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# Description of Santri Preparedness for Fire Disaster Management in Pondok Karya Pembangunan Islamic Boarding School Manado City 2020

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## **Description of Santri Preparedness for Fire Disaster Management in Pondok Karya Pembangunan Islamic Boarding School Manado City 2020**

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**Abstract:** Preparedness is a part of the disaster management process which aims to prevent and minimize disaster risk which is pro-active before a disaster occurs. Fire disasters can occur anywhere, including in the Islamic boarding schools, this is because in the pesantren there is not only a teaching and learning process, but also most of the students' lives are carried out in the pesantren. The aims of this study was to describe the fire disaster preparedness of the students at Islamic Boarding School Pondok Karya at Manado City. Type of this research using analytic survey with a cross sectional approach, with a total sample of 89 people was taken using accidental techniques. The results of this study showed that as many as 60 students (67.4%) have a level of preparedness that is ready to cope with fire disasters with a good level of knowledge (47.2%) on fire management procedures although only 11 students (37.1%) knew how to use fire extinguisher. Statistical test result using chi square test that there is a relationship between the level of knowledge (0.002) and attitude (0.000) with the level of preparedness in fire disaster preparedness at Islamic Boarding Scholl Pondok Karya at Manado City. Recommended for Islamic Boarding School Management are required to provide education on fire disaster management preparedness to students at least once a year, so that if a fire disaster occurs, the risk can be minimized.

**Keywords:** fire disaster preparedness, Islamic boarding school, Santri SIGAB

### **1. Introduction**

Implementation of occupational safety and health education in educational institutions still needs more intensive attention. An educational institution is not much different from a company, in an educational institution there are workers, people other than workers, hazards, sources of danger, and risks of harm. In contrast to educational institutions, activities in a company are focused on production activities, however this does not mean that educational institutions are not at risk of harm. One of the hazards that can occur in educational institutions is a fire

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disaster. National data from Indonesia National Disaster Management Authority in 2012 there were 896 fire cases, both residential and building fires. Cases of fire disasters caused by electrical short circuits or electrical short circuits amounted to 65.51% or as many as 587 cases, 2.90% or as many as 26 cases caused by gas stove explosions, and 31.58% or as many as 283 cases of fires that occurred due to human negligence, the production process, and has not been identified.

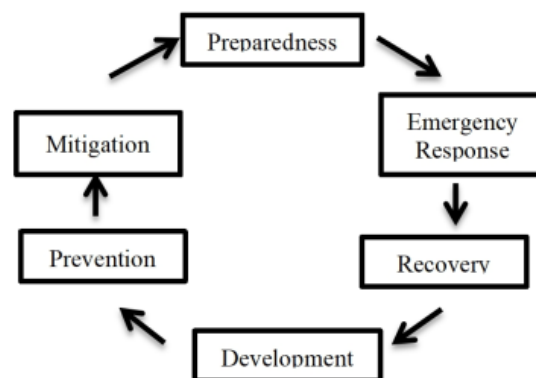
Fire incidents at educational institutions such as college have occurred at the STIE Perbanas campus in the Kuningan Area Jakarta and and the Dean Building from Faculty of Engineering, University of Indonesia, in 2001. In March 2019, fire accident has also occurred at Faculty of Public Health, Airlangga University, Surabaya, the cause of the fire was allegedly by electrical short circuits. Fire incident occurred at a pesantren in Malaysia in 2017 which caused 24 people died and the caused by electrical short circuits. At Indonesia in 2020 there several fire incidents that occurred in the Islamic boarding school as it happened to one block of the Nurul Islam Islamic boarding school in Sribandung Village, South Sumatra in Februari 2020 and in June 2020 at the boarding school Manbau Darussalam, Palangkaraya, both were caused by electrical short circuits.

The opportunity for a fire insident to occur in this Islamic boarding school requires the management of pesantren to provide students with insight into disaster preparedness before entering and during the learning process at Islamic boarding school. The result of preliminary study conducted at Islamic Boarding School Pondok Karya Manado City on 10-13 July 2020 through interviews with 2 management of the pesantren and 5 students information was obtained that the way to prevent fire from occurring is to always turn off the electric meter when it is not in use, to

control the cylinder LPG and regulator of the gas stove. In addition, regarding the procedure for extinguishing the fire, information was obtained that out of 5 students, only 1 student could operate the existing Fire Extinguisher. Therefore, this research activity needs to be carried out to see a description of the preparedness of students for fire disaster management at Islamic Boarding School Pondok Karya Pembangunan.

