

FACTORS RELATED TO THE COMPLIANCE IN UNDERGOING MASS TREATMENT OF FILARIASIS IN PASAMAN BARAT.

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ABSTRACT

Objective: The research purposed to determine the factors associated with society's obedience in filariasis mass treatment in West Pasaman 2014. **Method:** This research uses a cross sectional design. The sample size in this study is based on a minimum provision of finger blood survey study of 500 samples. The sample in this study were taken by using purposive sampling technique. **Result:** Results of univariate known that 67.8% of respondents said non-compliant in filariasis mass treatment, 86.0% have a low level of education, 39.6% had low knowledge levels, 55.4 had a negative attitude, 47.6% have negative beliefs, 62.8% health officials do not play an active role. Bivariate

analysis showed a significant correlation between attitude ($p = 0.001$) (PR = 1.33), trust $p = 0.002$ (PR = 1.22), the role of health workers ($p = 0.001$) (PR = 1.40) with the compliance community in filariasis mass treatment, while education and knowledge have relationship was not significant. **Conclusion:** The risk factor is related attitudes, beliefs, and the role of health workers. Risk factors that play a role is the role of health workers. Suggested to the health department to improve guidance to health workers and officials who can motivate to play an active role in disease eradication programs filariasis.

KEYWORDS: Fiariasis, Mass Treatment, Compliance.

Pendahuluan: Infectious diseases are transmitted through various media. Infectious diseases become major health problem in almost all developing countries due to morbidity and death is relatively high in a relatively short time. Infectious diseases generally be acute (sudden)

and attack all walks of life. Infectious diseases still prioritized because given the nature of which could lead to outbreaks of infectious and cause great harm.^[1,2]

Filariasis is a disease caused by a filarial worm which is a nematode and live in the subcutaneous tissue and human lymphatic vessels. Insect life cycle involves carrying infective larvae. Filariasis as a disease caused by infection with the nematode parasite can reduce the productivity of patients because of impaired physical. Clinical manifestations arise many years after infection. Symptoms of leg swelling appeared due to blockage of microfilariae in the lymph vessels that normally occurs at the age of 30 years after exposure to the parasite over the years. The most fatal result for the patient is a permanent disability that disrupt productivity.^[1]

In 2000, the WHO declared "The Global Goal of Elimination of Lymphatic Filariasis as a Public Health Problem by the Year 2020". Accordingly, Indonesia has set the elimination of filariasis as one of national priority communicable disease control in accordance with the Indonesian Presidential Regulation No. 7 of 2005 on the National Medium Term Development Plan 2004-2009. Based on Filariasis Elimination program, to endemic areas who have a number of microfilaria $\geq 1\%$ mass treatment. Mass treatment is a program to eliminate filariasis disease in a way to break the chain of transmission of the Mass Dispensing Filariasis Prevention (POMP filariasis) that uses the DEC and Albendazol conducted once every year for at least 5 years in a row.^[3]

Based on WHO data show that in the world there are 1.3 billion people in more than 83 countries are at risk of contracting filariasis, and more than 60%. These countries are in Southeast Asia. Estimates of more than 120 million of them are already infected with the 43 million people already showing clinical symptoms.^[3]

Filariasis is a contagious disease that is located in Indonesia that spread almost evenly throughout the region. There are more than 23 types of mosquitoes that can transmit filariasis consisting of the genus *Anopheles*, *Aedes*, *Culex*, and *Mansonia*. The filarial worms live in the lymph glands causing damage to the lymphatic system.^[4]

Based on data from the Department of Health from 2001 to 2004 the number of cases of filariasis in Indonesia has increased, as many as 6,181 people, 6217 people, 6635 people, and

6,430 people. In 2005, the increase in cases of filariasis become as much, 10 239 people, even from the 2009 data was increasing cases to as much as 11.914 cases..^[4]

The distribution of the incident spread of filariasis in Indonesia covering almost all provinces, including the province of West Sumatra. West Sumatra province is an area endemic filariasis and has ranked eleventh most cases of filariasis in 2013 that 225 cases were scattered in various counties and cities. The distribution and prevalence of each county and city in West Sumatra can be seen in Table 1.1.

Pasaman Barat a filariasis endemic area that has a number of cases of filariasis in 49 cases with the highest prevalence of filariasis in West Sumatra Province is 12.40 in 2013 and was followed by Agam is 11.27. Genesis filariasis in Pasaman Barat spread across nine districts. The distribution and prevalence of filariasis by district in Pasaman Barat can be seen in Table 1.2.^[5,6]

Based on the incident report filariasis of Pasaman Barat Health Office in 2013, districts that have the highest prevalence is Sungai Aua at 2.8 by the number of people with as many as nine people and then followed by the District of Batahan Realm of 2.5 by the number of people with as many as six people.

