

Understanding Scabies in Religious Boarding School (Pesantren)

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Abstract—Scabies is a skin disease that is still a problem with 200 million cases in 2015 in the world. Reducing the incidence of scabies, the understanding of scabies is essential since knowledge is a factor that will determine behaviour. This study aims to analyse the relationship between scabies and the level of knowledge of students in a religious boarding school. This study was a cross-sectional study with analysis using the Fisher Exact test. The incidence of scabies gathered through physical examination, and the diagnosis of scabies based on the cardinal sign such as diffuse itching presents along with either lesion in two regular spots or itchiness is present in another household member. The student's level of knowledge accessed using a questionnaire. Results showed that the incidence of scabies was quite high although most of the students have a good level of knowledge. The results show that not only knowledge but behaviour plays a vital role in one's hygiene. It concluded that there was no relationship between the level of knowledge and the incidence of scabies.

Keywords—incidence; knowledge; scabies

I. INTRODUCTION

Scabies is a skin disease with a high incidence in the world. In 2015, there were 200,000,000 people suffering from scabies [1]. This disease is widely found in tropical countries and occurs in dense environments [2]. This disease results in a

decrease in quality of life. In children, itching affects the child during activities at school and while playing, and children feel embarrassed by lesions on their skin, whereas in adult's scabies affects work activities [3].

One of the dense settlements is at a boarding school. The incidence of scabies in several boarding schools in Indonesia in 2013-2016 ranged from 24.6% to 54.7% [4-6]. Studies show that there was relationship between the level of knowledge and the number of scabies [6,7]. Other studies which shown an association between education levels and the incidence of scabies were by Ratnasari et al., and Nazari M et al. [5, 8]. However, one study showed that there was no relationship between knowledge and the number of scabies [9].

This disease closely related to personal hygiene and good living environment. Health-related actions result from many factors contribute to behavioral influences interfaced with external environmental forces. Behaviour is determined by cognition, affection and psychomotor trait [10]. Knowing whether knowledge is related or not to the incidence of scabies it is important to determine what strategies will be implemented. In the scenario of the religious boarding school, the knowledge on how to prevent scabies, reduce transmission and reduce the incidence, especially in densely populated locations is essential.

This study aims to determine the number of scabies cases, the level of knowledge of students about scabies and to analyze the relationship between the number of scabies and the knowledge of students about it.

II. METHODS

This study used cross-sectional study on a religious boarding school's student which resides in the compound totaling 52 respondents. The statistical analysis method used was Fisher Exact test. The incidence of scabies at the religious boarding school collected by physical examination. The diagnosis of scabies made based on two symptoms and positive signs of 4 cardinal signs, which are itching at night and scabies cases found in the community [11].

The student's level of knowledge collected using a questionnaire consisting of 20 questions about the causes, symptoms, prevention, transmission, treatment, and risk of scabies. The level of knowledge divided into three categories, namely good if the value is >76% -100%, satisfactory if the value is 60% -75% and unsatisfactory if the value is <60% [12].

III. RESULTS AND DISCUSSION

Table 1 shows that of the 52 respondents, the average age is 15.11 years, and 50% were on the junior high school level. The average questionnaire value was 75, with respondents with good knowledge was 46.2%. Based on the history and physical examination of all respondents, the incidence of scabies was 84.6%. This figure is far higher than the number of scabies at religious boarding schools in Padang (24.6%), Malang (37.32%), Jakarta (51.6%) and Yogyakarta (54.7%) [4-6]. Scabies can infect people of all ages, races, and socioeconomic status. Prevalence in developing countries ranges from 4-100% population [13]. There is no difference in the proportion of scabies between male and female students.

TABLE I. RESPONDENTS CHARACTERISTICS

Variables	Sex		N = 52
	Girls (N=19)	Boys (N=33)	
Age			
Mean	13,26	16,18	15,11
Median	14	15	15
Deviation standard	2,86	2,17	2,80
Min – max	6 – 17	12 – 21	6 – 21
Education level			
Madrasah Ibtidaiyah	6 (32%)	7 (21%)	13 (25%)
Madrasah Tsanawiyah	11 (58%)	15 (46%)	26 (50%)
Madrasah Aaliyah	2 (11%)	11 (33%)	13 (25%)
Value			
Mean	79,73	72,27	75
Median	85	70	72,5
Deviation standard	17,43	17,00	17,37
Min – max	45 – 100	45 – 100	45 – 100
Knowledge level			
Unsatisfactory	2 (11%)	10 (30%)	12 (23%)
Satisfactory	5(26%)	11 (33,3%)	16 (31%)
Good	12 (63%)	12 (36,4%)	24 (46%)
Scabies cases			
With Scabies	17 (90%)	29 (88%)	44 (85%)
None	2 (11%)	4 (12%)	8 (15%)

In this study, 46.2% of respondents had good knowledge about scabies. Of all respondents with good knowledge, 78.28% were affected by scabies. The results were similar to the research by Ridwan et al. [9].

TABLE II. LEVEL OF KNOWLEDGE TO SCABIES CASES

Level of Knowledge	Scabies				Total		P Value
	No		Yes		N	%	
	N	%	N	%			
Unsatisfactory	2	16,7	10	83,3	12	100	0,54
Satisfactory	1	6,3	1	93,8	16	100	
Good	5	20,8	19	78,28	24	100	
Total	8	15,4	44	84,6	52	100	

This study showed a high incidence of scabies even in students with a good level of knowledge. Lawrence Green in his preceed-proceed model stated that health problem could divide into behavior and non-behavior problem. There were three factors which can define a behavior change which are: predisposition, enabling and reinforcement factors. Knowledge was part of the predisposition factor, the factor that can facilitate the occurrence of behaviour [14]. Knowledge is the result of knowing someone's object through the sense [15]. From 46.2% respondents with proper knowledge, it was clear that both of predisposition factor with the six stages of knowledge process already achieved by respondents. The six stages were comprehension, application, analysis, synthesis, and evaluation [14,15].

For the occurrence of changes in ones' behaviour, the process needed by someone's are: awareness, that is knowing the stimulus, feel interested to that stimulus, considering that stimulus to be good or bad then try to start doing something according to that stimulus and finally adopt it. The adoption stages are where someone's behaves new according to knowledge, awareness and attitude to the stimulus [14]. Someone's attitude to the stimulus began to be formed when there is interest toward it.

Based on behaviour change process, the important thing to be done for decreasing scabies incidence in this boarding school were to analyse attitude and respondents psychomotor. In the attitude processed, there are two components which have an effect to attitude formation that were someone's needs, and the information about those objects or subjects. In the context of the need for not suffering or contracted scabies it is quite difficult since the need is not concrete or feel real especially when the environment is not supported [16]. In this scenario, effort to change respondent behaviour through attitude can be performed with information about scabies. This actually already included in clean and healthy living behaviour material in the academic curriculum at the religious boarding school. The stimulus can be strengthened the formation of health cadres and little doctor appointed from the boarding school students. Scabies can be eliminated if the person and community understand and perform what is necessary such as maintain healthy living and good personal hygiene. What is needed is the continuing information and education about healthy living and personal hygiene from a competent person.

IV. CONCLUSION

The number of Scabies cases in MH boarding school is very high while the majority of students have good level of knowledge. There is no correlation between level of knowledge and cases of Scabies in the religious boarding School. Continuing education about healthy living and personal hygiene are needed to ensure a better environment and elimination of the disease.

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CONFLICT OF INTEREST

All authors made substantial contributions right from inception to the end of the study. There is no conflict of interest in whatever form.

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