Approach Model Aktif Mandiri to Prevent Filarisis

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Abstract. Filariasis is an infectious disease that is still a burden to the world, including Indonesia. The burden of filariasis endemicity in Indonesia is known to be found in Kertoharjo Village and Jenggot Village, Pekalongan City, Central Java with an *mf rate* in 2012 of 2.4% and 5%, respectively. This study applies the innovative mentoring model Action for the Elimination of Filariasis - Media Reads to Avoid Filariasis (AKTIF MANDIRI) as an effort to complete acceleration elimination of filariasis to increase the level of public knowledge. This research method uses *quasi-experimental design* with before and after intervention using a control group. The number of research samples was 25 respondents in the intervention group and 52 respondents in the control group using *proportional random sampling technique*. The results showed that 32% of respondents had a good level of basic knowledge of filariasis and 60% of respondents had a good level of knowledge of filariasis POMP in the intervention group. In the intervention group, after the implementation of the AKTIF MANDIRI mentoring model, the level of basic knowledge of filariasis increased significantly to 76%. However, the mentoring model did not significantly increase knowledge about filariasis POMP to 68%. The difference in the level of knowledge can be influenced by the level of understanding of community leaders as agents who deliver health education to the community. While the results in the control area did not show a significant difference.

Keywords: Filariasis, Model Aktif Mandiri, Knowledge

1 Introduction

Filariasis is an infectious disease caused by parasitic worms (*Brugia malayi*, *Brugia timori*, and *Wuchereria bancrofti*) and attacks the lymph nodes which can cause lymphangitis and lymphadenitis[9]. Filariasis is also known to be capable of causing psychological impacts on sufferers due to social exclusion due to their disability[10]. In addition, economically filariasis is known to cause Indonesia a loss of Rp. 1.34 T due to not providing filariasis POMP to at-risk populations (people living in endemic areas)[4].

The burden of filariasis in Indonesia, especially on the island of Java, is known to be in Pekalongan City, Central Java. In 2015, Pekalongan City was in the highest order of filariasis cases in Central Java, namely 108 cases. In addition to the highest filariasis cases in Central Java, Pekalongan City is also included in the filariasis endemic area with an MF rate > 1% [3]. One of the areas in Pekalongan City that has the highest mf rate is Kertoharjo Village and Jenggot Village with *mf rates*in 2012 of 2.4% and 5% [2].

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One of the factors that can trigger the incidence of filariasis and the high level of filariasis endemicity is community compliance in the Filariasis Prevention Mass Drug Administration (POMP) program. Data from the Health Office of Pekalongan City stated that adherence to taking filariasis prevention drugs tended to decrease from 2011 to 2014 namely 63.01%, 60.89%, and 55.86%. It is feared that the decrease in the level of adherence to taking medication will cause the continued POMP program in 2017-2018 to be threatened with failure and increase the risk of transmission because people who do not take filariasis prevention drugs are known to be more at risk of becoming patients and transmitting filariasis. Based on the research of the first year Arum Siwiendrayanti et al (2015) it is known that the level of basic knowledge about filariasis and POMP in the community in Kertoarjo Village which is stated to be lacking is 68% and 40%, respectively. It was also stated by Septiarini's research (2010) that the dominant factor (79.8%) causing low medication adherence was the low level of public knowledge about filariasis and POMP.

Based on these problems, the AKTIF MANDIRI model is expected to be a solution to reduce filariasis rates. The AKTIF MANDIRI model was initiated from research by Afrida (2011) which stated that the coverage of adherence to taking filariasis prevention drugs increased 7.9% higher after being accompanied by health workers[1]. However, due to the limited number of assistants, the model of mentoring by health workers to take medication is considered to be less effective in improving medication adherence. Therefore, the researchers applied assistance sourced from community resources, namely the AKTIF MANDIRI model as an innovative solution in preventing filariasis in filariasis endemic areas.

The AKTIF MANDIRI model is a mentoring method that can be used in an effort to increase knowledge and rates of adherence to taking filariasis prevention drugs as a complement to the filariasis elimination program. The AKTIF-MANDIRI model stands for Action to Eliminate Filariasis (AKTIF) with Reading Media to Avoid Filriasis (MANDIRI). The concept of the AKTIF MANDIRI model is in the form of educational activities by utilizing religious leaders as educators (AKTIF points) and using Reading Media to Avoid Filariasis so that prevention can be carried out by the community (MANDIRI points). Media Read Avoid Filariasis (MANDIRI) contains written information accompanied by illustrations of filariasis prevention steps that can be done by the community themselves. In addition to using Reading Media to Avoid Filariasis, the AKTIF MANDIRI model also applies interventions in the form of filariasis film screenings and limited group discussions. In general, the AKTIF MANDIRI model aims to increase community knowledge and behavior in preventing filariasis while still being guided by the local characteristics of the local community. The local culture of the Kertoharjo Village community is still thick with religious principles, therefore the community component that is being re-empowered is religious leaders.

