

# Effectiveness of Giving Health Education About Healthy Houses as Effort of Prevention of Pulmonary Tuberculosis in the Pelabuhan Dalam Village in the Pemulutan Community Health Center of Ogan Iir District 2019

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**Abstract** - A healthy house is very important in preventing the emergence of various diseases, especially tuberculosis (TB), community knowledge about healthy homes and TB prevention efforts is still low. The purpose of this study was to determine differences in knowledge of port village communities in the Puskesmas Pemulutan work area before and after health education regarding prevention of pulmonary TB transmission. Data was collected by using a questionnaire about knowledge about prevention of pulmonary TB transmission. with 99 samples, and data analysis using the Paired t-test. There are differences in the average knowledge of respondents before and after counseling. It is expected that the puskesmas will increase extension activities to the community and village officials will increase community participation, especially in health extension activities.

**Keywords:** *counseling, healthy homes, pulmonary TB.*

## I. INTRODUCTION

National development goals in the field of health according to RI Law No. 36 of 2009, [1] is to increase awareness, willingness, and ability to live healthy for everyone, so as to realize the highest degree of public health. Health is an investment for national development, especially for human resources that are socially and economically productive.

Blum states that the degree of health is influenced by four factors namely the environment, behavior, health services and heredity [2]. Environmental and behavioral factors have a great influence on the quality of health status. The biggest environment in the human life process is the housing environment, so the quality of the house will have an impact on his health condition. [3]

The house is one of the basic human needs that functions as a place to live or a residence that is used to protect against climate disturbances and other living things as well as a place to develop family life. Therefore, the existence of a healthy, safe, harmonious and orderly home is very necessary so that the function and use of the house can be fulfilled properly [3]

Construction of houses and the environment that do not meet health requirements is a risk factor for disease transmission. One of the Infectious Diseases which is closely related to a house that does not meet the requirements is Tuberculosis (TB) Ministry of Health Republic of Indonesia [4]. A healthy building that meets the requirements can improve the quality of health [4]. WHO recommends environmental factors, one of which is a good home ventilation system to prevent the spread of pulmonary TB [5]

Tuberculosis is an infectious disease that can cause morbidity, death and high disability [6] In order not to cause adverse impacts, appropriate countermeasures are needed. [7] It is estimated that there are 8 million people stricken with tuberculosis with the death of 3 million people. Tuberculosis attacks more than 75% of the productive age population, 20-30% of family income is lost annually due to tuberculosis. In addition, an active TB sufferer will infect 10-15 people in the vicinity per year, and without effective treatment, 50-60% of TB patients will die [8]

TB sufferers in Indonesia are quite high. Based on the WHO report in 2018 [8] the country of Indonesia was ranked 3rd most people with TB after India (2,740,000 cases) and China (889,000 cases) Sufferers.

Tuberculosis in South Sumatra Province is quite high. Palembang City ranks first with a total of 5,125 TB patients. Ogan Ilir Regency ranks 9th with 632 patients.[9]

Pemulutan Puskesmas is one of the puskesmas in the Ogan Ilir area of South Sumatra Province with a high number of pulmonary tuberculosis sufferers. Notification rates of TB cases in the puskesmas Pemulutan area increased from 2017 by 28 people and in 2018 to 36 people [10]

The village of Pelabuhan Dalam is one of the villages in the working area of Pemulutan Public Health Center with the condition of many residents' houses that do not meet the requirements. Dede's research [11] states that people who live in unhealthy homes have a 2,152 times chance to suffer from pulmonary TB compared to those who live in healthy homes. Likewise with the results of al Asyary et al [12] study which states that a healthy home is able to protect children despite staying long with adults with tuberculosis.

For this reason, it is necessary to carry out research on "The Effectiveness of Providing Health Education as an effort to prevent pulmonary TB transmission at Pelabuhan Dalam Village in the Region of Pemulutan Community Health Center, Ogan Ilir Regency in 2019".

This study aims to determine the differences in knowledge of Pelabuhan Dalam village communities in the work area of the Pemulutan Community Health Center in OI Regency in 2019 before and after health education.

The results of this study are expected to be input for the health center in improving the degree of public health in their working area.

## II. METHODS

The type of research conducted by the author is Quasi Experiment. One group pre-test and post-test design is research that is directed to find out the differences in knowledge of the community of the Port Village in the Work Area of Puskesmas Pemulutan OI Regency about the prevention of pulmonary TB transmission before and after health education. In this design there is no comparison group (control) but the first observation (pretest) is made which allows researchers to test changes that occur after the treatment

The sample in this study was the majority of family heads in Pelabuhan Dalam Village in Pemulutan District as many as 99 families out of 798 households.

The sample size was determined by the Slovin formula and sampling by simple random sampling technique [13]

Data were analyzed using Wilcoxon test to see differences in respondent knowledge before and after counseling.

## III. RESULTS

### A. Characteristics of Respondents

#### 1. Age

**Table 1. Distribution of respondents by age**

Data	Mean	Md	Mo	SD	Min- Max
Usia	48,96	50	55	11,083	25- 72

Based on table 1 it is known that the average age of the respondents was 48.96 years. Gender, occupation and education of respondents.

