

THE EFFECT OF HEALTH EDUCATION TOWARDS DISCHARGE READINESS OF PULMONARY TUBERCULOSIS PATIENTS AT INTERNA WARD II OF RSUD TOTO KABILA, BONE BOLANGO DISTRICT, HEALTH POLYTECHNIC OF KEMENKES OF GORONTALO

Fatmawati Mohammad¹⁾ and Muhammad Irfandi Saleh²⁾

^{1,2)}Health Polytechnic of Kemenkes of Gorontalo

Email: rifka_waty@yahoo.co.id

ABSTRACT

A large number of recurrence in pulmonary TB patients is due to a lack of knowledge to perform self-care at home, which is assumed as a lack of readiness of pulmonary TB patients when facing discharge. Health education can increase knowledge, willingness, and community role in preventing pulmonary TB disease. The research aimed at determining the effect of health education towards discharge readiness of pulmonary TB patients at Interna Ward II of RSUD Toto Kabila, Bone Bolango District

This research applied Pre-Experimental design with One Group Pre-test-Posttest design. The research samples were 23 respondents with the purposive sampling method.

Research finding based on the Wilcoxon statistical test revealed that there was a significant change in the knowledge before and after was given health education with the p -value = 0,000. It can be concluded that there was an effect of health education towards discharge readiness of pulmonary TB patients at Interna Ward II of RSUD Toto Kabila, Bone Bolango District.

Keywords: Health Education, Pulmonary Tuberculosis

INTRODUCTION

Pulmonary tuberculosis is a disease of global concern. With various efforts made, the incidence and deaths from tuberculosis have decreased, but tuberculosis still attacks 9.6 million people and caused 1.2 million deaths in 2014. Based on WHO reports 9.6 million new TB cases were made based on 5, 4 million inhabitants, women 3.2 million and children 1.0 million. An estimated 1.5 million people were killed due to TB (1.1 million HIV positive people and 0.4 million HIV positive people), women and 140,000 people are children (WHO, 2015). Where around 890,000 people are men, 480,000 people are women and 140,000 people are children (WHO, 2015).

In Indonesia, there were 330,910 cases of pulmonary TB in 2015. In 2015 there were an estimated 10.4 million new cases of tuberculosis or 142 cases / 100,000 populations, with 480,000 multidrug-resistant cases. Indonesia is the country with the second-largest number of new cases in the world after India. 60% of new cases occur in 6 countries, namely India, Indonesia, China, Nigeria, Pakistan, and South Africa. Deaths from tuberculosis are estimated as many as 1.4 million deaths plus 0.4 million deaths from tuberculosis in people with HIV. Although the number of deaths due to tuberculosis decreased by 22% between 2000 and 2015, tuberculosis remains the 10 highest cause of death in the world in 2015 (WHO, Global tuberculosis report, 2016).

The Effect of Health Education Towards Discharge Readiness of Pulmonary Tuberculosis Patients at Interna Ward II of RSUD Toto Kabila, Bone Bolango District, Health Polytechnic of Kemenkes of Gorontalo

Tuberculosis (TB) is a directly infectious disease caused by *Mycobacterium tuberculosis* which partially attacks the lungs. The source of transmission is smeared positive tuberculosis patients when coughing or sneezing. Spread of germs into the air in the form of sputum (droplet nuclei), once a cough can produce about 3000 sputum sparks. Germs that spread in the air are then inhaled into the lungs of healthy people so they can get infected (Ministry of Health Republic of Indonesia, 2016).

In Indonesia, tuberculosis is a major public health problem with number 3 in the world after China and India, with around 10% of the total number of tuberculosis patients in the world. It is estimated that there are 539,000 new cases and 101,000 deaths each year. Based on the 2016 Tuberculosis Prevalence Survey by the Indonesian Ministry of Health's Research and Development Agency, the prevalence rate (new and old cases) of tuberculosis in Indonesia; in 2014 amounting to 660 per 100,000 populations (324,539 cases); in 2015 amounting to 643 per 100,000 population (330,910 cases); and in 2016 amounting to 628 per 100,000 population (351,893 cases) (Ministry of Health Republic of Indonesia, 2016).