2 Research Methods

This study used a *quasi-experimental pre-post test control group* to analyze the potential of the AKTIF MANDIRI program in increasing the knowledge level of the community. The sample in this study was 25 respondents as an intervention group in Kertoharjo Village (given an AKTIF-MANDIRI mentoring intervention model) and 52 respondents as a control group in Jenggot Village (given an intervention in the form of leaflets) with sample acquisition carried

out using *proportional random sampling technique*. The intervention group was taken from the residents of Kertoharjo Village who were given an intervention in the form of the AKTIF MANDIRI program through booklets, religious lectures from religious leaders and limited discussions. Meanwhile, the control group was taken from residents of Jenggot Village who were only given an intervention in the form of leaflets posted in public places. Kelurahan Jenggot was chosen as the control group with the consideration that the residents of Kelurahan Jenggot have habits and the same type as the residents of Kelurahan Kertoharjo and the location of the two villages is next to each other.

Data collection techniques were carried out by means of interviews and instruments in the form of questionnaires. Sources of data used are primary data obtained through interviews before (*pre*) and after (*post*) treatment, either through the MANDIRI ACTIVE method and leaflets.

The data analysis used in this study was univariate and bivariate. Univariately, the research results were analyzed descriptively. While the bivariate method was carried out using the Mc Nemar test to see the difference in the level of knowledge before and after treatment.

3 Results and Discussion

Knowledge Level Before and After Intervention

The following is a description of the level of knowledge of respondents about filariasis and filariasis Prevention Mass Drugs (POMP) in the intervention group and control group before and after the intervention is given, can be seen in table 1 below:

Table 1. Description Knowledge Level About Filariasis Before and After Intervention

Variables		Intervention Group		Control Group	
		%	F	%	F
Basic Knowledge of Filariasis	Before Intervention				
	Less	17	68	28	53.8
	Good	8	32	24	46.2
	After Intervention				
	Less	6	24	35	67.3
	Good	19	76	17	32.7
Knowledge of POMP	Before Intervention				
	Less	10	40	27	51.9
	Good	15	60	25	48.1
	After Intervention				
	Less	8	32	40	76.9
	Good	17	68	12	23.1

From table 1 it can be seen that the number of respondents who have less knowledge about filariasis disease and the program for filariasis Prevention of Drinking Drugs (POMP) are more than those who respond den whose knowledge is in the good category, except for the level of knowledge in the control group. In the intervention group, the level of knowledge of 25 respondents before being given treatment about basic knowledge of filariasis using the AKTIF MANDIRI method was 17 (68%) respondents who had a low level of knowledge.

After being given treatment on basic knowledge of filariasis using the AKTIF MANDIRI method, the number of respondents who had a low level of knowledge decreased to 6 respondents (24%). This shows that with the intervention with the AKTIF MANDIRI method, the public will understand the flow of filariasis transmission, how to prevent filariasis and know that filariasis is not a cursed disease. Meanwhile, in the control group, before the intervention, the number of respondents who had a low level of knowledge about filariasis was 28 respondents (53.8%) of the 52 respondents who were sampled. After being given an intervention in the form of leaflets in the dick group, the basic knowledge about filariasis in the less category increased to 35 respondents (67.3%).

Judging from the level of knowledge regarding the Administration of Mass Drug Prevention (POMP) filariasis, it is known that there are 15 people (60%) of respondents who lack knowledge before treatment, while after treatment (application of the AKTIF MANDIRI model) it is known that there are 17 people (68%) of respondents who are knowledgeable Meanwhile, in the control group before being given the intervention there were 25 respondents (48.1%) who had a low level of knowledge about MDA and after being given the intervention it decreased to 12 respondents (23.1%).