## 2. Theoretical Framework and Hypothesis Development

The main factors that can lead to disasters resulting in large casualties and losses, namely a lack of understanding of the characteristics of hazards, attitudes or behaviors that result in decreased human resources, lack of early warning information resulting in unpreparedness, and helplessness or inability to face disasters. Disaster management arrangements are dynamic, continuous and integrated to improve the quality of measures related to local observation and disaster analysis as well as mitigation prevention, preparedness, early warning, emergency response, disaster rehabilitation and reconstruction. The disaster management cycle consists of prevention to completely eliminate or drastically reduce the consequences of threats through control physical and environmental adjustments.



Gambar 1.3 Disaster Management Cycle (Sumber: Ramli, 2015)

The parameters for measuring preparedness are grouped into four groups, namely knowledge and attitudes, emergency planning, warning systems and resource mobilization.

### 3. Research Method

This research was conducted at the Pondok Karya Pembangunan Islamic Boarding School Manado City. The type of this research used analytical survey with a cross sectional study design. The population of this research is all students who live in boarding schools with a total of 128 people. The sample size was 89 people who were taken using accidental sampling technique. The data was collected by giving questionnaires to the students using the google form application.

Sources of data in this study are divided into two, namely: Primary data, namely data obtained from the results of the initial survey and interviews with students in Islamic boarding schools and secondary data obtained from documentation and profiles of Islamic boarding schools by collecting and studying documents. related to the facility. and infrastructure for Islamic boarding schools as well as light fire extinguishers and evacuation routes.

### 4. Results and Discussion

#### RESULT

##### a. Characteristics of Respondents

Table 1. Distribution Characteristics Responden in Pondok Karya Pembangunan Islamic Boarding Schools, Manado City in 2020

Respondent Characteristics		n	%
Age	10-15 years old	76	85,4
	16-20 years old	12	13,5
	>20 years old	1	1,1
Length of Stay at	Less 1 years	51	57,3



Islamic Boarding School	1-2 years	24	27,0
	More than 2 years	14	15,7
Educational Background	Madrasah Ibtidaiyah (SD)	37	41,6
	Madrasah Tsanawiyah (SMP)	38	42,7
	Madrasah Aliyah (SMA)	12	13,5
	PT (D4/S1)	2	2,2
Have Experience with fire incident	Yes	9	10,1
	No	80	89,9
Knowledge Level about Preparadness Fire Incident	Pretty good	47	52,8
	Good	42	47,2
Attitude in dealing with fire disasters	Negative	26	29,2
	Positif	63	70,8
Utilization of Fire Management Facilities	Available but don't know to use	56	62,9
	Available and know to use	33	37,1
Fire Disaster Preparedness Level	Not ready	29	32,6
	Ready	60	67,2
Total		89	100,0

Table 1 shows that the characteristics of students who became respondents in this study were aged 10-15 years (85.4%) with the last education level being junior high school (38 people 42.7%). The level of knowledge of the students on potential hazards and procedures for dealing with fire hazards was in the quite good category (52.8%) and 70.8% of the students' attitudes in dealing with fire disasters and the procedures for handling them were positive, namely the students knew who to contact and what actions to take when a fire broke out at the Islamic boarding school. The level of fire disaster management preparedness for the students was in the ready category (67.4%), although only 33 people (37.1%) knew students used a fire extinguisher.

b. Description of respondent's characteristic regarding fire disaster preparedness at Islamic Boarding School

Table 2. Crosstabulation between the level of knowledge and attitudes of students towards preparedness in fire disaster management in

Pondok Karya Pembangunan Islamic Boarding School, Manado City in 2020

Independent Variable		Dependent Variable ( Fire Disaster Preparedness Level )				P-value	Conclusion
		Not Ready		Ready			
		n	%	n	%		
Knowledge Level about Preparadness Fire Incident	Pretty good	24	75.0	23	40.4	0.002	<i>significant</i>
	Good	8	25.0	34	59.6		
<b>Total</b>		<b>32</b>	<b>100</b>	<b>7</b>	<b>100</b>		
Attitude in dealing with fire disasters	Negative	23	79.3	3	5.0	0.000	<i>significant</i>
	Positif	6	20.7	57	95.0		
<b>Total</b>		<b>29</b>	<b>100</b>	<b>0</b>	<b>100</b>		

Table 2 shows the results of statistical tests using the chi square test on the independent variable with the dependent variable showing that there is a relationship between the level of knowledge (0.002) and attitude (0.000) and the level of preparedness in fire disaster management in Pondok Karya Pembangunan Islamic Boarding School, Manado City. Knowledge is a major factor and a key to preparedness. The knowledge they have can usually influence attitudes and awareness to be prepared in anticipation of disasters.

