modules are advised to have adequate knowledge and skills (meet the minimum competency standards) according to the competency standards required by each profession so that they can learn to develop effective inter-professional collaboration. Scheduling collaborative activity modules, is technically the first problem for health agencies in implementing IPE. It needs strong coordination and goodwill between coordinators or people who are responsible for managing this program in order to overcome difficulties in managing schedules (to fulfill various professions at one time) (Kusumawati, 2015).

The change in the collaborative paradigm of disaster management must be supported by the government through policies in a regulation. Government policy is a policy that has the power to bind the apparatus in the government's own organization. In this case the government must seek to support interprofessional collaboration so as to improve the quality

of services. The researcher argues that if the government participates in the development of interprofessional collaboration, the quality of health services will be higher so that it can reduce the death rate due to natural disasters, especially the annual cycle of smog.

Besides that, it must also have community support so that the community is involved in making decisions in the event of a disaster. Community support is social support as a source of emotional, informational or assistance provided by people around in everyday life. In health services, collaboration between health workers and cross-sector is very important because good cooperation will improve quality and quality services that are easily accessible to the public.

Conclusions and suggestions

The level of understanding of health workers shows that more than half of the respondents or health workers have a high level of knowledge and a positive attitude about collaboration in managing the risk of haze disaster. The actions or practices of more than half of the health workers have less collaborative action to mitigate the risk of haze disaster. The relationship between knowledge and attitudes with actions shows that there is a relationship between the attitude of health workers and the actions of health workers in collaborative risk management for haze disaster. The government's involvement is needed to issue a collaborative policy for dealing with haze disaster risk to change the centralistic/spatial paradigm in disaster management. Health workers can improve their understanding of communication and motivation in collaborative disaster risk management of haze. It is necessary to follow up this research by implementing collaboration in disaster risk management for haze and the impact can be measured

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