

## MANAGEMENT AND TRAINING ON AEDES AEGEPTY MOSQUITO NEST ERADICATION (PSN) AT AL-HIJRAH ISLAMIC BOARDING SCHOOL, POLMAN

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### Abstract

**Background:** The eradication of *Aedes aegypti* mosquito nests in Islamic boarding schools is very important because *Aedes aegypti* is the main vector of dengue fever and Zika virus. If not controlled, this mosquito population can spread and cause disease outbreaks that endanger public health, especially Islamic boarding school students. **Objective:** This activity aims to increase the knowledge, skills as well as motivation of coaches and students to play an active role in preventing dengue fever by eradicating mosquito nests. **Method:** Management activities and training on mosquito nest eradication (PSN) *aedes aegypti* at Al-Hijrah Islamic Boarding School consist of PSN training activities will be carried out with lectures, demonstrations, and discussions between speakers and participants, then to find out the effects of counseling, the community service team conducts pre and post tests on students about PSN. **Results:** based on the results of this study, the number of students and satriawati who participated was 21 people, including 12 students of male gender and 9 students of female gender. It is known that there is an increase in knowledge. The data were abnormally distributed, so the *Wilcoxon test was used* to determine whether there were differences in the level of knowledge before and after exposure to material related to mosquito nest eradication. The results of the *Wilcoxon test* show that the value of *Asymp. GIS (2-tailed) 0.005 (p<0.05)* so that it can be concluded that there are differences in the level of knowledge before and after education activities are carried out about the eradication of dengue mosquito nests. **Conclusion:** it was concluded that there were differences in the level of knowledge before and after the education activities on the eradication of dengue mosquito nests. **Keywords:** Dengue, Knowledge, Mosquito Nest Eradication.

### INTRODUCTION

The eradication of *Aedes aegypti* mosquito nests in Islamic boarding schools is based on the fact that *Aedes aegypti* is the main vector of dengue fever and Zika virus. This means that these mosquitoes can spread diseases to others through their bites (Nisa & Sugiharto, 2016).

The emergence of dengue fever and Zika virus makes eradication of mosquito nests very important, especially in the Islamic boarding school environment because many students live together and their activities can make mosquito nests breed easily (Sari, 2017).

The Islamic boarding school environment can also be a source of disease spread to the surrounding community if not controlled properly. Therefore, the government and related parties often carry out routine eradication of mosquito nests in Islamic boarding schools to minimize the risk of disease outbreaks (Turisnawati, 2016).

There are several main problems faced in efforts to eradicate *Aedes aegypti* mosquito nests in Al-Hijrah Islamic boarding schools, including:

1. Resources: Eradicating mosquito nests requires resources, such as manpower and funds, which are often less available in Islamic boarding schools. This makes prevention efforts constrained.
2. Technology limitations: Islamic boarding schools have limited technology and tools needed to carry out effective mosquito nest eradication.
3. Lack of public awareness: Some students and the surrounding community do not understand the importance of preventing diseases spread by mosquitoes, so they do not participate in mosquito nest eradication efforts.
4. Unsanitary environment: Islamic boarding schools have an unclean and poorly maintained environment, making them ideal mosquito nests. There are still many mosquito breeding grounds because
5. Limited access: Islamic boarding schools are located in remote and hard-to-reach areas, making it difficult to eradicate mosquito nests effectively.

To overcome this problem, close cooperation between the government, the community, and related parties is needed to increase awareness, knowledge, and resources needed in efforts to eradicate mosquito nests in Islamic Boarding Schools (Utami, 2015).

The solution offered to partners in this service activity is to conduct socialization and education about the importance of preventing diseases spread by mosquitoes is very important to increase awareness and participation of coaches, and students in efforts to eradicate mosquito nests. Improving environmental hygiene, such as ensuring the environment is not polluted with water and there is no place for water to settle, is essential to minimize mosquito nests. PSN will be carried out in the form of counseling and demonstrations by lecturers/service and students. It is hoped that efforts to eradicate mosquito nests in Islamic boarding schools can be carried out effectively and efficiently so that the risk of diseases spread by mosquitoes can be suppressed

## **METHOD**

Management activities and training on *Aedes aegypti* mosquito nest eradication (PSN) at Al-Hijrah Islamic Boarding School will be carried out by a team of lecturers at the Faculty of Health Sciences, University of West Sulawesi, through several stages, namely:

### **A. Preparation**

1. In the early stages, the team of lecturers at the Faculty of Health Sciences, University of West Sulawesi held a meeting / via telephone with partners to ensure that service activities at the Al-Hijrah Islamic Boarding School could be carried out
2. The initial survey will be conducted by observing and interviewing partners to find out what is needed by partners regarding mosquito eradication.

3. Agree on procedures and timing of activities with partners. Service activities will be carried out at the Al-Hijrah Islamic Boarding School
4. Prepare training materials to be provided

#### **B. PSN Management and Training**

PSN training activities will be carried out through lectures, demonstrations, and discussions between speakers and participants.

