

The Relationship of Knowledge and Motivation with Anti Tuberculosis Drugs Compliance in Tuberculosis Patients

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ABSTRACT

Knowledge and motivation of tuberculosis (TB) patients will have an impact on compliance in implementing treatment programs. The purpose of this study was to find out and describe the relationship between knowledge and motivation with compliance in taking anti-tuberculosis drugs. This type of research was cross-sectional. The population in this study were patients with tuberculosis with a total sample of 100. They measured instruments used in the form of questionnaires, interview guides, and TB form 01. Data analysis used univariate and bivariate analysis with chi-square. The results showed that knowledge with medication compliance showed a relationship with (p-value 0.000). Motivation with medication compliance showed a relationship of (p-value 0.000). It can be concluded that there was a relationship between knowledge and motivation with adherence to taking anti-tuberculosis drugs in TB patients. Nurses need to do health education about TB and provide motivation for TB patients using a therapeutic approach. The next researcher is expected to be able to examine the other factors that influence TB patient's compliance in carrying out treatment programs so that it will increase the number of adherence in drug intake in TB patients.

Keywords: compliance, knowledge, motivation, tuberculosis

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INTRODUCTION

Tuberculosis (TB) is still a problem that must be addressed in the community, treatment programs, and prevention guidelines have also been implemented by the government to handle these cases following national standards. This is because there are still high rates of noncompliance with taking drugs in TB patients (1). A large proportion of Tb cases that have emerged are among the poor and those with low levels of education (2). TB is still a problem in the world, and treatment programs are one of the problems of this disease (3). The obstacle in the Tb treatment is the lack of compliance of TB patients to take anti-tuberculosis drugs, the cause of which is the motivation of patients, which is still lacking (2). Another cause is because of knowledge; in this case, a person's level of knowledge is related to adherence to taking anti-tuberculosis drugs (4,5).

In 2015, there were 10.4 million new tuberculosis cases worldwide (6). The prevalence of Indonesians who suffer from TB in 2014 was 539 cases, with an increase of 272/100,000 in a year (6). In 2015, it was found around 330,910 cases, and those cases have increased compared to the number of cases in 2014 with 324,539 cases (1). The success of treatment in TB patients depends on the compliance of taking anti-tuberculosis drugs with a proper dose [1]. Patients who hospitalized a few times due to noncompliance in taking anti-tuberculosis drugs (OAT) regularly (7,8). This will certainly have an impact of drop out, which is one of the causes of failure in treatment, and this has the potential to increase the likelihood of drug resistance or what we call Multi Drugs Resistant (MDR) TB (9). If there is resistance to the drugs, the costs incurred for treatment will be more, and the time needed for recovery will be longer (10). Factors that influence TB patients' noncompliance with medication include education, knowledge, and income (11-13). The lack of knowledge becomes the risk factor and the dominant variable of drop out medication (10). Besides that, motivation is also one of the keys to success in managing TB

treatment [2]. The higher the motivation, the more obedient the patients will be in taking anti-tuberculosis drugs (2).

Nurses have an important role in their duties in the management of Tb patients as educators, counselors, and facilitators in providing nursing care to TB patients [3]. As an educator, nurses have to increase TB patient knowledge about causes, symptoms, and also treatment programs that must be carried out and also explain the purpose of the reasons why such treatment should be carried out regularly [4]. The purpose of the nurses' role as an educator, on the other hand, is also to change the behavior of the patients so that they can carry out regular treatment, so, it will improve the patients' health and accelerate the healing of the TB patients (14). Besides efforts to anticipate noncompliance in taking medication is to increase the client's motivation. It is necessary to deliver information as accurately as possible by communicating therapeutically by nurses and also providing an explanation that TB can be cured with routine treatment according to the program without interruption (2). The purpose of this study was to find out and describe the relationship between knowledge and motivation with adherence to taking anti-tuberculosis drugs.

Materials and Methods

This study used a Cross-Sectional research design, a type of research that emphasizes the measurement or observation of independent and dependent variable data only once, at a time. The population was all TB patients in the health center consisting of 278 patients. As for the sample taken 100 respondents using Purposive Sampling technique. The independent variables were knowledge and motivation, while the dependent variable in this study was the adherence to taking anti-tuberculosis drugs in TB patients. The instruments used in this study were questionnaires, interview guides, and TB 01 form. The data were analyzed using the Chi-square statistical test.

Results

Table: 1. Respondents characteristics

Characteristics	n	%
Gender		
Male	52	52
Female	48	48
Age		
Late teenager	15	15
Adult	46	46
Elderly	39	39
Education		
None	1	1
Elementary	29	29
Junior High	19	19
Senior High	50	50
College	1	1
Occupation		
Unemployed	48	48
Sellers	3	3
Private worker	27	27
Labor	15	15
Entrepreneur	4	4
Student	3	3
Marital Status		
Single	12	12
Married	84	84
Widow	2	2
Widower	2	2

Based on table 1, the characteristic respondents showed that the number was almost balanced between both men and women, consisting of 48 females and 52 males. Characteristics of respondents showed that most respondents were classified as adults consisting of 46 respondents (46%). The last education of most

respondents were high school graduates consisting of 50 respondents (50 %), and there was only one respondent who has graduated from a university. Most respondents did not work as in 48 respondents (48%). Most of the respondents were married, consisting of 84 respondents (84%).