Health Office of Pasaman Barat filariasis mass treatment of years 2007-2012 for 5 consecutive years. But after mass treatment evaluated performed poorer did not work well. This can be evidenced by the results of filariasis mass treatment evaluation conducted on 15 randomly selected elementary schools in 2013. Blood tests carried out to 500 primary school children in Pasaman Barat there are 63 of them positive microfilariae. From the results of this evaluation didapatkanlah number MF-Rate in Pasaman Barat by 12.6%. This figure exceeds the standards of Mf-rate set by the WHO to determine an area endemic filariasis is > 1%. Failure mass treatment can be caused by habits and behavior of people who are still at risk for contracting the disease filariasis.^[1]

There are some people's behavior can be found, among others, some local decision-makers have not realized that the economic losses due to filariasis mass treatment has not prioritize activities that result in operating costs is not or is not adequate, the notion some people that the disease is caused by a curse to order or so do not need to be treated by health workers but people turn to shamans, lack of community participation in the examination and blood

sampling at night, side effects of treatment cause people do not want to continue treatment until complete, lack of community participation in preventing filariasis such a way to avoid themselves from mosquito bites, eliminating mosquito breeding places and went to the health center if there are signs of filariasis, community residences distance away from the clinic so as to come to the public requires a fairly expensive transportation costs.^[4, 5]

According with the concept of L.Green behavior, then the anti-filariasis drug taking behavior is influenced by predisposing factors are factors in a person such as education, knowledge, both contributing factor is the availability of health facilities, health resources and media as well as the driving factor that is capable of providing motivation to someone such as family support, the role of health workers and the surrounding environment.^[7]

Research conducted by Sugiyanto (2010) showed a significant relationship between knowledge, attitudes, beliefs, fear reactions / effects of drugs, socialization, service officer with taking medication noncompliance filariasis. Fear reactions / drug effects are variable with the strongest relationship with $r = 0.64$.^[8]

Civil disobedience to take medication will affect the success of filariasis mass treatment programs Filariasis goal is to break the chain of transmission of the disease filariasis. It is also influenced by all parties involved, the necessary organization of cross-program in the ranks of Office Health as well as cross-cutting with other officials who support the implementation of the program.

According Anorital (2005), there are various obstacles encountered in the implementation of filariasis elimination, such as lack of public knowledge about filariasis, people's behavior is not taking the drugs given to the high dropout rate, the activity of officers in implementing elimination programs, the lack of cross-sector cooperation with officials authorities and environmental conditions with good sanitation that allow filariasis vector multiply quickly.^[9]

From the above description researchers interested to determine the factors associated with adherence in the community treatment of filariasis mass in the region of Pasaman Barat Health Office in 2014.

METHODE

This study is a quantitative study using cross-sectional design, which is the independent variable (Education, Knowledge, Attitude, Belief, The role of health workers) and the

dependent variable (Compliance community in filariasis mass treatment) were observed at the same time. This study was conducted in February-July 2014. The research is in Pasaman Barat.

The target population in this study is the entire population in the region of of Pasaman Barat District Health Office in 2014 which was subjected to mass treatment of filariasis. Source population is households with a sample unit head of the family.

The sample size in this study is based on a minimum provision of a survey of 500 samples of blood finger. Patients with chronic filariasis of 40 people, the number of samples 500 kk divided by 40 sample points (filariasis patients). Hh Number of samples = $500/40 = 12$ hh → 12 hh per point filariasis cases.

Samples were taken by using purposive sampling technique on the basis of consideration of the case at that location and geographic location that facilitates the implementation of the research is the head of the patient's family and closest neighbor to the homes of people. The selected sample is the head of the family or a person authorized to make decisions about health.

Univariate analysis is used to see the picture of the distribution of frequencies and percentages for each study variable. Level of education, knowledge, attitudes, beliefs, role of health workers.

Bivariate analysis was conducted to determine the relationship between the independent variables (education, knowledge, attitudes, beliefs, the role of health workers) with the dependent variable (Compliance community in the treatment of filariasis mass) using the chi-square test. If $p < 0.05$, then there is a significant relationship between the dependent and independent variables. If $p > 0.05$, there is no significant relationship between the dependent and independent variables.

Multivariate analysis was conducted to determine the variables that most influence on the dependent variable. The independent variables in the multivariate model is a variable with a value of $p < 0.25$. Multivariate analysis performed by multiple logistic regression test.