Based on data from the Gorontalo Provincial Health Office that there were 413 pulmonary TB sufferers in 2013, in 2014 there were 414 people, in 2015 there were 323 people, in 2016 there were 458 people, in 2017 there were 423 people. Tuberculosis is a contagious infectious disease caused by the bacterium *Mycobacterium tuberculosis*. Tuberculosis germs attack many lung organs although they can attack other organs so that this disease is known as pulmonary tuberculosis (pulmonary TB) while those that attack other organs besides the lung are called extra-pulmonary tuberculosis. Tuberculosis has a special feature, which is resistant to washing colors with acid and alcohol; therefore it is called acid-resistant bacilli (Widoyono, 2011).

The alternative program to eradicate pulmonary TB is DOTS (Directly Observed Treatments Short-course) with active case

finding by involving the role of health cadres. Health cadres in each region were given education about pulmonary TB who subsequently actively sought, motivated and supervised the supervision of swallowing drugs. Health cadres with available knowledge are expected to be able to recognize early signs and symptoms of pulmonary TB to be treated immediately at the nearest health care unit. The advantage of active case finding is that it can find precisely and quickly pulmonary TB sufferers in communities who are reluctant to seek treatment (Agrina, 2012).

Health education is a dynamic process of behavior change, where the change is not just a process of transferring material or theory from one person to another and not a set of procedures, but the change occurs because of awareness within the individual, group, or community itself (Chayatin, 2009). The purpose of health education is to improve the ability of the community to maintain and improve their health, both physical, mental and social, so that it is economically and socially productive, health education in all health programs, including the eradication of communicable diseases, environmental sanitation, community nutrition, health services, and programs other health (Chayatin, 2009).

Health education is not only related to information communication but also relates to the adoption of motivation, skills, and confidence to take action to improve health (Nursalam & Efendi Ferry, 2012). Patient readiness to face repatriation is the ability that includes knowledge, experience, and skills as well as the desire that includes the beliefs, commitments, and motivation of patients to carry out activities or activities that are taught and recommended by nurses and other clinicians. Patients are declared ready to face repatriation if the patient is aware of the treatment, danger signs, activities undertaken and continued care at home (The Royal Marsden Hospital, 2004 in Marthalena S, 2009).

The unpreparedness of patients facing discharge is also at risk of complications following hospitalization, and also due to un-

planned repatriation that can result in hospitalization. The repatriation planning program is a program of providing health education to patients which includes nutrition, activities/exercises, medicines and special instructions that are signs and symptoms of the patient's disease (Yosafianti, 2010). This health education aims to provide important knowledge and skills to patients and their families to meet the needs of sustainable care that will be carried out at home (Utama, 2003).

Based on preliminary observations made at Toto Kabila Hospital on Tuesday, October 23, 2018, data on patients with pulmonary tuberculosis in the Internal Room II in 2018 were found.

The results of interviews with nurses in the internal room II RSUD ToTo Kabila Bone Bolango Regency on December 15, 2018, regarding the readiness of the patient's return. Health education for patients facing repatriation is not by standard operating procedures and nurses' time for health services in the room.

RESEARCH METHODS

This type of research used in this study is pre-experimental with one group pretest-posttest approach. There were no comparison groups in the pretest-posttest. The population in this study was all pulmonary TB patients, totaling 46 inhabitants of Toto Kabila Regional Hospital, Bone Bolango District. Sampling in this study uses a purposive sampling technique that is a sampling technique by selecting samples among the population following what the researchers want. The sample size in this study was determined using the formula from Slovin which amounted to 23 people. In this study, the independent variable is health education and the dependent variable in this study is the readiness of the patient to return. data collection in this study using observations on respondents surveyed, data processing editing, coding, scoring and tabulating continued data analysis with the Wilcoxon test which will be processed or calculated using a computerized SPSS 14.0 program with a significance level $\alpha = 0.05$.

