

Relationship Level Of Knowledge, Attitude And Behavior To The Incidence Of Scabies At The Al Fatih Klaten Modern Islamic Boarding School

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ABSTRACT

Keywords:

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Scabies is a skin disease that is most often found in densely populated environments such as Islamic boarding schools. This disease is caused by *Sarcoptes scabiei homini*. Education for students about scabies is necessary to increase awareness of hygiene behaviors. Education related to knowledge, attitudes and behavior to scabies has been carried out regularly every six months by the Dermatologist and Venereologist. This study aims to determine knowledge, attitudes and behavior to the incidence of scabies at Modern Islamic Boarding School Al Fatih, Klaten. This study used quantitative research design with a cross sectional design which was carried out in March 2023 at the Al Fatih Modern Islamic Boarding School, Klaten. The sample was 65 students were obtained by the total sampling method that met the inclusion criteria. Data obtained by direct examination and using a questionnaire. The diagnosis of scabies is made based on the criteria in the Regulation of the Ministry of Health of the Republic of Indonesia No. 5 of 2014 concerning Guidelines for Clinical Practice for Doctors in Primary Health Care Facilities. The results of the study showed that 40% of the respondents experienced scabies. Bivariate analysis with Spearman's Rank correlation test for the knowledge variable obtained p-value 0.873 where there was no significant relationship between knowledge and the incidence of scabies. As many as 40% of students who had a positive attitude were diagnosed with scabies. The relationship between behavior and the incidence of scabies was found to be p -value 0.03 where there was a significant relationship between behavior and the incidence of scabies. Amount of 40% students had a positive attitude were diagnosed with scabies. There was no significant relationship between knowledge and the incidence of scabies. However, there was a significant relationship between behavior and the incidence of scabies at the Al Fatih Modern Islamic Boarding School, Klaten Regency.

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1. INTRODUCTION

Scabies, also known as scabies, gudig, and budug, is a skin disease caused by infection with the mite *Sarcoptes scabiei hominis* [1]. Until now, scabies has become a world health problem, including in Indonesia [2]. This disease is usually suffered by children and adults with a similar frequency between men and women [3]. Transmission of scabies can occur through direct contact, including shaking hands, sleeping together and through indirect contact, through infected objects, namely clothing, towels, bed sheets, pillows and blankets [4]. Scabies usually attacks all ages, but often occurs in children due to children's behavior which often does not think about cleanliness, such as frequently changing clothes with friends. Living in groups with other people, such as in a boarding school environment, carries a high risk of contracting scabies. Transmission occurs more easily if personal hygiene is not maintained properly [5].

WHO predicts that every year more than 300 million people in the world suffer from scabies [6]. According to the International Coalition for Scabies Control in 2020, scabies attacks more than

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130 million people at any given time with a prevalence ranging from 0.3% to 46% [7]. Various studies show that locations where people live have a high risk of contracting scabies, especially Islamic boarding schools or dormitories [8]. Research by Handari (2017) reported that the prevalence of scabies in crowded Islamic boarding schools was 78.7% and was greater in students with poor personal hygiene [9]. According to Mayrona, Subchan, and Widodo (2018), it was found that of the 46 students studied, 39 students (84.8%) had scabies [10].

Scabies can also be influenced by knowledge, attitude, personal hygiene and environmental sanitation [11]. Knowledge can be a factor that facilitates the emergence of healthy practices or habits. Knowledge plays a role in determining people's attitudes, in this case taking actions to prevent the spread of scabies [12]. According to Vetronela (2018), there is a significant relationship between the level of knowledge and scabies in student dormitories with a value of $p = 0.002$ [13]. This is in line with research conducted by Aliffiani and Mustakim (2018) who reported that there was a significant relationship between knowledge and scabies p -value = 0.024 at the Ar-Rofi'I Islamic Boarding School. Likewise, the attitude variable with the incidence of scabies at the Ar-Rofi'I Islamic Boarding School obtained a p -value = 0.049 [14]. Based on the results of this research, students who suffer from scabies are more likely to have a less good attitude (54.7%) compared to students who have a good attitude [14].

