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Relationship Between Personal Hygiene Behavior Bathing Behavior and Sleeping Behavior with the Incidence of Scabies Among Students at the Manhajul Ulum Islamic Boarding School Ciamis Regency

Adi Nurapandi¹, Intan Putri Nurlela¹, Irpan Ali Rahman¹, Sri Utami Asmarani¹, Endrian MJW¹, Panji Wahlanto¹, Elis Noviati¹, Lusi Lestari¹

¹STIKes Muhammadiyah Ciamis, Indonesia

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Correspondence

E-mail : adinurapandi15@gmail.com

ABSTRACT

Scabies is a skin disease that is still common in Indonesia and remains a public health problem. According to the World Health Organization (WHO) the incidence of scabies in 2014 was 130 million people worldwide. According to data from the Ministry of Health of the Republic of Indonesia, the prevalence of scabies in 2017 is 6% of the total population of Indonesia, while scabies is still ranked 9 of the 10 largest diseases in West Java Province with a total of 38,854 cases in 2011. Based on outpatient reports of the Rajadesa Health Center the incidence of scabies in months In October 2020 there were around 39 cases, while in the Manhajul Ulum Islamic Boarding School, Ciamis Regency, data was obtained that as many as 60 students suffered from scabies in October 2020. To determine the relationship between personal hygiene behavior, bathing behavior and sleeping behavior with the incidence of scabies among students at the Manhajul Ulum Islamic Boarding School, Ciamis Regency. Quantitative research methods using a correlation design and retrospective research design. Total population of 90 students who suffer from scabies and who do not suffer from scabies in the Manhajul Ulum Islamic Boarding School, Ciamis Regency, and the sampling used the total sampling method, namely the entire population was used as a sample of 90 respondents. The results showed that there were 60 people (66.7%) who suffered from scabies, 34 people (37.8%) who suffered from scabies, 34

people (37.8%) who were in poor category and 36 people (40.0%) suffered from scabies. with the less category. The results of statistical tests showed that there was a relationship between personal hygiene behavior in bathing behavior and the incidence of scabies ($p = 0.023 <0.05$) and there was a relationship between personal hygiene behavior in sleep behavior and the incidence of scabies ($p = 0.011 <0.05$) at the Manhajul Ulum Islamic Boarding School, Ciamis Regency. The conclusion of this study states that there is a significant relationship between personal hygiene behavior, bathing behavior and sleep behavior with the incidence of scabies among students at the Manhajul Ulum Islamic Boarding School, Ciamis Regency.

INTRODUCTION

Scabies is a contagious disease caused by infestation of the *scabieci hominis* mite on the skin, which belongs to the arachnid class (Parman, Hamdani, Rachman, & Pratama, 2017). According to the World Health Organization (WHO), the incidence of scabies in 2014 was 130 million people worldwide (Adamu & Tsegaye, 2018). Scabies occurs not only in developing countries but also in developed countries such as Germany, where it occurs sporadically or in the form of a long-term endemic (Egeten et al., 2019). A prevalence of scabies of 20.4% was also found in Kolkata, India. The prevalence of scabies in Penang, Malaysia, among children aged 10-12 years was 31%. The prevalence of endemic scabies among Aboriginal tribes in Australia and Oceania was 30%. The prevalence of scabies in Brazil is 8.8% (Hamzah B & Akbar, 2020).

The incidence of scabies in developing countries tends to fluctuate, as in Indonesia in 2008, where 77 million children out of a current population of 220 million were infected with infectious diseases such as scabies due to the growing population (Saputra, H, & Putri, 2019).

According to data from the Indonesian Ministry of Health, the number of scabies sufferers in 2009 was around 6,915,135 (2.9% of the population of 238,452,952) and scabies ranked third out of 12 common skin diseases. Meanwhile, the incidence increased by 9% in 2013 and 6% in 2017 of the total population of Indonesia (Luthfa & Nikmah, 2019).