Differences in the level of knowledge regarding filariasis and POMP filariasis before and after the intervention

Table 2. Differences in the level of knowledge regarding filariasis and POMP filariasis before and after the intervention

Sample group Community			knowledge level (post)		Total	*p* value
			Poor	Control		
Control	Basic Knowledge of Filariasis (pre)	Less	19	9	28	0.230
		Good	16	8	24	
		Total	35	17	52	
	Knowledge of POMP (pre)	Poor	20	7	27	0.021
		Good	20	5	25	
		Total	40	12	52	
Intervention	Basic Knowledge of Filariasis (pre)	Poor	4	13	17	0.007
		Good	2	6	8	
		Total	6	19	25	
	Knowledge of POMP (pre)	Less	4	6	10	0.754
		Good	4	11	15	
		Total	8	17	25	

Table 2 shows that after the AKTIF MANDIRI intervention was carried out, the number of respondents who had good knowledge about filariasis transmission in the intervention group increased (to be better). In addition, based on the results of a different test using Mc Nemar's test, it also showed a significant difference between before and after the application of the AKTIF MANDIRI model with the level of basic knowledge of the community regarding the prevention of filariasis in the intervention group (*p value* 0.007). While in the control group there was no significant difference between the level of basic knowledge of filariasis before and after treatment with a *p value* of 0.230 (*p value*> 0.05).

Based on the results of this study, it can be seen that mentoring with the AKTIF MANDIRI model is more effective and has the potential to increase public knowledge about filariasis compared to mentoring through leaflets. Therefore, assistance with the AKTIF MANDIRI model really needs to be applied as a method of perfecting the filariasis elimination program in increasing the level of public knowledge, which in the long term can change people's habits to always prevent the transmission of filariasis disease through behavior and environmental management. This is in accordance with the opinion of Notoatmodjo (2003) that the formation of awareness and behavior change towards a better direction will be lasting if it is based on knowledge. People who already have awareness will be able to independently carry out efforts to prevent filariasis transmission by changing behavior.

Health education with the AKTIF MANDIRI model is more effective in increasing public knowledge if it is carried out using lectures, booklets, and audiovisual media. This is in accordance with research conducted by Santi et al (2014) which states that health education through audiovisuals is effective in increasing community knowledge, attitudes, and actions in preventing filariasis (p value = 0.000) [8]. The same study also shows that lecture education can increase knowledge about leptospirosis and tends to be liked by the people of Bantul Regency compared to health education through billboards or leaflets[7].

The level of knowledge has a significant correlation with the incidence of disease. The results of Nasrin's research (2008) show that respondents who do not know about filariasis transmission and prevention will have a 3 times greater chance of contracting filariasis compared to respondents who know about filariasis transmission[5].

In the statistical test results of the knowledge variable for Mass Drug Administration for Prevention (POMP) of Filariasis in the intervention group, it is known that the p-value is 0.754 ($p>0.05$), which means that there is no significant difference between before and after being given the ACTIVE-INDEPENDENT model in the community of Kelurahan Kertoharjo Kota. Pekalongan. However, the control group showed different things that the intervention with leaflet media had different levels of knowledge of POMP filariasis before and after the intervention with *p value* 0.021 (*p value*< 0.05).

The absence of a significant difference in the knowledge score about MDA in the community before and after being given intervention through the AKTIF MANDIRI model could be influenced by the ability of the assistant staff in the field, which in this context is the level of understanding of religious leaders as agents who convey information or knowledge to the community. Therefore, the AKTIF MANDIRI mentoring model can be applied, but intensive assistance is needed to ensure the knowledge ability of religious leaders as companions is at the expected level.

Appropriate health education must use the right methods and media, so that the material presented in health promotion will be easily accepted and absorbed by the target whose final impact will further increase public knowledge and more easily realize public awareness in disease prevention[6]. Health education often fails because of the inaccurate selection of educational methods, educational media and application of methods in the field. The advantages of the ACTIVE-INDEPENDENT model of health education method are that the public will be more concerned because the people who convey information are people they respect (religious leaders), have more potential in forming public awareness and community shops, as well as the formation of a guide book for religious leaders and the public regarding

filariasis. which can be read over and over again in the future. Therefore, mentoring with the AKTIF MANDIRI model is effective and has the potential to increase public knowledge about filariasis. However, based on the evaluation of the implementation of the "AKTIF MANDIRI" mentoring model, to get more optimal results it is necessary to have several consequences of choices such as the need for assistance to religious leaders and monitoring of the rotation of booklets carried out in reading because what is found in the field is not everything that is given the book. read.

4 Conclusion

Health education with the AKTIF MANDIRI model (Action to Eliminate Filariasis - Media Reads to Avoid Filariasis) is effective in increasing basic knowledge about filariasis. However, there was no difference in the level of knowledge about filariasis POMP before and after the intervention. Therefore, to make the application of the AKTIF MANDIRI model effective in increasing public knowledge about filariasis in full, there is a need for more intensive assistance to religious leaders to ensure that the level of understanding of religious leaders regarding filariasis is as expected and it is also necessary to monitor the circulation of media booklets to ensure that every citizen read the media booklet.

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