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## **APPLICATION OF SANITATION CONCERING PRINCIPLES IN CHILDREN TUBERCULOSIS PATIENTS IN BANJAR REGENCY (SUNGAI TUAN ULU VILLAGE)**

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**Abstract** - Pulmonary tuberculosis is a chronic infectious disease caused by infection with the bacterium *Mycobacterium tuberculosis*. Indonesia is the country with the third largest number of pulmonary TB sufferers in the world after India and China, with 10% of the total pulmonary TB sufferers worldwide. Of all cases, 11% of sufferers were children under 15 years. Riskesdas data in 2018 that behavior in the province of South Kalimantan opened only 70.1% Windows, Enough ventilation only 55.1%, Enough lighting 79,% with TB prevalence lung disease by 0.41% (16,043) and PMO availability by 62.7%. The prevalence of pulmonary tuberculosis in Banjar District is second rank of 3,301 with the number of pediatric sufferers of 0.23%. after Banjarmasin (4,004) TB sufferers. In an effort to overcome the problem of increasingly severe environmental-based diseases, health promotion and education programs are needed. Health education is a planned effort to influence others, whether individuals, groups or communities. Counseling about hygiene and sanitation to mothers is one form of intervention that can improve the health of children who have Tuberculosis. The majority of mothers in the work area in Banjar regency is a housewife, most of the time devoted to taking care of family care. In implementing this program the community has the role of implementing the program that has been implemented. Aside from being the implementer, the community also acts as the main target in the use of the results of the programs that have been carried out. There is a comparison between the value of PreTest and Post Test Counseling Material about community knowledge of pulmonary TB disease with 30 respondents and there is an increase in knowledge and attitudes after being given an intervention with a p-value of 0.001.

**Keywords**– tuberculosis, conseling, sanitation, Banjar Regency

### **I. INTRODUCTION**

Pulmonary tuberculosis is a chronic infectious disease caused by infection with the bacterium *Mycobacterium tuberculosis*. Although patented anti-tuberculosis drugs have been discovered for a long time, pulmonary TB disease is still a major health problem worldwide (1). Indonesia is the country with the third largest number of pulmonary TB sufferers in the world after India and China with 10% of the total number of pulmonary TB sufferers worldwide. Of all cases, 11% of sufferers were children under 15 years. According to the 2018 Riskesdas Data that behavior in South

Kalimantan province opened a Window of only 70.1%, Enough ventilation of only 55.1%, Enough lighting 79,% with a prevalence of pulmonary TB of 0.41% (16,043) and availability of PMO of 62, 7%. The prevalence of pulmonary tuberculosis in Banjar District is second rank of 3,301 with the number of pediatric patients of 0.23%. after Banjarmasin (4,004) TB sufferers (2).

Every day around the world nearly 500 children die from tuberculosis. While the incidence of tuberculosis in children in Indonesia increases every year. In 2006, there were 1,884 cases, an increase in 2007 was 26,492 cases and in 2008 it increased again to 30,728 cases. Tuberculosis in children is a very worrying phenomenon, this is because the diagnosis of tuberculosis in children is very difficult, generally non-typical symptoms and difficult to obtain diagnostic specimens. This disease if not treated as early as possible and as precisely as possible can cause severe complications and reinfection in adulthood. One of the things that aggravates the disease and causes further complications is due to poor hygiene and sanitation (3).

In an effort to overcome the problem of increasingly severe environmental-based diseases, health promotion and education programs are needed. Health education is a planned effort to influence others, whether individuals, groups or communities (4). One method of health education in the form of health counseling is a 2-way process between the counselor and the individual, to help individuals recognize and overcome the problems faced by the individual (5). Counseling about hygiene and sanitation to mothers is one form of intervention that can improve the health of children who have Tuberculosis. Counseling with the target mother is the right object, because the mother is the first educator of the family, who plays a role in family welfare. Mothers are very instrumental in the formation of behavioral changes, so that changes in behavior related to environmental health are expected (6). The majority of mothers in the work area in Banjar regency is a housewife, most of the time devoted to taking care of family care.