RESEARCH RESULT

Table 4. Frequency Distribution of Respondents Age Classification in the Internal Room II of Toto Kabila Regional Hospital

No	Age group	Frequency (n)	Percentage (%)
1	12-16	1	4.3
2	17-25	5	21.7
3	26-35	1	4.3
4	36-45	7	30.4
5	46-55	7	30.4
6	56-65	2	9.7
Total		23	100

Based on table 4.1 above shows that most of the age group of respondents are in the age range of 36-45 years which is as many as 7 people (30.4%) and at the age of 46-55 as many as 7 people (30.4%), while respondents with the smallest age group are in the age range of 12-16 as many as 1 person (4.3%).

Table 4.2. Classification Frequency Distribution Based on Gender of Respondents in Room II of Toto Kabila Regional Hospital

No	Gender	Frequency (n)	Percentage (%)
1	Male	13	56.5
2	Female	10	43.5
Total		23	100

Based on table 4.2 above, there are more male respondents than women, namely 13 people (56.5%) while female respondents are 10 people (43.5%).

Table 4.3. Classification Frequency Distribution Based on Respondents' Education Level in Toto Kabila Regional Hospital II

No	Education	Frequency (n)	Percentage (%)
1	Elementary school	15	65.2
2	Junior High School	4	17.4
3	Senior High School	4	17.4
Total		23	100

The Effect of Health Education Towards Discharge Readiness of Pulmonary Tuberculosis Patients at Interna Ward II of RSUD Toto Kabila, Bone Bolango District, Health Polytechnic of Kemenkes of Gorontalo

Based on table 4.3 above, most of the research respondents with an elementary education level of 15 people (65.2%), and junior and senior high schools each amounted to 4 people (17.4%).

Table 4.4. Classification Frequency Distribution Based on Respondents' Work in Toto Kabila Regional Hospital II

No.	Employment	Frequency (n)	Percentage (%)
1	Farmer	6	26.1
2	Fisherman	2	8.7
3	Enterpreneur	5	21.7
4	Sellers	3	13.0
5	Student	2	8.7
6	Housewife	5	21.7
Total		23	100

Based on table 4.4 above, the highest respondent occupation is 6 farmers (26.1%), while the lowest is 2 fishermen and students (8.7%).

Table 4.5. Level of Readiness of Respondents Before Providing Health Education in the Internal Space II of Toto Kabila Regional Hospital

No	Level of Readiness	Befire Providement	
		Frequency (n)	Percentage (%)
1	Level 1	-	-
2	Level 2	17	73.9
3	Level 3	6	26.1
4	Level 4	-	-
Total		23	100

Based on table 4.5 above before the provision of health education, most respondents were on the average level of readiness 2 of 17 people (73.9%) and the rest were on the level of readiness 3 of 6 people (26.1%).

Table 4.6. Level of Readiness of Respondents After Provision of Health Education in the Internal Space II of Toto Kabila Regional Hospital.

No	Level of Readiness	After Provision	
		Frequency	Percentage

		(n)	(%)
1	Level 1	-	-
2	Level 2	-	-
3	Level 3	5	21.7
4	Level4	18	78.3
Total		23	100

Based on table 4.6 above, after providing health education the majority of respondents were on the average level of readiness 4 of 14 people (78.3%) and the rest were on the level of readiness 3 of 5 people (21.7%).

Table 4.8. Level of Patient Readiness Before and After Providing Health Education in Toto Kabila Regional Hospital II

Level of Patient Readiness Before and After Providing Health Education	N	Mean Rank	Sum Of Rank
Negative Ranks	0	0.00	0.00
Positive Ranks	20	12.00	276.00
Ties	0		
Total	23		

*Wilcoxon test

Based on Table 4.7 The level of patient readiness before and after health education shows that based on the Wilcoxon Statistics Test the P value: value = 0.000 $\alpha = 0.05$.

DISCUSSION

The level of preparedness of the respondent before providing health education with pulmonary TB patients

Readiness relates to abilities, namely knowledge, experience and skills and relates to desires that include beliefs, commitments and motivation to complete certain tasks or activities (Martinsusilo, 2007 in Siahaan 2009). The results of the study conducted by researchers obtained at the time before treatment there are respondents with an average level of preparedness of respondents being at the level of readiness 2 of 17 people (73.9%) and a level of readiness 3 of 6 people (26.1%).

This shows that health One factor that influences knowledge and attitude is educa-

tion. The higher level of education of a person influences knowledge and attitudes. Similarly, knowledge and attitudes about the prevention of tuberculosis transmission (Tresnawanti, 2015).

