

**THE RELATION BETWEEN KNOWLEDGE AND ATTITUDE TOWARD BEHAVIOR
OF ANTIBIOTIC USAGE ON SOCIETY IN TALANG JAWA HEALTH CENTER
OF SOUTH LAMPUNG AUGUST PERIOD 2019**

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Abstract

In developing countries, many antibiotics are used without a doctor's prescription, causing someone to use antibiotics incorrectly. Lack of knowledge about antibiotics is a major factor that triggers an increase in the rate of bacterial resistance to antibiotics. Knowledge and attitude become one of the social cognitive factors that influence antibiotic use behavior. This study aims to determine the relationship of knowledge and attitudes toward of antibiotic usage behavior in community of Talang Jawa public health centre. The research is an observasional analytic research using cross sectional study design. sampling using non-probability sampling method with type purposive sampling and instruments in the form of questionnaires. The data analysis was based univariate and bivariate analysis equipped with chi square. The study was conducted on 100 community respondents in the Talang Jawa Health Center. The results showed respondents with good knowledge (25%), enough (27%) and less (48%). Respondents with positive attitudes (64%) and negative attitudes (35%). Respondents with positive behavior (43%) and negative behavior (57%). Chi square test result showed that there was a significant relationship between knowledge and antibiotic use behavior ($p= 0,000$) and there was a significant relationship between attitude and antibiotic use behavior ($p= 0,000$). This study has a meaningful relationship between and attitudes with antibiotic use behavior in Talang Jawa Health Center.

Keywords: *Antibiotics, Knowledge, Attitudes, Behavior*

INTRODUCTION

Antibiotics are substances produced by a microbe, one of which is a fungus that can inhibit or eradicate microbes other types [1]. Antibiotics first discovered by Paul Ehrlich in 1910 and its use is very effective at curing patients with infectious diseases [2]. Antibiotics are hard drug classes that use should be under the supervision of a physician. This is to avoid the use of antibiotics or irrational, namely the use of the wrong dose, wrong indications, dosing interval is wrong and wrong timing [3]. Antibiotics currently the most commonly prescribed drug, sold and used worldwide [4], Organizer Data from the World Health

Organization (WHO) in Antimicrobial Resistance: Global Report on Surveillance showed that Southeast Asia has the highest number of cases of antibiotic resistance in the world [5]. In developing countries, many antibiotics are used without a prescription, causing a person to use antibiotics inappropriately [4]. Based Riskesdas in 2013, the percentage of Indonesian people who save and use antibiotics without a prescription as much as 86.1%, while in Lampung Province without a prescription antibiotic use by 92.0% [6]. In 2009 Indonesia was ranked

8th out of 27 countries with a high burden of drug resistance to germs Multidrug Resistance Tuberculosis (MDR-TB) [3].

Lack of knowledge of antibiotics is the main factor that triggered the increasing resistance of bacteria to antibiotics. The intensity of the use of antibiotics causing infectious organisms to adapt to antibiotics, causing reduced effectiveness of antibiotics and antibiotic resistance occurs. In addition to impact on morbidity and mortality, as well as a negative impact on the economic and social high[2] [3]. One effort to improve adherence to the use of antibiotics is the provision of drug information or counseling. Provide drug information to increase knowledge, change behavior, motivate and improve the quality of life of patients [7]. Knowledge and attitude is one of the social factors that affect cognitive health behavior at the individual level, including the behavior of the use of antibiotics. Knowledge is influenced by several factors, one of which is education. The higher the person's level of education the more easily a person is in receiving information[8]. So someone knowledgeable will either lead to confidence and ultimately will behave according to the knowledge [9].

Talang Jawa Health Center was chosen as the research for the disease pattern is still dominated by infectious diseases. In 2017, Talang Jawa Health Center has the highest tuberculosis cases in South Lampung regency in case of 163 per 100,000 population. Based on preliminary observations, number of visits at the Talang Jawa health center in May as many as 817 visits with diagnoses most of which amounted to 208 cases of common cold and in June as many as 868 visits with diagnoses most of which amounted to 248 cases of common cold. So the use of antibiotics in Talang Jawa health centers is high enough[10].