Personal hygiene behavior is an important factor that plays a role in the emergence of scabies. Lack of self-awareness regarding cleanliness is the main reason why scabies is still high and has become a health problem [3]. Personal cleanliness determines the quality of an individual's health in order to prevent scabies. To prevent this disease, you can practice personal hygiene, clean your nails, increase the frequency of washing your hands, don't use the same towel, change bed linen frequently, don't change clothes except for our own clothes that we wear, shower regularly, and often dry the mattress and pillow under the hot sun [15]. Research by Handari and Yamin (2018) reported that personal hygiene was related to scabies at the An-Nur Islamic Boarding School Ciseeng Parung Bogor [9].

Until now, Islamic boarding schools still have problems related to environmental cleanliness and sanitation, including room overcrowding, lack of ventilation, the behavior of students hanging up dirty clothes and exchanging personal items between students. This makes it easy for scabies to spread in the Islamic boarding school environment. Education for students about scabies is very necessary to raise their awareness of healthy and clean living behavior so that they can overcome various diseases, of course. Education regarding scabies at the Al Fatih modern Islamic boarding school, Klaten Regency is carried out routinely every 6 months by a skin and venereal specialist. The hope of a scabies-free Indonesia by 2030 is a reason for skin and venereal specialists to further increase efforts to prevent the incidence of scabies. Based on the background, the researchers conducted research entitled the relationship between knowledge, attitudes and behavior of students on the incidence of scabies at the Al Fatih Modern Islamic Boarding School, Klaten Regency.

2. METHOD

This research is a quantitative type with a cross-sectional design. This research was carried out in March 2023 after obtaining ethical clearance with number No. 117/III/2023/Bioethics Commission from the Faculty of Medicine, Sultan Agung Islamic University. The sample was 65 students at the Al Fatih Modern Islamic Boarding School, Klaten Regency, obtained using the total sampling method. Examinations and interviews were carried out on students who were indicated to have scabies. The data was obtained by checking directly and using a questionnaire. The diagnosis of scabies is based on the criteria PERMENKES Number 5 of 2014 concerning Clinical Practice Guidelines for Doctors in Primary Health Care Facilities. The diagnosis is confirmed by combining 2 of the 4 cardinal signs for the diagnosis of scabies, namely: (a) pruritus nocturna; (b) attacks humans in a group manner (c) there is a polymorphic picture in the lesion predilection area in the thin stratum corneum (between the fingers, volar wrists and feet) or tunnels are found, (d) mites are found by microscopic examination.

The independent variables in this research include knowledge, attitudes and behavior. The definition of knowledge is students' knowledge about scabies including the causes, symptoms, location of the disease, transmission, risk factors and prevention of scabies. The definition of attitude

is the attitude of students towards scabies including vigilance, personal and environmental cleanliness. Meanwhile, what is meant by behavior is behavior towards personal hygiene and habits of students in an effort to prevent scabies. The inclusion criteria were students who could carry out all the examination processes, be able to establish a diagnosis of scabies, interview questionnaires and agree to the research. The data analysis includes univariate to calculate the frequency distribution of the characteristics of the research subjects as well as bivariate using Spearman Rank correlation testing .

3. RESULTS AND DISCUSSION

This research was carried out in March 2023. The research sample that met the inclusion and exclusion criteria was 65 subjects. The results of the frequency distribution of respondents based on the incidence of scabies in the Al Fatih modern Islamic boarding school, Klaten Regency are presented in the table below,

Table 1. Characteristics of Santri

Assessment category	N	%
Class		
X	65	100.0
Age		
15 Yr	10	15.4
16 Yr	39	60.0
17 Yr	15	23.1
18 Yr	1	1.5
Gender		
Man	41	63.1
Woman	24	36.9
Long stay in Islamic boarding school dormitory		
≤ 6 months	0	0.0
> 6 months	65	100.0
Total	65	100

Table 1 illustrates that all of the participants in this study (100%) were in class X, most (60.0%) were 16 years old, most (63.1%) were male students, and all (100, 0%) have lived in Islamic boarding school dormitories for more than 6 months

Table 2. Distribution of Levels of Knowledge, Attitudes, Behavior and Incidents of Scabies

Assessment category	n	%	Score
Knowledge			
Good	58	89.2	≥ 75%
Enough	7	10.8	> 56% - 74%
Not good	0	0.0	< 55%
Attitude			
Positive	65	100.0	≥ 50%
Negative	0	0.0	< 50%
Behavior			
Good	62	95.4	≥ 50%
Not good	3	4.6	< 50%
Scabies Occurrence			
Not Scabies	39	60.0	
Scabies	26	40.0	
Total	65	100	

Based on table 2, the results show that of the 65 Al-Fatih Islamic Boarding School students who were research respondents, the majority, namely 89.2%, had good knowledge about scabies, all of them (100.0%) had a positive attitude, and almost all (95.0%) had a positive attitude. 4%) have behavior to prevent the spread of scabies efficiently, and the diagnosis of scabies was found in 60.0% of students.