Meanwhile, according to Budiman (2013), that personal experience and information are factors that can affect the knowledge and attitudes of someone who is given health education. This is under Rogers's statement in Effendi's book (2009), which says that the acceptance of behavior based on positive knowledge and attitude will lead to long-lasting behavior. But on the contrary, if the behavior is not based on knowledge and a positive attitude then the behavior will not last long.

The discharge planning program is basically a program of providing health education to patients which includes nutrition, activities/exercises, medicines and special instructions, namely the signs and symptoms of the patient (Potter & Perry, 2005). This health education aims to provide important knowledge and skills to patients and their families to meet the ongoing care needs that will be carried out at home (Utama, 2003).

Meanwhile, according to Effendi in Hendra (2010), that the purpose of health education is to achieve changes in the behavior of individuals, families, and communities in developing and maintaining healthy behavior and a healthy environment and plays an active role in efforts to realize optimal health degrees, the formation of healthy behavior in individuals, families, groups, and communities in accordance with the concept of healthy living both physically, mentally, and socially so as to reduce morbidity and mortality, Can change the behavior of individuals and communities in the health sector.

The level of preparedness of the respondent after providing health education with pulmonary TB patients

After being given health education, the results of the study showed an increase in the level of readiness that is almost all respondents had a level of readiness 4 of 18 people (78.3%) and the remaining 5 people (21.7%) were at the level of readiness 3, the level of

readiness 4 where the level of readiness the highest of all levels because patients already know about any treatment at home, danger signs, care at home, activities at home, and follow-up care while the readiness level 3 not all patients know about what will be done at home. This is due to the increase in patient knowledge, one of which is supported by media leaflets. Fill out the leaflets in accordance with the information provided with pictures and colors and present all material points on the leaflets in the questionnaire.

According to Amisani (2009), leaflets are very effective in increasing the effectiveness of counseling in the lecture method, because the leaflet in addition to summarizing the overall counseling material, also presents an interesting picture that makes it easy for someone to understand the contents of the material. The results of this study are in line with the theory of Muninjaya, 2004. That health education is the addition of one's knowledge and abilities through learning practice techniques or instructions to change or influence human behavior both individually, in groups and society to increase awareness of the value of health so that they consciously want to change his behavior becomes a healthy lifestyle. According to Susilo (2007), there are two main components of readiness, namely ability, and desire. Ability is the knowledge, experience, and skills possessed by a person or group to carry out certain activities or tasks. While desires related to beliefs, commitments, and motivation to complete certain tasks or activities. Readiness is a combination of different components and desires that someone shows in each given task.

Level of readiness 1 patient already knows about home remedies namely the use of drugs taken, the dosage of drugs, drug consumption according to the recommended schedule, the importance of taking medication, and drug reactions took.

Level of readiness 2 patients already know about the danger signs that are symptoms of pulmonary tuberculosis, causes of pulmonary tuberculosis, which part of the lung contains pulmonary tuberculosis bacte-

The Effect of Health Education Towards Discharge Readiness of Pulmonary Tuberculosis Patients at Interna Ward II of RSUD Toto Kabila, Bone Bolango District, Health Polytechnic of Kemenkes of Gorontalo

ria and the importance of reporting symptoms to the doctor when returning to the hospital.

Level of readiness 3 patients already know about home care, namely the importance of wearing masks when they get home, do not smoke at home, do not throw any saliva at home, maintain contact at home, and the importance of drying in the sun during the morning. The

Level of readiness 4 where the patient already understands all of the levels 1,2,3, and 4. The level of readiness 4 is about the importance of the activities/exercises to be carried out at home, as well as the time of re-control following the schedule given.

After being treated with health education the respondent's level of preparedness to face repatriation increased, this was supported by the results of Sihan's study (2009) that patients were able to predict their need for information related to the healing process, and they wanted information that was easily understood as much as possible before they faced the return and need for this information are not affected by the age and level of education of the patient.