Based on the description that background, it is necessary to study the correlation between knowledge and

attitude towards the behavior of antibiotic use in Talang Jawa health centers of South Lampung.

METHODS

Research

The research plan is cross sectional research that is done by observing the objects and measurement of research variables at one time by using primary data by filling the questionnaire conducted by the respondent [11].

Time and Place of Research

Research time:

This research was conducted in August 2019.

Place of research:

This research was conducted at the Talang Jawa health center of South Lampung.

Population and Sample

Population

Population is the whole object of study or studied [12]. The population of this study are patients seeking treatment at Talang Jawa health centers of South Lampung district in August 2019.

Samples

Samples are partly or representative of the population studied. Samples from this study are patients seeking treatment at Talang Jawahealth centers of South Lampung district in August 2019 who received antibiotics and met the inclusion criteria.

Sampling Technique

The sampling technique is purposive sampling, that the sampling technique research based on the characteristics that have been determined or desired by the researcher. Lameshow sample calculation using the formula.

$$n = \frac{Za^2.P(1-P)}{d^2}$$

Information :

n = Minimum sample

Za = The significance level (1.96)

P = Proportion populated (0.5)

d = Decree absolute in the desired (10%)

Based on the formula above the required sample size in this study was 96 samples and rounded to 100 samples.

Test Instruments

Before the questioner used in research, it must first be tested valditas and reliability. This test was conducted on 20 respondents. Samples were respondents to the validity and reliability should not be used for sampling during the study [13].

Data Analysis

Management and statistical analysis of the obtained data is computerized using Statistica Program Product and Service Solution (SPSS) version 24. The data were analyzed using univariate and bivariate analysis. In this study conducted bivariate analysis using Chi-square test, using a 95% confidence level with a significant level α of 0.05.

RESULTS AND DISCUSSION

Validity and Reliability Test

Based on the results of the validation test and reliability are obtained 30 questions on a questionnaire that can be

used and answer a thing measured because it meets the criteria of valid. After getting a valid question then performed the reliability test by using SPSS version 24 and obtained a Cronbach's alpha of 0.852 to knowledge, Cronbach's alpha of 0.741 for attitude, and Cronbach's alpha of 0.781 to behavior. The value of the reliability test means unreliable according to the category of reliability.

Univariate Analysis

Data Characteristics of Respondents

This research was conducted at the Talang Jawa health center, with data characteristics of respondents consisting of gender (male and female), age (ranging between 17-55 years were categorized into 4 levels), education (elementary, middle, high school and university), and employment (civil servants, self-employed, a housewife, merchants, peasants / workers and army / police). Overall the number of respondents as the sample in this study was 100 respondents. Characteristics of respondents are presented in the form of distribution and percentages in the following table :

Table 1.Distribution Characteristics of Respondents

No.	Characteristics	Amount	Percentage (%)
1.	Gender		
	a. Male	39	39
	b. Woman	61	61
2.	Age		
	a. 17-25	33	33
	b. 26-35	39	39
	c. 36-45	21	21
	d. 46-55	7	7
3.	Education		
	a. SD	21	21
	b. SMP	23	23
	c. High School	39	39
	d. College	17	17
4.	Profession		
	a. PNS	12	12
	b. entrepreneur	7	7
	c. Housewife	30	30

	d. trader	12	12
	e. Farmer / Labor	38	38
	f. Military / Police	1	1
Total		100	100

Based on the data obtained that the number of male respondents as many as 39 respondents (39%) and women as much as 61 respondents (39%). This is according to research conducted by the Health Center Mahardika in Karanganyar with as much as 72% of female respondents and male respondents as much as 27.1%. This is because more respondents who are willing to fill out a questionnaire female than male respondents [14], Based on respondents' age range 17-25 consisted of a total of 33 respondents (33%), age 26-35 were 39 respondents (39%), age 36-45 were 21 respondents (21%) and respondents aged 46-55 were 7 (7%). Respondents most vulnerable age at 26-35 years, people who get into this age generally have considerable experience in the treatment.