An extraordinary outbreak of scabies occurred in West Java Province in 2006 and 2008, affecting around 40.78% of the

population. In 2011, scabies still ranked ninth among the ten most prevalent diseases in West Java Province, with 38,854 cases (Hamzah B & Akbar, 2020).

Based on the Rajadesa Community Health Center outpatient report, there were around 97 cases of scabies in December 2018, which decreased to around 26 cases in December 2019, while in October 2020, there was an increase to around 39 cases. During a preliminary study on November 10, 2020, at the Manhajul Ulum Islamic Boarding School in Ciamis Regency, data showed that 60 students suffered from scabies.

The symptoms immediately felt by scabies sufferers are itching that worsens at night or in hot weather and when the sufferer sweats, due to increased mite activity in line with increased body temperature (Luthfa & Nikmah, 2019). Small tunnels with small bumps appear at the ends of the skin, attacking the spaces between the toes, fingers, buttocks, around the genitals, and the back. If scratched, a clear fluid will be released, which can spread the itching to other areas (Nuraini & Wijayanti, 2017).

Scabies experienced by students can affect their academic performance due to itching at night or in hot weather and when the patient sweats (Handari & Yamin, 2017). This condition causes sufferers to experience sleep disturbances, making them appear lethargic in the morning (Berot, 2018). Prolonged sleep disturbances can affect concentration in learning and decrease academic performance (Rahmi, Arifin, & Pertiwiati, 2016).

If scabies is left untreated for several weeks or months, it can cause dermatitis due to scratching. Eruptions can take the form of impetigo, ecthyma, cellulitis,

lymphangitis, folliculitis, and furuncles. Bacterial infections in infants and young children with scabies can cause complications in the kidneys, namely glomerulonephritis (Berot, 2018).

Personal hygiene factors greatly influence scabies because the higher a person's level of personal hygiene, the lower their risk of contracting scabies, but the poorer a person's level of personal hygiene, the greater their risk of contracting scabies (Saputra, H., & Putri, 2019). Direct contact interaction occurs when students sleep together with infected individuals in a relatively small room and when students shake hands, as scabies lesions often occur between the fingers (Luthfa & Nikmah, 2019). Indirect contact interaction occurs when students with scabies share bathing equipment, prayer items, clothing, and towels with others, leading to the transmission of scabies (Mayrona, Subchan, & Widodo, 2018).

Based on research conducted by Hamzah (2020) entitled Analysis of the Relationship between Personal Hygiene and the Incidence of Scabies in the Working Area of the Juntinyuat Community Health Center, Indramayu Regency. The results of the study showed that 58.2% of respondents suffered from scabies, and 46.5% of respondents had poor bathing habits. Statistical tests showed that there was a relationship between bathing habits and the incidence of scabies ($p=0.007<0.05$) in the working area of the Juntinyuat Community Health Center in Indramayu Regency.

Research conducted by Parman (2017) with the title "Factors Risking Individual Hygiene of Islamic Boarding School Students on the Incidence of Scabies in Al-baqiyatushshalihat Islamic Boarding School, Tanjung Jabung Barat, in

2017." The results showed that 50% of respondents suffered from scabies and 50% did not. Statistical analysis revealed a significant association between bedding and sheet cleanliness and the incidence of scabies ($p=0.000<0.05$) at the Al Baqiyatushshalihat Islamic Boarding School.

From the preliminary study conducted through interviews with 10 students suffering from scabies on November 10, 2020, at the Manhajul Ulum Islamic Boarding School in Ciamis, it was found that there were students who experienced itching between their fingers and small spots on their skin and that the students only bathed once a day. the habit of borrowing towels, the lack of cleanliness of the students' beds, such as rarely drying mattresses, rarely changing pillowcases, and the habit of sleeping together. Based on the background described above and considering the large number of students experiencing scabies, the researcher was interested in conducting research on "The relationship between personal hygiene behavior, bathing behavior, and sleeping behavior with the incidence of scabies among students at the Manhajul Ulum Islamic Boarding School in Ciamis Regency."