Table: 2. Frequency distribution of knowledge, motivation, and the adherence of TB patients

Variables	n	%
Knowledge		
Good	55	55
Moderate	37	37
Less	8	8
Total	100	100
Motivation		
Good	69	69
Moderate	31	31
Total	100	100
Adherence		
Obey	86	86
Disobey	14	14
Total	100	100

Based on table 2, the measured variables indicate that most

have good knowledge, motivation, and adherence.

Table: 3. Relationship of knowledge with the adherence in taking anti-tuberculosis drugs

Variable	Drugs Compliance		Total	p-value
	Obey	Disobey		

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	n	%	n	%	n	%	
Knowledge							0.000
High	54	54	1	1	55	55	
Moderate	32	32	7	7	37	37	
Low	1	1	5	5	8	8	
Total	87	87	13	13	100	100	
Motivation							0.000
High	61	61	0	0	61	61	
Moderate	26	26	13	13	39	39	
Low	0	0	0	0	0	0	
Total	87	87	13	13	100	100	

Knowledge statistical test results using *Chi-square* obtained a significance level of $p=0.000$ by setting a significance level of $\alpha<0.05$, so there was a relationship between knowledge and adherence to taking anti-tuberculosis drugs in TB patients. In addition, the results of the statistical motivation test obtained a significance level of $p=0.000$ by setting a significance level of $\alpha<0.05$, meaning there was a relationship between motivation and adherence to taking anti-tuberculosis drugs in TB patients.

Discussion

Knowledge has a significant relationship with adherence to taking anti-tuberculosis drugs. Respondents who have high knowledge tend to be obedient in taking anti-tuberculosis medication. The analysis showed that there was a relationship between knowledge and adherence to taking anti-tuberculosis drugs. This was in accordance with the results of the study conducted by Fitria & Mutia in 2016 that there is a relationship between knowledge and adherence to taking anti-tuberculosis drugs (15). This is also supported by the research results from Purwanto in 2017, which states that there is a significant relationship between knowledge and adherence to taking anti-tuberculosis drugs in TB patients (5). Factors that influence knowledge in TB patients include internal factors, which are education, occupation, and age, while the external factors are social and cultural (16,17). Good knowledge of TB patients is supported by educational background based on the results of the study. It is found that most respondents have a high school education, and it can be concluded that the majority of respondents' education in this study is good (15). The theory also supports this from Notoatmodjo in 2010, which states that a person's knowledge is influenced by the level of education, in general, the more educated a person is, the easier it will be to receive information (17).

Another supporting theory from Nursalam in 2013, which states that education is needed to get information such as things that support health to improve the quality of life and education, can influence attitude and behavior (18). But this is contrary to the results of research from Aditama & Aris in 2013. The results of their study show that educational factors do not significantly influence the knowledge of TB patients. Still, the factors that played a very important role are factors of personal experience of TB patients, in addition to other factors influencing experience is information factors obtained from counseling that had been given by health professionals (19). The results showed that motivation has a relationship with adherence to taking anti-tuberculosis drugs in TB patients. Based on the data obtained, most respondents have good motivation to achieve recovery, while others have enough motivation. Respondents who have good motivation tend to be obedient in taking anti-tuberculosis medication. This is also supported by research conducted by Fajri in 2013 that the motivation of pulmonary TB patients in achieving recovery has a relationship with adherence in taking medication (20). Research from Prasetya in 2009 also states that there was a significant relationship between motivation

with medication adherence in taking medication in TB patients (2). TB patients' motivation in implementing treatment programs and taking medicine is influenced by various factors, including knowledge and education level (2). The results of the study that have been carried out obtained the majority of respondents possess a good level of knowledge and a high level of education. Most respondents have good knowledge, and some other respondents have sufficient knowledge. This opinion is reinforced by research conducted by Aditama & Aris in 2013, which states that motivation has a significant effect on adherence to taking anti-tuberculosis drugs. Various factors influence respondents' motivation themselves, namely education and knowledge. The higher the level of education, the higher the level of motivation, as well as knowledge, the higher the level of knowledge of a person, the higher the motivation level to carry out a treatment program and also take medicine so that they will be more obedient in carrying out treatment (19). In addition, research from Aditama & Aris in 2013 also explains that a person's motivation is influenced by internal and external factors (19-23). Internal factors come from within the patients, and external factors come from outside the patients, including family, friends, environment, and health workers. The motivation of patients with pulmonary TB is influenced by two things first from themselves, which are encouragement or the desire to seek treatment or do something better and support from family. Second is community and health workers in handling cases of pulmonary TB disease through health education, provide support, encouragement following the expected goals. Motivation is said to be good when someone can control themselves towards good things. Increasing motivation, there is a need for counseling about diseases and the dangers of these diseases to the threat of human life. Additional research from Fajri in 2013 explains that the motivating factor for one's motivation is the desire to live (20). The results of the study conducted, none of the respondents who have less motivation, according to the interviews. Most respondents always get support from their families and closest people to achieve recovery. Besides that, health center workers always provide motivation and support to all patients to never stop taking medication and to carry out examinations and treatment regularly to achieve recovery.

CONCLUSION

Knowledge and motivation of TB patients have a significant relationship with adherence to taking anti-tuberculosis drugs in TB patients. Patients must undergo a routine and complete their treatment until the expected recovery is achieved.

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