#### **C. Evaluation**

To find out the effects of counseling, the community service team conducted pre and post-tests on students about PSN

### **RESULTS AND DISCUSSION**

Community Service activities were carried out face-to-face through counseling on mosquito nest prevention training on Thursday, May 11, 2023, at the Alhijrah Islamic boarding school mosque attended by 21 people and 2 educators. The details of the activity are as follows:

#### **1. Preparatory Stage**

At this preparatory stage, permission was made to the Head of the Al-Hijrah Islamic Boarding School for the determination of schedules, places, and participants. In addition, field observations were carried out at the location of the pesantren. Based on observations, it is known that there is 1 mosque, 4 bathrooms, and 2 student dormitory buildings.

#### **2. Implementation Phase**

Before carrying out this activity, the participants were given a *pre-test* questionnaire to find out the extent of participants' knowledge about dengue fever mosquitoes, and how the PSN method. The details of the implementation stage carried out several activities as follows:

##### **a. Counseling About PSN**

PSN counseling was given to increase students' understanding of how the PSN method in eradicating dengue fever mosquito nests. Counseling materials were given about the types of mosquitoes, dangers and diseases caused by *Aedes aegypti* mosquito bites, and how the PSN method. In addition, participants were also given information about the description of dengue cases in Indonesia, and in it are the objectives, benefits, of the PSN program. In addition, participants were also given material related to efforts to control *Aedes aegypti* mosquitoes.



**Picture 1 Counseling on PSN Management**

b. Evaluation Phase

The results of the evaluation showed that the activity took place according to plan both in terms of time, place, material provided, and also responses from students and administrators of local boarding schools and activity participants.



**Figure 2 Post-test filling to students**

In addition, an evaluation was carried out on increasing participants' knowledge about mosquito nest eradication management, both naturally, biologically, and chemically. The results of the analysis carried out are as follows:

**Table 1 Results of Participants' Answers Per Question-Related to Participants' Knowledge of Eradicating Mosquito Nests at Al-Hijrah Modern Islamic Boarding School, Polewali Mandar Regency in 2023**

No	Question Item Indicator	Pre Test				Post Test			
		True		Wrong		True		Wrong	
		n	%	n	%	n	%	n	%
1	How to Transmit DHF	20	95,2	1	4,8	21	100	0	0
2	Types of dengue transmission vectors	16	76,2	5	23,8	20	95,2	1	47,8
3.	Where dengue vectors breed	1	4,8	20	95,8	5	23,8	16	32,1
4.	Characteristics of Dengue Mosquitoes	20	95,2	1	4,8	20	42,9	1	4,8
5	PSN Identification	14	66,7	7	33,3	17	81,0	4	64,3

6.	PSN DBD Terminology	17	81,0	4	19,0	21	100	0	0
7.	PSN effectiveness	18	85,7	3	14,3	19	90,5	2	53,6
8.	PSN Method	16	76,2	5	23,8	20	95,2	1	4,8
9.	PSN Frequency Rules	7	33,3	14	66,7	4	19,0	17	81,0
10.	When to do PSN	10	47,6	11	52,4	16	76,2	5	23,8
11	Types of PSN activities	7	33,3	14	66,7	9	42,9	12	57,1
12	Types of where to do PSN	4	19,0	17	81,0	8	38,1	13	61,9
13	Abate Powder in PSN	9	42,9	12	57,1	13	61,9	8	38,1
14	Dengue Mosquito Breeding	5	23,8	16	76,2	10	47,6	11	52,4
15	PSN in public facilities	9	42,9	12	57,1	13	61,9	8	38,1

Source: Primary Data

Based on Table 2, it is known that in each indicator of questionnaire questions, 13 out of 15 questions have increased knowledge, except for question no. 4, there is no change when conducting pre-test and post-test and questionnaire question no. 9 has decreased the number of correct before and after education is carried out

**Table 2 Results of Differences Test Related to Participants' Knowledge of Eradicating Mosquito Nests in Al-Hijrah Modern Islamic Boarding School Polewali Mandar District in 2023**

No	Category	Knowledge Level				Difference Test (Wilcoxon test)
		Not Good		Good		
		n	%	n	%	<i>Asymp. sig (2-tailed)</i>
1	Pre Test	10	47,6	11	52,4	0.005
2	Post Test	7	33,3	14	66,7	

Source: Primary Data

Based on Table 2, it is known that there is an increase in knowledge. The data were abnormally distributed, so the Wilcoxon test was used to determine whether there were differences in the level of knowledge before and after exposure to material related to mosquito nest eradication. The results of the Wilcoxon test show that the value of *Asymp. sig (2-tailed)* 0.005 ( $p < 0.05$ ) so it can be concluded that there are differences in the level of knowledge before and after education activities are carried out about the eradication of dengue mosquito nests.

## CONCLUSION

Community service activities in the form of introducing the dangers of *Aedes aegypti* mosquitoes and the importance of mosquito nest eradication management (PSN) went well and according to plan. Activities carried out in the form of health counseling about the dangers of dengue, PSN training, and practices in eradicating mosquito larvae received high enthusiasm from students and administrators of Islamic boarding schools.

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