Aloha International Journal of Health Advancement (AIJHA)
ISSN 2621-8224
Volume 4 Number 6, June 2021 RESEARCH
http://journal.aloha.academy/index.php/aijha DOI: http://dx.doi.org/10.33846/aijha40602

Motivation Therapy to Pulmonary Tuberculosis Patients in Improving Compliance Consuming Antituberculosis Drugs

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Submitted: May 11, 2021 -Revised: June 22, 2021 -Accepted: June 29, 2021 -Published: June 30, 2021

ABSTRACT

Introduction: Puskesmas Semanding, Tuban, East Java, Indonesia became the health center with the largest number of patients with about 40 patients with 35 treated patients and 2 of the rules of resistance or included in the MDR-TB group. Antituberculosis drugs resistance is due to patients not adhering to taking medication. One of the causes was motivation deficit. **Methods:** This study was to analyze the motivation effect on the Antituberculosis drugs consumption accuracy in TB patients. This a pre-experimental design study. The population was TB patients at the Puskesmas Semanding. The sampling technique was purposive sampling probability with a total of 30 TB patients, taken in line with inclusion criteria. The independent variable is the provision of motivational therapy. The dependent variable is antituberculosis drugs consumption compliance. Instruments for observation were sheets and questionnaires. Data analysis was done using the Chi-Square test with a significance level of 0.05. **Results:** The study showed that those who adhere to taking medication before therapy was less than 2 persons (6.67%) after therapy was greater than 19 (63.33%). This study showed that motivation has a significant influence on increasing the compliance of TB patients in undergoing Antituberculosis drugs therapy with a value of p=0.00. **Conclusions***:* Based on the results of this study, it is expected that the Puskesmas will be able to provide policies and attention to the importance of motivation in the form of health education and counseling as well as the provision of supervision of taking medication or supervision to succeed in controlling and eradicating TB cases.
Keywords: pulmonary tuberculosis; motivation; drug adherence

INTRODUCTION

Tuberculosis is a directly infectious disease caused by the bacteria *Mycobacterium tuberculosis.* Most TB germs attack the lungs, but can also affect other organs [(1)]. The latest WHO report on world tuberculosis (2015), still places Indonesia as the third-largest contributor to tuberculosis in the world after India and China with several new cases of around 539,000 and a total of around 100,000 deaths per year. From the preliminary data obtained from the Semanding Health Center, 50% of patients did not take medication on time so patients came back to treatment with the results of a re-examination with a positive smear. Disobedience of tuberculosis sufferers is due to lack of knowledge, feeling healed, lazy treatment, and lack of motivation to continue treatment until complete; so that treatment fails [(2, 3)].

Patients with lung tuberculosis in the Semanding Health Center work area are in rural areas, with low socioeconomic levels. From preliminary observations found, there were 35 positive smear sufferers recorded in the Semanding Health Center register book and 20 newly detected pulmonary tuberculosis in 2014/2015 as well as 10 failed treatment. In terms of knowledge of pulmonary tuberculosis, 10% of respondents know that pulmonary tuberculosis is caused by germs, 90% of respondents do not know the cause of pulmonary tuberculosis. In terms of the vulnerability of contracting pulmonary tuberculosis, 25% of respondents feel at risk of contracting pulmonary tuberculosis, while 75% do not feel at risk of contracting. In terms of danger or threat, if Lung Tuberculosis is not treated completely, 30% feel unsafe and 70% do not feel unsafe. Regarding the regularity of taking medication, 30% take drugs on time, 70% do not take medication on time. Individuals who do not understand tuberculosis and low treatment motivation will result in the patient's body, which is the premature treatment termination if he feels healed. Termination of treatment that does not last for 6 months can lead to resistance and result in the remains of BTA intermittently multiplying; so recurrence can occur [(4)].

The lack of knowledge and motivation for regularity of taking medication can lead to low medication discipline [(5)]. Termination of treatment can lead to treatment resistance of tuberculosis so that repetition occurs and will worsen the disease such that it can be transmitted to family members and other people. Patients who do not comply with treatment will make the disease be chronic because the bacteria in the lungs will multiply due to drug resistance and will eventually lead to the death of patients with tuberculosis [(4)], efforts that can be done to prevent relapse include counseling, which can be done with compliance; regularity in taking anti-tuberculosis drugs by tuberculosis patients to avoid treatment failure. Motivation is an effort to improve adherence to the willingness to

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carry out treatment to the end. However, the effect of giving motivation to Tuberculosis patients in consuming Antituberculosis drugs in the Semanding health center area of the Tuban Regency has not been studied. This study to find out whether there is an effect of giving the motivation to increase compliance with consuming Antituberculosis drugs by TB patients in the Semanding Community Health Center work area, Tuban District.

METHODS

Study Design

This study used the type of pre-experiment research (one group pre-test post-test design) [6]. Independent variable was giving therapeutic motivation to tuberculosis sufferers, while the dependent variable is the level of compliance of patients consuming antituberculosis drugs. The study was conducted in March 2018 at Semanding Health Center in Tuban District.