Based on the latest education, respondents with elementary education last as much as 21 respondents (21%), SMP as many as 23 respondents (23%), SMA total of 39 respondents (39%) and higher education as much as 17 respondents (17%). Last education possessed by most respondents in this study is the high school education (39%). Where the higher education is obtained, then the easier they receive information [15], This result is consistent as research conducted by Angelina in Sub Tomang with the most respondents as many as 67 high school educated respondents (51.5%) (32). Based on the work of the respondents who worked as a civil servant as much as 12 respondents (12%), self-employed as many as seven respondents (7%), housewives of 30 respondents (30%), traders as much as 12 respondents (12%), farmers / laborers as much as 38 respondents (38%) and TNI / Police by 1 respondent (1%). Works most

respondents are farmers / laborers as much (38%). It is based on the people's livelihood in the area of Java Gutters PHC are predominantly farming / gardening.

Respondents Knowledge Level About Antibiotics

Based on the results of research conducted by asking a few questions via a questionnaire on knowledge of antibiotics to 100 respondents can be seen in the following table.

Table 2. Respondents Knowledge Level About Antibiotics

No.	Knowledge level	amount	Percentage (%)
1.	Well	25	25
2.	Enough	27	27
3.	Less	48	48
Total		100	100

Based on the results in Table 2 show that the knowledge society in Puskesmas Talang Java has a good level of knowledge as much as 25 respondents (25%), the level of knowledge pretty much as 27 respondents (27%) and knowledge level of less 48 respondents (48%). Similarly, a study conducted by Ivoryanto conducted in Klojen demonstrate good levels of knowledge as much as 54%, pretty much as 23% and as much as 23% less [8], Another study conducted by Mahardika in Karanganyar Regional Health Center shows that the level of public knowledge in the health center is relatively good Karangnyar 81.8% in Karanganyar health center and 76.4% in Puskesmas Ngargoyoso [14].

In general knowledge is closely related to education. The higher the person's

level of education the more easily receive information, and ultimately more and more knowledge [15]. But that does not mean the respondents with low education, having knowledge that is also low. It is not absolute, because someone will be health knowledge can be acquired through non-formal education and experience of the respondent itself [16].

Attitude

Attitude is a person's response to a stimulus or a closed object to certain opinions or emotional factors involved are concerned that meliputu happy-not happy, agree-disagree, was not good, and so [17]. Testing attitude questionnaire by asking 10 questions to be answered by the respondents. The results of the research can be seen in the following table.

Table 3. Respondents Attitudes About Antibiotics

No.	attitudes of Respondents	amount	Percentage (%)
1.	Positive	64	64
2.	Negative	36	36
Total		100	100

Results of research on attitudes about antibiotics showed that respondents who have a positive attitude as much as 64 respondents (64%) and respondents who have a negative attitude as much as 36 respondents (36%). The results of this study are similar to studies conducted by Andarwati in Karo get the results that respondents who have a good attitude as much as 85 respondents (65.38%), respondents who had an attitude quite as much as 44 respondents (33.84%) and respondents with less attitude as many as 1 respondent (0.78%) (39). In another study conducted by Murthi in North Denpasar II Health Center showed that 34 respondents are correct (69.4%) and

as many as 15 respondents are wrong (30.6%) [18].

Factors that influence the formation of attitudes is a personal experience, the influence of others that are considered essential is also one of the factors that shape attitudes, culture can also be a pattern of individual experience and instill line influences attitudes towards society, educational institutions and religious and emotional factors are also a factor which affect the formation of attitudes [19], Besides, there are three components, namely the attitude of trust (confidence) in the form of opinions or thoughts of someone on an object, the emotional life form that contains elements of emotional assessment of the person to an object, and a tendency to act (growing niche of behave). From the three elements will form a unified stance (total attitude) [17].