Effects of Health Education on Readiness Discharge Patients with Pulmonal TB

The results of this study indicate an increase in client readiness to face repatriation after health education. Of the 17 people who originally had a level of preparedness 2, 5 people increased to a level of readiness 3, while 12 people rose to a level of readiness 4. The results of the research analysis using the Wilcoxon test were found to be of significance (P -Value <0.05) so that it was concluded that H_0 was accepted it means that there is an influence of health education on readiness for the return of pulmonary TB patients in the Interna II room at Toto Kabila Regional Hospital, Bone Bolango Regency. Health education is an effort to empower individuals, groups and communities to maintain, improve and protect their health through increased knowledge, willingness and ability and to develop a supportive climate, carried out from, and for the community per local cultural factors. What we want to achieve

through this approach is to increase awareness, willingness and skills to behave in a clean and healthy life at the Indonesian Ministry of Health (2006).

The results of this study are in line with Effendy's (2012) theory, revealing that the purpose of providing health education is to achieve changes in the behavior of individuals, families, and communities in fostering and maintaining healthy behavior with a healthy environment, and plays an active role in efforts to realize optimal health degrees. Providing an understanding of health education is a process to improve the community's ability to maintain and improve health. In addition to achieving a perfect degree of health both physically, mentally and socially, the community must be able to recognize and realize their aspirations, needs and be able to change or overcome their environment both physical, social, cultural and so on (No-toatmodjo, 2010). Associated with the results of the analysis and theory described above, the researcher assumes that providing health education to clients is very important to be supported by readiness from the hospital and the client's readiness itself. Clients are ready to face repatriation when they know more about health and know-how to maintain their health. When returning home, the client must have the knowledge, skills, and resources needed to fulfill his care. By providing health education the client becomes more understanding about health conditions, treatment, signs of disease symptoms, activities to be carried out at home per the disease and the importance of controlling routing to reduce the illness suffered by the client.

The results of this study are supported by previous studies conducted by Ummal (2015). The results showed that there was an effect of health education on changes in patient attitudes about preventing transmission of pulmonary tuberculosis with a p -value of (0,000).

CONCLUSIONS AND SUGGESTIONS

Conclusions

Based on the results of the research and discussion as well as the research objectives

on the Effect of Health Education on the Disease Readiness for Lung TB Patients in the Internal Space II of Toto Kabila Regional Hospital, Bone Bolango District, the conclusions in this study are as follows:

1. The readiness of clients who suffer from pulmonary TB before health education on average is at the preparedness level 2 of 17 people (73.9%) and the readiness level of as many as 6 people (26.1%).
2. The readiness of clients who suffer from pulmonary TB after health education shows that almost all clients have a preparedness level 4 of 18 people (78.3%) and the remaining 5 people (21.7%) are at a level of preparedness 3.
3. There is an influence of health education on readiness for the return of pulmonary TB patients in the Interna II room at Toto Kabila Regional Hospital, Bone Bolango District with a p-value = 0.000 ($\alpha < 0.05$).

Suggestions

Based on the discussion and conclusions about the effect of health education on readiness for the return of pulmonary TB patients in the Interna II room at Toto Kabila Regional Hospital, Bone Bolango District, there are several suggestions from researchers as follows:

1. Theoretical Benefits
 - a. For researchers
Adding to the experience of researchers related to the implementation or application of patient discharge as a form of implementation of the tri dharma of higher education.
 - b. For further researchers
It can be used as a reference and comparison material for further researchers who are interested in continuing research related to the patient's readiness for discharge.
2. Practical Benefits
 - a. For Toto Kabila Hospital, Bone Bolango Regency.
As input in the process of providing health education activities to improve the effectiveness of health education provision that is more directed and by

standard operational procedures, especially for patients with pulmonary TB.

- b. For Nurses.
The results obtained are expected to be used by nurses in the room to conduct health education in preparing patients for repatriation, in the sense that patients can carry out ongoing care at home.
- c. For Sufferers / Families
Knowing the importance of knowledge about things that must be planned when returning home is related to pulmonary TB suffered so that sufferers are desirous and able to carry out care when at home.

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The Effect of Health Education Towards Discharge Readiness of Pulmonary Tuberculosis Patients at Interna Ward II of RSUD Toto Kabila, Bone Bolango District, Health Polytechnic of Kemenkes of Gorontalo

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