Population, Samples, and Sampling

The population was TB patients at the Puskesmas Semanding. The sampling technique was purposive sampling with a total of 30 TB patients.

Instruments

The instruments used in data collection in this study were structured interviews. Instruments for observation were sheets and questionnaires. Structured interviews were made to enable respondents to answer all questions asked about demographic data and observation sheets consuming antituberculosis drugs (Figure 1). [7, 8]

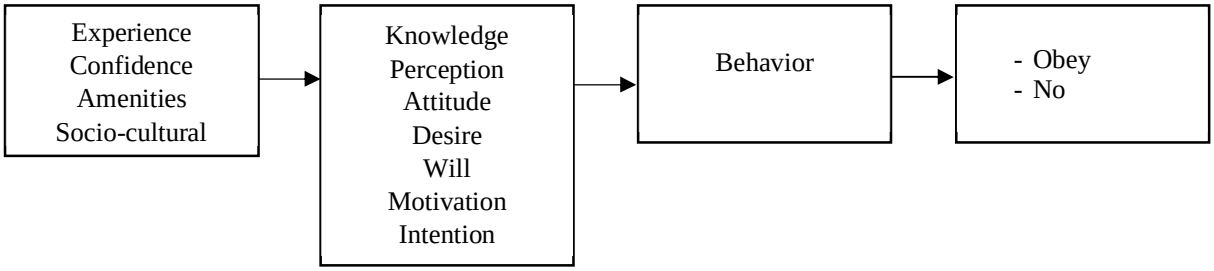

Figure 1. Conceptual framework for the relationship between giving motivational therapy and adherence to taking anti-tuberculosis drugs at the Semanding Tuban Health Center

Procedure and Analysis

The independent variable is the provision of motivational therapy. The dependent variable is Antituberculosis drug consumption compliance. Informed consent was given to the respondents before intervention (Pre-test, motivation therapy, and post-test). The pre-test was done before being given motivation therapy by the researcher and after being given therapy followed by post-test. The data collected is categorical data so that it is presented descriptively in the form of frequency and percentage [9, 10], then analyzed using Chi square test with $\alpha = 0.05$.

RESULTS

Table 1 showed that half (50%) of the respondents were aged between 46-55 years and 26.67% were aged 26-35 years. most of the 73.33% of respondents were male and almost half (26.67%) female. Almost half (43.33%) of the respondents worked as farmers and 23.33% of respondents worked as mine workers and the rest were either traders or were not working. 16 respondents (53.33%) of respondents had elementary education.

Table 2 showed that at the time of the pre-test before being given motivation therapy, most of the respondents have a moderate level of compliance, which is 53.33%. Whereas, after being given therapy and post-test it was found that 60% of respondents had a high level of compliance. This was showed a significant change and illustrates the effort of motivation therapy in treatment. From 30 respondents, adherence to taking medication before therapy was less than 2 (6.67%) after therapy was greater than 19 (63.3%). This means that the majority of

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respondents showed a positive difference in changes in adherence to medication after being given motivational therapy by researchers. 30 TB patients who received anti-tuberculosis medicine therapy before and after being motivated. Data analysis with chi-square statistical test with α=0.05 obtained a significant number of p=0.000 (0.000<0,05) which means that giving motivation therapy affects adherence to consuming anti-tuberculosis medicine.

Table 1. Demographic characteristics of TB patients in the Semanding Community Health Center, September 2018 (n=30)

Characteristics	Frequency	Percentage
Age		
15-25 Years	2	6.67
26-35 Years	8	36,67
36-45 Years	15	50.00
46-55 Years	5	16,67
Gender		
Male	22	73.33
Female	8	26.67
Occupation		
Farmer	13	43.33
Miner	7	23.33
Trader	5	16.67
Does not work	5	16.67
Education		
Primary school	16	53.33
Junior high school	8	26.67
Senior high school	6	20

Table 2. Compliance with tuberculosis sufferers in consuming anti-tuberculosis drugs before and after being given motivation in the Semanding Health Center Work Area, Tuban District, September 2018 (n=30)

Obedience	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
Low	6	20	1	3.33
Medium	16	53.33	11	36.67
High	8	26.67	18	60
p = 0.000				

DISCUSSION

This study was found that out of 30 respondents, adherence to consuming antituberculosis drugs before being motivated found that the majority of respondents (53.33%) had moderate compliance and a small portion (26.67%) had good adherence; and after being motivated most (60%) have good adherence. The extrinsic factors that affect the level of compliance include low education and age, because in old age the state of health decreases, and lack of paying attention to health. Pulmonary tuberculosis is an infectious disease caused by Mycobacterium tuberculosis.