Table 3. Normality and Homogeneity Test

	Normality (Kolmogorov Smirnov)		Homogeneity (Levene)	
	Sig.	Information	Sig.	Information
Knowledge	<0.001	Abnormal	0.466	Homogeneous
Attitude	<0.001	Abnormal	0.005	Inhomogeneous
Behavior	<0.001	Abnormal	0.453	Homogeneous

Table 3 shows that the distribution of data on the level of knowledge, attitudes and behavior to prevent transmission of scabies disease has an abnormal data distribution because the sig. (p) obtained from the Kolmogorov Smirnov test <0.05; However, the variance of knowledge and behavior data based on scabies diagnosis is homogeneous ($p > 0.05$) while the variance of behavior data is not homogeneous ($p < 0.05$). The normal distribution of data was not met, so in order to increase knowledge the relationship between knowledge, attitudes and behavior with the diagnosis of scabies was tested using the Spearman Rank correlation.

Table 4. Relationship between knowledge and incidence of scabies

Knowledge	Scabies Diagnosis				Total		p-value
	Not Scabies		Scabies		n	%	
	n	%	n	%			
Good	35	60.3	23	39.7	58	100.0	0.873
Pretty good	4	57.1	3	42.9	7	100.0	
Not good	0	0.0	0	0.0	0	0.0	
Total	39	60.0	26	40.0	65	100.0	

In Table 4, the results show that of the 58 Al-Fatih Islamic Boarding School students who had good knowledge, the majority (60.3%) were diagnosed as not having scabies; Likewise, of the 7 students who had poor knowledge, the majority (57.1%) were also diagnosed as not having scabies. Based on the results of the Spearman Rank correlation test, it was found that the value was $p = 0.873$ ($p > 0.05$), so it was stated that there was no relationship between knowledge and the incidence of scabies.

Table 5. Relationship between attitudes and the incidence of scabies

Attitude	Scabies Diagnosis				Scabies Diagnosis		p-value
	Not Scabies		Scabies		n	%	
	n	%	n	%			
Positive	39	60.0	26	40.0	39	100.0	-
Negative	0	0.0	0	0.0	0	0.0	
Total	39	60.0	26	40.0	39	100.0	

In Table 5, the results obtained are that of the 65 students of the Al-Fatih Islamic Boarding School who had a positive attitude, the majority (60.0%) were diagnosed as not having scabies; and another 40.0% were diagnosed with scabies. However, because there are no students with negative attitudes, the Spearman Rank correlation test to determine the relationship between attitudes and the incidence of scabies cannot be carried out.

Table 6. Relationship between behavior and incidence of scabies

Behavior	Scabies Diagnosis				Total		p-value
	Not Scabies		Scabies		n	%	
	n	%	n	%			
Good	39	62.9	23	37.1	62	100.0	0.030
Not good	0	0.0	3	100.0	3	100.0	
Total	39	60.0	26	40.0	65	100.0	

In table 6, the results show that of the 65 Al-Fatih Islamic Boarding School students who had good behavior, the majority (62.9%) were diagnosed as not having scabies; However, all 3 students who had poor behavior (100.0%) were diagnosed with scabies. Based on the test results with Spearman's Rank, the value was $p = 0.030$, so it was stated that there was a significant relationship between behavior and the incidence of scabies.

Discussion

Based on the table above, the number of scabies among students at the AlFatih Islamic Boarding School is 29 people (40%) and 39 people without scabies sufferers (60%) [16]. Scabies can be found in high density environments such as military dormitories, prisons and Islamic boarding schools. Crowded housing and an unhealthy environment also accelerate the spread and transmission of scabies [17]. These results are supported by research conducted by an Islamic boarding school in East Jakarta with a fairly high density environment showing a scabies incidence rate of 51.6%. High population density, interaction and physical contact between individuals in densely populated environments facilitate the transmission and spread of *Sarcoptes scabiei* [18].