RESULT

Table 1 Frequency Distribution of Independent and Dependent Variables

Variabel	f	%
Filariasis Mass Undergoing Treatment Compliance		
Not Comply	339	67,8
Comply	161	32,2
Education Level		
Low	430	86,0
High	70	14,0
Knowledge Level		
Low	198	39,6
High	302	60,4
attitude		
negative	277	55,4
positive	223	44,6
belief		
not Sure	238	47,6
sure	262	52,4
Role Health Officers		
not Active	314	62,8
active	186	37,2
Total	500	100,0

Based on Table 1, which is the result of the univariate analysis, it can be seen that 67.8% of respondents do not obey the mass medication. For educational level is known there are 86% of respondents with low education. To the level of knowledge known to have 39.6% of respondents had low knowledge. For it is evident that the attitude of 55.4% of respondents had a negative attitude. Convictions are known for 47.6% of respondents were not sure would heal with mass treatment. For the role of health workers known to have 62.8% of respondents stated that health workers are less active.

Table 2: Independent Variables relationship with Dependent.

Variabel	Compliance Drinking Drugs						P valu e	PR	95% CI
	Not Comply		Comply		Total				
	f	%	f	%	f	%			
Education Level									
Low	292	67,9	138	32,1	430	100			
Hight	47	67,1	23	32,9	70	100	1,01	0,85- 1,20	
Total	339	67,8	161	32,2	500	100	1,00		
Education	131	66,2	67	33,8	198	100			

Level	208	68,9	94	31,1	302	100			
Low	339	67,8	161	32,2	500	100			
Hight							0,59	0,96	0,84-1,09
Total									
Attitude									
Negative	211	76,2	66	23,8	277	100			
Positive	128	57,4	95	42,6	223	100	0,00	1,33	1,16-1,51
Total	339	67,8	161	32,2	500	100	1		
Belief									
Not sure	178	74,8	60	25,2	238	100			
Sure	161	61,5	101	38,5	262	100	0,00	1,22	1,08-1,37
Total	339	67,8	161	32,2	500	100	2		
Role of health officers									
Not Active	238	75,8	76	24,2	314	100	0,00		
AktifActiv	101	54,3	85	45,7	186	100	1	1,40	1,21-1,62
Total	339	67,8	161	32,2	500	100			

Based on Table 2, which is the result of bivariate analysis, it can be seen that there is a relationship attitudes, Convictions, the role of health workers with medication adherence in the treatment of filariasis mass which has p value ≤ 0.05 .

Table 3: Multivariat Analyze (Dominant Variable)

Variabel	p-value early	p-value in the elimination phase	PR 95% CI
		Model I	
Attitude	0,001	0,001	2,494
Belief	0,002	0,004	1,817
Role of Health Officers	0,001	0,001	2,623

The dominant risk factors that affect the incidence of filariasis is the role of health workers with a value of $p = 0.001$ (PR = 2.623). This means that the active peranpetugas affect community health in the treatment of filariasis mass of 2,623 times compared to the passive role of health workers.

DISCUSSION

Education Level Compliance Relationship with Society Undergoing in Mass Treatment of filariasis

Test results using the chi-square statistic for variable levels of education shows that there is no significant relationship between level of education and compliance community in mass medication filariasis. Hasil this study is different from the research conducted by Santoso, et

al, the study states that there is a significantly between level of education and compliance community in filariasis mass treatment.^[21]

According to Green, quoted by Notoatmodjo (2007), education is one of the factors predisposing the formation of health behaviors. Someone who has a high level of education will be easy to understand and adopt matters relating to health and low educational level would otherwise be difficult to understand and adopt matters related to health.^[15]

In this study there was no significant relationship between level of education and compliance community in filariasis mass treatment, respondents who have low levels of education tend to be less well within the recommended actions to him and respondents with higher education level is not necessarily always better to take action recommended because it can be influenced by the social environment.

Knowledge Level Compliance relationship with society Undergoing in Mass Treatment of filariasis

Test results using the chi-square statistic for variable levels of knowledge indicates that there is no significant relationship between the level of knowledge with community compliance in mass medication filariasis. Hasil this study is different from the research conducted by Santoso, et al (2008).^[21]

Green in Notoatmodjo states that knowledge is the basis for the formation of behavior or motivation is there and will give variety to the action or behavior. Behavior that is based on the knowledge of more lasting than the behavior that is not based on knowledge.^[15]

In this study there is a high level of knowledge that do not affect compliance with community in filariasis mass treatment. High knowledge is not necessarily going to establish good behavior in maintaining health, because many people who know the effects of something but do not want to carry it out. It is also likely to occur on the respondent. Respondents with low knowledge certainly endeavored to improve the knowledge of the good, the people are expected to know that filariasis is an infectious disease caused by various filarial worms and transmission as well as knowing how to prevention and countermeasures, one of which is the mass treatment of filariasis.