Pulmonary tuberculosis is a lower respiratory tract disease. Patients diagnosed with TB (either new cases or relapsing cases) must get a complete treatment regimen to recover. In Indonesia, antituberculosis drug alloys provided by the program have 3 types, namely; category-1, category -2, category -3, and insert (HRZE); this drug is given to patients free of charge. Each treatment category consists of 2 phases of the administration phase, namely the intensive initial phase (2 months) and the regular follow-up phase (4 months). In the initial phase, the patient drinks medicine every day with full supervision, while in the intermittent phase of the patient takes medication 3 times a week. Although antituberculosis drugs can be obtained relatively slowly, many patients are reluctant to seek treatment or complete treatment. Many things that affect the compliance of TB patients in undergoing antituberculosis drug therapy include knowledge, pain experience, socioeconomic status, information, and support or motivation. Internal motivation is obtained in each person; internal motivation is an urge from within a person

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to do something to achieve a certain goal, while external motivation is an external motivation for someone to do something.

The functions of motivation are 1). Encourage humans to act, so it is a driver or motor that releases energy. Motivation in this case is the driving force or motor of the activity to be carried out; 2). Determine the direction of the action that is towards the goal achieved. Thus motivation can provide direction and activities that must be done following the formulation of objectives; 3). Select actions to determine what to be done which are harmonious to achieve the goal by setting aside actions that are not useful [(11)]. Motivation is indispensable for everyone to be able to do something to achieve their goals, in this case, TB sufferers who get a long-standing antituberculosis drug treatment regimen, with consistent and continuous support from the government or community (sufferers and families), is very important for the government program in preventing and controlling TB disease to succeed. The availability of affordable and accessible diagnostic and therapeutic services is an important step in suppressing and controlling the rate of TB disease. Motivation is needed to encourage, direct and determine one's choices in doing things, including TB patients who get antituberculosis drug therapy. Therefore with consistent support and motivation from the government, health workers, and families, it is hoped that it can help in the success of the emphasis and controlling TB incidence rate or antituberculosis drugs Drop Out [(12, 13)].

There was compliance of 30 TB patients in antituberculosis drug therapy before and after being motivated. Data analysis with Chi-Square statistical test with $\alpha = 0.05$ obtained a significant number of 0.00 (0.00 <0.05) which means that motivation is very influential on the compliance of antituberculosis drug therapy. Motivation is a specific internal condition and directs one's behavior to a goal [(2)]. Someone often feels bored with something continuous and monotonous without innovation. A dynamic motive of change and giving another color will give a different story to something it faces. According to Suhartono, one of the characteristics of motivation is that motivation can change; motivation for someone often changes [(14)]. This is because human desires are always changing. According to Maslow, everyone is motivated to meet their needs very strongly at a certain time depending on the current situation and knowledge of the person [(2)].

The existence of a strong motivation from within and the environment will help someone deal with problems. Many TB sufferers die because of the ignorance of the patient about the signs and symptoms and the danger of TB disease. Besides, there are also many drops out from the antituberculosis drug regimen, which worsens the condition and prognosis. Support or motivation in the form of supervision and the provision of affordable health services is the right step in helping to achieve the emphasis and control of TB cases. Motivation is not a neutral factor but is influenced by factors such as experience, level of intelligence, physical ability, environmental situation, life goals, and others. The intrinsic factors include age, education, knowledge or understanding, sense of security, and experience of pain; while extrinsic factors are economic, social and cultural, facilities and infrastructure. By paying attention to these components, the government and the public are expected to be proactive in suppressing and controlling the incidence of TB.

TB is the highest cause of death in developing countries because low economic status is the precipitating factor of a person's poor nutritional status, this causes weakness in the body's defense, making it susceptible to disease. Besides, according to the WHO, in a year there were about 1 million women who die from pulmonary TB, it can be concluded that more women die from pulmonary TB compared to pregnancy and childbirth. The disease is higher in the male because of smoking tobacco and drinking alcohol so that it can reduce the body's defense system, so that younger people are exposed to the agent that causes pulmonary tuberculosis [(2, 5)].

Weak economic status (poor nutritional status) is responsible for the increasing incidence of TB, thus the government should pay attention to the economy of the people to help suppress TB cases. Also, the supervision and implementation of TB (DOTS) prevention strategies that are consistent and sustainable are the hopes and benchmarks for the management and control of TB cases [(15, 16)].

CONCLUSION

Motivation has a significant influence in improving the adherence of TB patients to antituberculosis drug therapy. From the results of the study, the researchers gave suggestions for the sustainability and benefits of this study, that the results of this study are expected to be used as information and references in providing services and provide motivation at least twice during antituberculosis drugs therapy to TB patients to achieve complete antituberculosis drugs therapy. The Puskesmas can provide policies and attention to the importance of motivating in the form of health education and counseling as well as the provision of PMO (supervisors taking medication) or supervision to control and eradicate TB cases. Motivation is also expected to be applied not only in Puskesmas and TB patients, but motivation can be applied in all other health institutions such as hospitals and carried out continuously.

Acknowledgment

The author would like to thank the research team in Tuban and health workers at the Semanding Tuban Health Center as well as TB Cadres.

Conflict of Interest

The Author declare that there is no conflict of interest.

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