Attitudes toward health values do not always materialize into real action, attitude sometimes experienced by respondents are formed because of his situation [20]. A positive attitude of respondents due to personal experience of respondents using antibiotics, cultural support for the use of antibiotics rational example of culture in the family to use antibiotics until exhausted, education and attitude of health workers in Talang Jawa health centers so that people will tend to be follow others that are considered important in territory.

Behavior

The behavior of the use of antibiotics is an action in an effort to seek treatment using antibiotics in various ways. Behaviors associated with antibiotic use and understanding of existing knowledge about illness and antibiotics are in accordance with the disease [21]. Here are the results of research on the behavior of the antibiotic on 100 respondents are presented in Table 4.

Table 4. Respondents Behavior About Antibiotics

No.	Respondent behavior	amount	Percentage (%)
1.	Positive	43	43
2.	Negative	57	57
Total		100	100

Based on Table 4 indicates that respondents have a positive attitude as much as 43 respondents (43%) and respondents who have a negative attitude as much as 57 respondents (57%). Factors that affect the behavior of belief as well in addition to knowledge, access to health services, their references, and the support of family and culture in a natural family rational antibiotic use [17].

In this case the Talang Jawa health centers have a bad behavior that the use of antibiotics should be used rationally. Health personnel such as doctors, pharmacists and nurses have been suggested that use of antibiotics as prescribed and antibiotics used to be until the end. However, in addition to the culture in the family also affect a person's behavior in the use of these antibiotics.

Bivariate analysis

Relationship Knowledge Toward Behavior Use Antibiotics in Talang Jawa Health Center

Here are the results of Chi Square test of knowledge of the behavior of the use of antibiotics.

Table 5. The results of Chi Square test Knowledge toward Behavior of Use Antibiotics

		Behavior						The p-value	OR
		Positive		Negative		Total			
		N	%	N	%	N	%		
Knowledge	Well	19	76.0	6	24.0	25	100	0,000	5.055
	Enough	17	63.0	10	37.0	27	100		
	Less	6	12.5	42	87.5	48	100		
Total		42	42.0	58	58.0	100	100		

Based on research that has been done, gained significant value (p) <0.05 is 0.000, which means there is a significant relationship between knowledge of the behavior of the use of antibiotics. The results of the knowledge of the behavior of antibiotic use in community health centers Java Talang showed that respondents were positive behave more respondents who have a good knowledge and sufficient level compared with respondents who have a negative attitude. Value OR (odds ratio) indicates the number 5.055, which

means that respondents with sufficient knowledge of good and have a tendency or an opportunity to positive behavior by 5 times greater than the level of knowledge respondents had less to antibiotics.

This is in accordance with the Health Belief Model theory which states that knowledge is a very influential factor in a person's beliefs and will shape a person's behavior. Someone who will have a good knowledge and awareness level of understanding better the effect on good behavior.

Knowledge plays an important role in providing insight into the attitudes and behavior of people. Appropriate antibiotic use in the community requires proper knowledge and rational behavior in use [9].

Research results in the above table shows that the majority of respondents who have a sufficient level of knowledge of good and show a positive attitude in the use of antibiotics. It can be caused due to knowledge becomes one of the factors that influence the formation of behavior. In general, the behavior is determined or influenced by three factors: predisposing factors include knowledge, attitudes, beliefs and perceptions, and the supporting factors such as access to health care, skill, and their references, and driving forces manifest in the form of support for the family, neighbors and leaders Public [19], In the above table show as much as 6 respondents (24.0%) had good knowledge but do not show a positive attitude in the use of antibiotics and as many as 10 respondents (37.0%) have sufficient knowledge but do not have a positive attitude in the use of antibiotics. This is related to the theory presented by Notoatmodjo that knowledge has 6

levels are: know (know) is defined simply as the recall (call out) memory that has gone before after observations of an object, understanding (comprehension), which means being able to interpret correctly about the known object, an application (user application) that can use or apply the principles that have been known in other situations, analysis (analysis) that is able to distinguish, categorize,19], In this study the possibility of the level of knowledge only at the level of (know) or understand only sufficient, but not yet at the level of the application so that the knowledge of good and sufficient not accompanied by antibiotic use positive behavior. Or can be caused by other factors such as the belief that less toward positive behaviors, access to the poor health care, lack of reference and the absence of family support in the rational use of antibiotics.