## II. METHOD OF IMPLEMENTATION

The implementation of this program does not matter the role and the community in which it is targeted. In the implementation of this program the community plays a role in implementing the program. In addition to implementing, the community also plays a key role in the utilization of program outcomes. The method of implementation of this community service program is as follows:

### 2.1 Preparation

Strategy used in this program is the community approach to ABG (Advocacy, Community Development, and Community Movement). Advocacy is carried out to health agencies and the local village to support this program so that it can run according to goals, objectives and plans. Community development is carried out with the local community with support from community leaders and health centers to encourage the general public who are partners to fulfill a healthy and balanced menu. The next preparation is planning the implementation of health education for mothers who have children with Tuberculosis who have a major role in this partnership activity. Therefore, activities need to be carried out in the form of:

Preparing counseling activities for mothers who have Tuberculosis children who are targeted by the program, including preparing counseling materials to increase knowledge about Tuberculosis, hygiene and environmental sanitation, examples of healthy environment, examples of healthy food menus, examples of good food processing and serving.

## 2.2 Implementation

Implementation of this activity is as follows:

- a. Conduct counseling activities for mothers who have children with Tuberculosis who are the target of the program. This activity was delivered by the dedication team. In this activity counseling material that will be provided is about hygiene and environmental sanitation at home to improve the health status of children.
- b. Conduct counseling activities for mothers who have children with Tuberculosis who are the target of the program. This activity was delivered by the dedication team. In this activity counseling material that will be provided is about Tuberculosis, environmental hygiene and sanitation, examples of a healthy environment, (opening windows, cleaning the house every day, reducing air pollution, removing trash and feces).

Mothers who have children with Tuberculosis are also given a way to advocate, foster atmosphere and community movements to mothers who are nearby Finally, with mothers who have Tuberculosis children who have been empowered will create increased hygiene and environmental sanitation in other mothers.

## 2.3 Evaluation

Assessment of the program can be seen from the short-term and long-term evaluations. Short-term evaluations were assessed for tuberculosis, environmental sanitation, healthy food menus, food processing and serving using a pretest and posttest questionnaire which was then compared to the results. A long-term evaluation is conducted to look at changes in hygiene and sanitation of the mother's environment who have tuberculosis sufferers who are the target of the program.

## III. RESULTS AND DISSCUSSION

### 3.1 Univariat Analysis

The description of the characteristics of the mother group in this community service activity is as follows:

#### 3.1.1 Age

Based on primary data conducted on 30 mothers in Sungai Tuan Ulu Village, the frequency distribution based on age is as shown in table 1 below.

Table 1 Distribution of Respondents by Age in Sungai Tuan Ulu Village

Age	Frequency	Percentage (%)
17-25	2	6,7
26-35	8	26,7
36-45	13	43,3
46-55	7	23,3
<b>Total</b>	<b>30</b>	<b>100</b>

Source: Primary Data 2019

Based on the table, the results of the study show based on age in Sungai Tuan Ulu Village with a total of 30 respondents, most respondents were found at the age of 36-45 years as many as 13 (43.3%) respondents. While at the age of 26-35 years as many as 8 (26.7%) respondents. In addition

it was also found at the age of 46-55 years as many as 7 (23.3%) respondents and at the age of 17-25 years as many as 2 (6.7%) respondents.

### 3.1.2 Education

Based on primary data collection conducted on 30 mothers in Sungai Tuan Ulu Village, frequency distribution based on level of education is obtained as in table 2 below.

Table2 Distribution of Respondents by Education Level in Sungai Tuan Ulu Village

Education	Frequency	Percentage (%)
No formal education or primary school	8	23,3
Middle school	7	26,7
High school	15	50
<b>Total</b>	<b>30</b>	<b>100</b>

Source: Primary Data 2019

Based on the table, the results of the study show based on the level of education in Sungai Tuan Ulu Village with a total of 30 respondents, most respondents were found at the high school level of 15 (50.0%) respondents. While at the level of education not graduating from elementary school as many as 8 (23.3%) respondents. At the junior high school level, 7 (26.7%) respondents.

Knowledge of respondents is influenced by the level of education. Education and the amount of training are factors that have a very significant influence on people's perceptions, stating that such a low level of education influences mindset and impacts creativity. Knowledge is very closely related to education, it is hoped that with higher education, the person will have a wider level of knowledge which impacts on better management of forests and water resources.

Evaluation is an activity that intends to find out whether the goals that have been determined can be achieved, whether the implementation of the program is in accordance with the plan, and or what impact occurs after the program is implemented. Program evaluation is useful for decision makers to determine whether a program will be stopped, repaired, modified, expanded, or improved. By evaluating a program, the impact of program implementation will be known so that future program planning will be better and more perfect (7).

Evaluation is done by comparing the results of the pre-test scores before the material is delivered as well as the post-test scores after the provision of counseling material. The results of the pre test and post test in the counseling activities can be seen in the following table.