## DISCUSSION

Islamic boarding schools are one of the educational institutions that have risks, because in their activities they always use tools and materials to support the teaching and learning process and energy sources that can cause potential hazard. Energy sources such as electricity, LPG gas and chemicals, if not properly regulated, can create a fire risk.

Fire is a disaster that is most frequently encountered and can be classified as a natural disaster or a disaster caused by human actions. Fire



hazards can occur at any time and at any time, which results in many losses in the form of material, environmental, financial, equipment and human beings [4].

The main factors that can lead to fire disasters that can cause large casualties and losses are a lack of understanding of the characteristics of hazards, attitudes or behavior that result in a decrease in natural resources, lack of early warning information resulting in unpreparedness, and helplessness or inability to handle disasters. Preparedness is grouped into four parameters, namely knowledge and attitudes, emergency planning, warning systems and resource mobilization.

In this study, the knowledge that students should have about fire disasters are knowledge and understanding of the causes of fire and fire disaster preparedness, which includes understanding of appropriate self-rescue measures when a fire occurs and actions and equipment that need to be prepared before a fire occurs, as well as attitudes. and awareness of fire risk factors. Knowledge is a major factor and a key to preparedness. The knowledge they have can usually influence attitudes and awareness to be prepared in anticipation of disasters. Preparedness is a part of the disaster management process and in the current concept of disasters, the importance of preparedness is one of the important elements of proactive disaster risk reduction prevention activities, before a disaster occurs.

In this study, it can be seen that most of the students at the Pondok Karya Pembangunan Islamic Boarding School Manado aged 10-15 years showed that the level of knowledge about fire disasters was in the good category, this mean that the students had enough to know and understand the causes of fire disasters, know how to save themselves when a disaster

occurred and understand the actions to be taken when a fire disaster occurs, but only a few students understand how to use fire extinguisher.

The age of the students who are between the ages of 15-18 years shows that the students are in the middle adolescent phase where middle adolescents are individuals who can already assess their behavior regarding the causes of fire and the risk of fire.

<sup>3</sup> The results of this study are in line with research conducted by Firmansyah (2104) which states that adolescents aged 15-18 years should be able to gather information from various sources to increase their knowledge of disasters, students' varying abilities in accessing information can affect students' knowledge levels. In this study, attitude is one of the factors related to preparedness action in fire disaster management. The attitude of the students shows an emergency response to fire disasters, some students know the evacuation route and the location of the fire extinguisher but some students still don't know how to use the fire extinguisher. Attitudes can affect a person's behavior in life. This statement is in accordance with Brehm and Kassim's Theory of Reasoned Action in Saifuddin (2005) which states that attitudes influence <sup>1</sup> behavior through a decision-making process and in this case it is the <sup>1</sup> decision of students to continue to prepare for the fire disaster. The <sup>1</sup> results of this study are supported by research supported by Lenawida, (2011) which states that attitude variables are the most dominant factor affecting household preparedness in facing earthquakes.

Efforts to increase knowledge through disaster education are expected to increase one's preparedness behavior. This can be seen from the results

of research where better knowledge can improve one's preparedness behavior.

## **5. Conclusion, Implication and Limitation**

### **5.1 Conclusion**

The conclusion from this study are The better the level of student knowledge, the more it will determine the mindset and better student attitudes, thereby increasing the level of preparedness. Disaster management actions taken by students are also good enough because the level of knowledge is still good even though it has never been done fire disaster simulation. Recommended for Islamic Boarding School Management are required to provide education on fire disaster management preparedness to students at least once a year, so that if a fire disaster occurs, the risk can be minimized.

The parameters for measuring preparedness are grouped into four groups, namely knowledge and attitudes, emergency planning, warning systems and resource mobilization, but in this study there are still 2 parameters of sure knowledge and attitude. So it is suggested for further research to examine warning systems and resource mobilization

### **5.2 Implication and Limitation**

The limitations of this research are:

1. This research only describes the level of knowledge and attitudes of students towards preparedness action in fire disaster management in Islamic boarding schools which are still subjective.
2. Due to time constraints, in this study there are several factors that illustrate preparedness measures for fire disaster management in Islamic boarding schools which are not carefully monitored, such as fire simulations conducted in a year, checking fire prevention

facilities and infrastructure such as fire extinguishers and evacuation routes

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