**Table 2. Frequency distribution of respondent characteristics based on gender, occupation and education**

characteristics	Category	(n)	%
Gender	Male	79	87,8
	Female	11	12,2
Profession	Government, Employees, Army , Police	8	8,9
	Private	16	17,8
	Farmer , Fisherman	57	63,3
	Trader	9	10
Education	Elemry School	26	28,9
	Junior High School	31	34,4
	Senior High School	26	28,9
	College	7	7,8

Table 2 shows the majority of respondents are male, namely: 79 people (87.8%), the most work is farmers / fishermen, and most education is junior high. (34.4%).

**B. Bivariate Analysis**

Before doing bivariate analysis, the normality test of the data was done using the Colmogorof Smirnov test, and the results obtained  $P \text{ Value} - 0,0001 > \alpha (0.05)$  both on scores before and after counseling. means the data is not normally distributed so an alternative test is used, the Wilcoxon Test

**Table 3. Differences in mean scores of knowledge scores before and after counseling**

	Md	Min-Max	Negatif Ranks	P Value
Knowledge before counseling	3.00	2-6		
Knowledge After counseling	5,00	4-9	0	0,00

Based on table 3 it is known that an increase in the mean value at the time before compared after counseling is from 3.0 to 5.0. The lowest value before counseling is 2 and after counseling is 6, while after counseling there is an increase ie the scanned value is 4 and the highest value is 9. The value of 0 on negative ranks indicates there is no decrease in value after counseling. There were 88 respondents showing an increase in value after a positive rating ranks = 88) and there were 2 people who did not experience an increase in scores (ties value = 2). From the Wilcoxon test

results obtained the value of  $P \text{ value} = 0,000 < \alpha (0.05)$  which means there are differences in the average of knowledge before being given counseling and after counseling.

**IV. DISCUSSION**

This study shows that an increase in the mean value at the time before compared after counseling. There are significant differences in the average value of knowledge between before and after health education.

Green states that one of the strategies to change behavior is the provision of information in order to increase knowledge[14]so that awareness arises that ultimately people will behave according to their knowledge.

Knowledge occurs after someone does the sensing process [2].Sensing can be through the use of the five senses, sight, hearing, smell, taste and touch.

Health education provided can add information to someone so that their knowledge increases. Study at General Hospital Minna- Nigeria about Effectiveness of health education intervention in improving knowledge, attitude, and practices regarding Tuberculosis among HIV patients Concluded that the health education was effective in improving Knowledge, attitude and practise regarding tuberculosis among HIV patients [15]

A simple educational intervention can have an impact on the knowledge and awareness of tuberculosis among high school children in Vellore, India [16]

Providing health education with lecture methods to increase public knowledge about healthy homes in efforts to prevent pulmonary TB is indeed quite effective. Research on a group of women of childbearing age in the Child Friendly Integrated Public Space (RPTRA) of Bambu Petung and Payung Tunas Teratai concluded that education increase knowledge of WUS about prevention of transmission of tuberculosis [17], but its retention power is not long enough. This was revealed in Cicilia's research [18]which states that the retention power of a given material is only able to last a day

The use of some media as a variation of the lecture method, can help the entry of information through the

sense of hearing, as well as the sense of sight. Study at SMA negeri 1 Cimalaka Shows that varied lecture methods are proven to increase student learning motivation in Civics learning[19]

One of the variations of the media used is leaflet. Research at PuskesmasDonggala shows that there is an effect of health education through leaflets on cadres' insights[20]

The provision of counseling by giving leaflets and displaying posters conducted by researchers also had a good impact. The effect of visual media posters and healthy food leaflets on the behavior of food consumption of students of special grade high school students in Panyabungan I Madailing Regency Madailing Christmas, which gets the result that the installation of posters and the provision of leaflets can influence student's food consumption behavior [21]

Study about Effect of Educational Booklet and Lecture on Nutritional Behavior Knowledge and Attitude on Third-Grade Male Guidance School Students shows that Both educational methods increased the level of nutritional knowledge, attitude, and behaviors of students and it was more significant in lecture group.[22]

Providing health education to the community can increase their knowledge. Health programs will be well understood by the community if they are often exposed to this information. Giving leaflets, putting up posters, and giving lectures are methods that can be used.

For this reason, the Community Health Center need to make a continuous and ongoing effort to increase public knowledge, Routine outreach activities must be carried out, either through mass meetings such as at posyandu, recitation, etc., or through direct visits to residents' homes.

Health workers in Puskesmas can be more intensive in providing counseling as an effort to increase public knowledge. Encouragement from the government, especially village officials to the community so that they play an active role in every health activity, especially health counseling events are very important. Behavior will be formed not only rely on encouragement from within, but also the encouragement of external factors in the form of encouragement from village officials.

## V. CONCLUSION

Here are differences in community knowledge before and after counseling activities.

## ACKNOWLEDGMENT

Community Health Care need to increase efforts to implement regular and ongoing counseling to villagers so that community knowledge can be improved. Dissemination uses several kinds of Poster leaflet media, and a combination of lecture methods. Village officials need to increase community involvement in every activity, especially those related to health activities, such as counseling and others.

For the next researchers, it is necessary to conduct research on the selection of the most effective counseling methods for the community, especially in the pemulutan sub-district

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