Tabel 3 Results of Pre Test and Post Test Values Counseling about public knowledge of pulmonary TB

Correct answer	Pre-test		Post-test		
	frequency	%	Correct answer	frequency	%
3	4	13,3	3	1	3,3
4	4	13,3	5	2	6,7
5	3	10	6	3	10
6	5	16,7	7	7	23,3
7	11	36,7	8	9	30

8	3	10	9	8	26,7
<b>Total</b>	<b>30</b>	<b>100</b>	<b>Total</b>	<b>30</b>	<b>100</b>

Source: Primary Data 2019

Based on the variables it is possible to compare the Pre Test and Post Test Guidance Material on public knowledge of lung TB disease with a total of 30 respondents. Of the Pretest results respondents answered with a true 3 of 4 (13.3%). Which answered correctly 4 out of 4 (13.3%). Which answered correctly 5 out of 3 (10%). Which answered correctly 6 out of 5 (16.7%). Of those who answered correctly 7 out of 11 (36.7%). And that answered correctly 8 by 3 (10%).

Based on the results of the Post test respondents who answered correctly 3 of 1 (3.3%). Of those who answered correctly 5 out of 2 (6.7%). Which answered correctly 6 by 3 (10%). Of those who answered correctly 7 out of 7 (23.3%). Which answered correctly 8 out of 9 (30%). And that answered correctly 9 out of 8 (26.7%).

Knowledge is one of the factors affecting the incidence of pulmonary TB. Knowledge is the result of learning by seeing the senses of sight, hearing, smelling, and staining. Knowledge plays an important role in one's actions, meaning that one's level of knowledge affects one's own well-being. This knowledge can shape certain beliefs so that one acts according to that belief (8).

Table4. Differences in Knowledge and Attitudes of respondents after being given counseling

No	Variable	counseling		P-Value
		average (±)		
		Pre	Post	
1	knowledge	5,80 (±0,297)	7,47 (±0,266)	0,000

Source: Primary Data 2019

Knowledge level score is 1-10. Communication is the process of delivering messages face to face and can be responded directly by the recipient of the message. Communication must contain clear messages, appropriate media, and not make others offended (9). Counseling is one way to help people who are given counseling (counselee) and its problems.

Counseling is an approach method used by counselors to help solve problems faced by counselee. The counselor will not regulate the counselee, but gives freedom to the counselee to express decisions taken after being given information according to their needs.

### 3.2 Output of the program

No	Output	Form	Status
1	Increase of knowledge and behavior of population in identify and prevent TB	Research results	finished
2.	International publication (Scopus)	Draft	Submit to Indian Journal of Public Health Research and Development
3.	Model of TB prevention	Increase of masker use, and less trash burning	finished
4.	Book draft	Chapter in principal of environmental health book	Draft

Source: Primary Data 2019

### 3.3 Research Limitation

This study is an analytic descriptive study using primary data from the Astambul Health Center and the Banjar District Health Office. In this study there are several limitations of the study. Some limitations of existing research are as follows:

1. The sampling technique is accidental so that the population does not all have the same opportunity to become respondents.
2. Characteristics of heterogeneous respondents so that knowledge, attitudes, and abilities in prevention practices vary so that they cannot describe the results in certain groups.
3. Factors that contribute to preventive behavior, including perceptions, norms, and trust cannot be controlled.

## IV. CONCLUSION

1. There is a comparison between the value of Pre Test and Post Test Counseling materials on people's knowledge of lung TB disease with a total of 30 respondents. Of the Pretest results respondents answered with a true 3 of 4 (13.3%). Which answered correctly 4 out of 4 (13.3%). Which answered correctly 5 out of 3 (10%). Which answered correctly 6 out of 5 (16.7%). Of those who answered correctly 7 out of 11 (36.7%). And that answered correctly 8 by 3 (10%). Based on the results of the Post test respondents who answered correctly 3 of 1 (3.3%). Of those who answered correctly 5 out of 2 (6.7%). Which answered correctly 6 by 3 (10%). Of those who answered correctly 7 out of 7 (23.3%). Which answered correctly 8 out of 9 (30%). And that answered correctly 9 out of 8 (26.7%).
2. There is an increase in knowledge and attitude after the intervention with a p-value of 0.001.

The suggestions from the results of this activity are:

1. For the target activity it is expected that this activity can increase knowledge and behavior in the application of sanitation behavior in TB children
2. Target activities can know, want, and be able to implement sanitation behavior and prevention of TB in children.

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