The factor that plays a role in the occurrence of scabies in the cottage is his knowledge about scabies. Knowledge is the result of knowledge, this occurs after people carry out their sensing of certain objects [19]. In this study, the p value was obtained = 0.873 ($p > 0.05$), which means that there is no significant relationship between the level of knowledge and the incidence of scabies. A good level of knowledge among students can prevent the transmission of scabies. Local health providers, in this case dermatologists and venereal specialists, have provided regular education every six months regarding scabies. This can be seen from the level of knowledge of the students which is classified as good and quite good, in fact there are no students who have a level of knowledge that is not good. Even though students have a good and fairly good level of knowledge regarding scabies, they still do not have the awareness to practice it in daily life so the incidence of scabies is still relatively high. According to Ibadurrahmi et al (2016), other factors that can have an influence on the high level of scabies in Islamic boarding schools include gender, age, density of occupants, humid air, natural lighting, temperature and air ventilation.

The table above explains that 40% of the students at AlFatih Islamic Boarding School who had a positive attitude were diagnosed with diabetes. This is supported by research by Aulia, Mulianto, and Widhiati (2017) which explains that there is a link between attitudes and the incidence of scabies in Islamic boarding schools in Central Java [2]. A positive respondent attitude was associated with a lower risk of scabies than a negative respondent attitude. In this research, the largest average of respondents' attitudes was positive, but scabies in this Islamic boarding school was still relatively high. This is thought to be caused by other factors that influence attitudes which are explained in research by Aulia, Mulianto, and Widhiati (2017) that students who have experienced scabies before have positive attitude scores compared to students who have never experienced scabies [20]. Experience can influence the formation of a person's attitude, where unpleasant experiences can foster positive attitudes by protecting oneself so that the incident does not happen again [21]. Attitudes are also influenced by factors such as support from local health managers, including the role of Genital Dermatology Specialists who provide education about scabies and its prevention periodically every six months. Attitude is a risk factor that causes scabies to develop in the Islamic boarding school environment. Attitudes play a big role in shaping behavior [22]. Without a positive attitude, human behavior will not change regarding disease prevention interventions [11].

Analysis of the relationship between behavior and the incidence of scabies using Spearman Rank analysis obtained a p value of 0.030, where there is a significant relationship between behavior and the incidence of scabies. Based on the data obtained, all students diagnosed with scabies had bad behavior. The results are the same as research by Tahani and Risnawati (2021) who reported that there was a correlation between personal hygiene and indications of scabies at the Darul Falah Asahan-Kisaran Islamic Boarding School and grades. $p = 0.000$ ($p < 0.05$). Similar to research by Nurhidayat (2021) who reported that there was a relationship between personal hygiene behavior and the incidence of scabies with a value of $p = 0.04$ [11]. The students are not clean, their clothes are often exchanged, they share towels and soap, so many are infected with scabies [23]. Based on the results obtained, lack of personal hygiene can increase the risk of transmitting various skin diseases, especially scabies. Scabies infection can occur if personal hygiene and environmental cleanliness are not maintained properly. This is because scabies is transmitted directly through shaking hands and sleeping together and can also be through sleeping equipment and clothes or towels. Because personal hygiene is not limited to individuals, but is also related to the hygiene tools they use every day, namely soap, bed linen, towels, clothes and others [3]. The limitation of this research is not

identifying other factors that influence the incidence of scabies in Islamic boarding schools, such as environmental sanitation. so further research needs to be done regarding this variable.

4. CONCLUSION

From the research above, the conclusion is that there is an insignificant relationship between knowledge and the incidence of scabies, 40% of students who have a positive attitude are diagnosed with scabies, and there is a significant relationship between behavior and the incidence of scabies at the Al-Fatih Islamic Boarding School, Klaten Regency. It is hoped that local health services can collaborate with Islamic boarding schools and other related parties to be able to provide continuous education to reduce the vulnerability of contracting scabies among students at the Al-Fatih Islamic Boarding School, Klaten Regency.

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