Attitude relationship with Community Compliance Undergoing in Mass Treatment of Filariasis

Test results using the chi-square statistic for variable attitude shows that there is significant relationship between the attitude of the community in compliance with filariasis mass treatment and respondents who have a negative attitude has a greater 1,32kali opportunities for non-adherence filariasis.

These results together with research conducted by Santoso, et al (2008), the study states that there is a significant relationship between attitudes to medication adherence filariasis.^[21] mAttitude is an assessment of a person to a stimulus or object (a health problem or disease). Once a person knows his problems, then do the assessment process on the matter.^[15] So in this study will encourage negative attitudes or make community for non-adherence. Negative attitude will form negative behaviors as well.

Confidence Relationships with Community Compliance Undergoing in Mass Treatment of Filariasis

Test results using the chi-square statistic for the confidence variable indicates that there is a significant relationship between confidence by the public in compliance with filariasis mass treatment and respondents were not sure of 1.21 times greater risk for non-adherence.

These results together with research conducted by Sugiyanto (2012) which states that there is a significant relationship between beliefs with filariasis medication adherence ($p = 0.001$).

Confidence is the perception of individuals in the prevention, organize and implement actions to avoid the perceived threat of illness or injury and consideration of the advantages and disadvantages.

In this case the belief proved to have a relationship that bermakana in mass treatment of filariasis. This certainly comes from self respondents themselves, in this case most of the respondents do not believe the positive benefit or purpose of the mass of the treatment itself.

Role relationship with Compliance Officer Public Health Undergoing Mass Treatment of Filariasis

Test results using the chi-square statistic for variable role of health workers showed that there is a significant relationship between the role of community health workers with compliance

in the treatment of filariasis mass and respondents cited the role of health workers who are not actively at risk 1.40 times greater for non-compliant taking medication.

Likewise, the research conducted by Waskardi (2013) which states the role of health workers have significant relationship with community taking medication adherence anti-filariasis. OR value obtained 6748, this means that respondents who earn less active officers have 7 times greater chance of non-adherence to anti-filariasis compared with respondents who actively health officer.^[25]

Behavioral health workers are friendly, thorough examination before treatment and explanation of a given drug makes a person feel valued and encourage them to take medication faithfully and regularly. Health workers are less communicative towards community makes them do not comply with the rules drinking consumption filariasis drug given.^[31]

In this study the role of health workers is shown to have significant relationship to the community in compliance with filariasis mass treatment. The role of health workers in mass treatment is very significant, because by explaining and advocating community to take the medicine as soon as possible after filariasis distributed and how the side effects after taking a drug that greatly affect the success of filariasis mass treatment. For the role of officers should be increased in order to materialize filariasis disease prevention..

Multivariate Analysis

The results of logistic regression analysis it is known that there is one of the most dominant variable to the public in compliance with filariasis mass treatment in Pasaman Barat 2014 is the role of health workers (PR = 2.623). This means that the active role of health workers affects the public in filariasis mass treatment of 2,623 times compared to the passive role of health workers.

The role of health workers that verbal information, advice, support real or behavior given by health workers with the subject in the social environment or in the form of presence and can provide emotional benefit or influence on the behavior of the recipient. In this case the support of people who feel socially, emotionally relieved to note, get advice or a pleasant impression on him. Respondents will decrease the level of anxiety about the health problem because there are health professionals who are able to handle such problems.^[22]

The role of health workers is one important factor in the success of the health program, due to the role the public can obtain useful health information. Health workers can convey health information through counseling and the media. If the role of health workers play an active role in the community will have a positive impact in achieving the success of the health program.

CONCLUSIONS AND SUGGESTIONS

Based on the research that more than half of the respondents did not obey the filariasis mass treatment, have a negative attitude and stated clerk did not play an active role. Almost all respondents have low education levels and have negative beliefs. Less than half of the respondents have low knowledge level.

Variables that have a significant relationship is the attitude, the role of health workers and beliefs. Respondents who have a negative attitude 1.33 times the risk of non-compliant in the mass treatment of filariasis. Respondents who had 1.22 times the risk of negative beliefs do not obey the mass treatment of filariasis. Of respondents stated that the role of health workers is not active at risk 1.40 times did not obey the mass treatment of filariasis. While variables memilikii significant relationship is the level of education and level of knowledge. The most dominant factors associated with adherence community in filariasis mass treatment is the role of health workers. Health workers are not active at risk 2.62 times to non-adherence to the mass treatment of filariasis. It is recommended to the Office of Health to improve guidance to health workers and provide motivation for officers can play an active role in the eradication program of filariasis, and provide education and training to the holder filariasis filariasis program in health centers and the cadres in community so that they can play an active role in filariasis eradication in Pasaman Barat.

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