Relationship Behavior Attitudes toward use of Antibiotics in Talang Jawa Health Center

Here are the results of Chi Square test of attitudes toward the behavior of the use of antibiotics.

Table 6. Results of the Chi Square Attitude toward Behavior Use of Antibiotics

		Behavior						The p-value	OR
		Positive		Negative		Total			
		N	%	N	%	N	%		
Attitude	Positive	38	59.4	26	40.6	64	100	0,000	11.692
	Negative	4	11.1	33	88.9	36	100		
Total		42	42.0	58	58.0	100	100		

Based on research that has been done, gained significant value (p) <0.05 is 0.000, which means there is a significant relationship between attitude and behavior of the use of antibiotics. With OR (odds ratio) 11.692 meaningful figures show that respondents with a positive attitude has the inclination or

opportunity to behave positively by 11 times more likely than respondents who had a negative attitude towards antibiotics. Results attitude towards the behavior of antibiotic use in community health centers Java Talang showed that respondents were positive behave more respondents have a positive attitude

compared with respondents who have a negative attitude.

In Table 6 shows that respondents who have a positive attitude as much as 38 respondents 59.4% showed a positive attitude to the use of antibiotics however, as many as 28 respondents (40.6%) who have a positive attitude does not show a positive attitude to the use of antibiotics. And only 4 respondents (11.1%) who have a negative attitude but showed a positive attitude towards the use of antibiotics.

Attitude is a form of expression a person against whom he met, like objects, people or something that will generate favorable response bersifar (siding) or unfavorable (impartial). The results in Table 6 indicate that attitudes influence the behavior of antibiotic use in community health centers Java gutters. These findings are consistent with research that has been done by Yarza et al about the correlation between knowledge and attitude to the use of antibiotics without a prescription indicate that a total of 112 respondents (73.3%) had a positive attitude and as many as 40 respondents (26.3%) have a negative attitude , And the statistical test results of these studies indicate that there is a significant relationship between attitudes to the use of antibiotics without prescription with signifika value <0.05 , It can be caused due to the attitude is one of the factors that shape behavior. Attitude will result in behavior that a person will act in accordance with the attitude that has been expressed [19]. That is because in attitude are the components that form of cognition (knowledge, beliefs, or thoughts that are based on information related to the object), component afekasi (an emotional dimension of attitude, the emotion associated with the object in which the object perceived with something pleasant or unpleasant), and component konasi (a behavior where there is the tendency of individuals to react in certain ways to an object). 3 Based on these components will be

formed attitude as a whole [19], It is also consistent with the concept of behavior by Notoatmodjo ie KAP (knowledge-attitude-practice) which states that a person's attitude precedes the formation of a person's behavior [17].

CONCLUSIONS AND SUGGESTION

A. Conclusion

Based on the research that has been done, the conclusions obtained are as follows:

1. Respondents who have a good knowledge level of 25%, sufficient by 27%, and less than 48%. Respondents who have a positive attitude 64% and 35% a negative attitude. Respondents who had a 43% positive behavior and negative behavior by 57% in the use of antibiotics in Talang Jawa health centers
2. There is a significant relationship between the knowledge of the behavior of antibiotic use in Talang Jawa health centers ($p = 0.000$)
3. There is a significant relationship between attitudes toward the behavior of antibiotic use in Talang Jawa health centers ($p = 0.000$)

B. Suggestion

For further research to do research to improve knowledge about antibiotics in Talang Jawa health centers to use metode Cara Belajar Insan Aktif (CBIA).

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