METHOD

This study is a quantitative study, using a correlation design with a retrospective approach. Data collection was carried out in January 2021 on 90 students at the Manhajul Ulum Islamic Boarding School in Ciamis Regency who met the research criteria.

This study was conducted from January 8 to 31, 2021, at the Manhajul Ulum Islamic Boarding School in Ciamis Regency. The independent variables in this study were personal hygiene behavior,

bathing behavior, and sleeping behavior, while the dependent variable was the incidence of scabies among students at the Manhajul Ulum Islamic Boarding School in Ciamis Regency.

The population used in this study consisted of 90 respondents, including students who had scabies and those who did not. The sampling technique used in this study was total sampling, where the entire population was used as the sample.

This study used the chi-square statistical test with a significance level of $\alpha < 0.05$. If the p value is $< \alpha$, then H_0 is rejected and H_a is accepted, which means that there is a significant relationship between the dependent variable and the independent variable.

RESULTS AND DISCUSSION

1. Respondent Characteristics

a. Gender

Table 1. Frequency Distribution of Respondent Gender

No	Gender	Frequency	Percentage (%)
1.	Male	60	66,7
2.	Female	30	33,3
	Total	90	100

Based on Table 1, it can be seen that the highest frequency of respondents at the Manhajul Ulum Islamic Boarding School was male, with 60 respondents (66.7%).

b. Age

Table 2. Frequency Distribution of Respondents' Age

No	Usia	Frequency	Percentage (%)
1.	11-14 years old (early adolescence)	50	55,6
2.	15-17 years old (mid-adolescence)	40	44,4
	Total	90	100

Based on Table 2, it is known that the highest frequency of respondents at the Manhajul Ulum Islamic Boarding School

was in the 11-14 age category (early adolescence) with 50 respondents (55.6%).

c. Education

Table 3. Frequency Distribution of Respondents' Education

No	Education	Frequency	Percentage (%)
1.	Junior High School	50	55,6
2.	Senior High School	40	44,4
	Total	90	100

Based on Table 3, it is known that the highest frequency of respondents at the Manhajul Ulum Islamic Boarding School was in the junior high school education category, with 50 respondents (55.6%).

2. Data analysis

a. Univariate analysis

1. Overview of personal hygiene behavior in bathing among students at the Manhajul Ulum Islamic Boarding School in Ciamis Regency

Table 4. Frequency Distribution of Personal Hygiene Behavior in Bathing Among Students at the Manhajul Ulum Islamic Boarding School in Ciamis Regency

Bathing Behavior	Frequency	Percentage (%)
Poor	34	37,8
Fair	30	33,3
Good	26	28,9
Total	90	100%

Based on Table 4, it can be seen that the highest frequency of personal hygiene behavior in bathing among students at the Manhajul Ulum Islamic Boarding School in Ciamis Regency is in the "poor" category, with 34 people (37.8%).

2. Overview of personal hygiene behavior in terms of sleeping habits among students at the Manhajul Ulum Islamic Boarding School in Ciamis Regency

Table 5. Frequency Distribution of Personal Hygiene Behavior in Terms of Sleeping Habits among Students at the Manhajul Ulum Islamic Boarding School in Ciamis Regency

Sleep Behavior	Frequency	Percentage (%)
Poor	36	40,0
Fair	29	32,2
Good	25	27,8
Total	90	100%

Based on Table 5, it is known that the highest frequency of personal hygiene behavior related to sleeping habits among students at the Manhajul Ulum Islamic Boarding School in Ciamis Regency was in the “poor” category, with 36 people (40.0%).

3. Overview of scabies cases among students at the Manhajul Ulum Islamic Boarding School in Ciamis Regency

Table 7. Frequency Distribution of the Relationship between Personal Hygiene Behavior, Namely Bathing, and the Incidence of Scabies among Students at the Manhajul Ulum Islamic Boarding School in Ciamis Regency

Bathing Behavior	Occurrence of Scabies				Total	ρ value		
	No Scabies		Scabies					
	F	%	F	%				
Poor	7	20,6	27	79,4	34	37,8		
Fair	9	30,0	21	70,0	30	33,3		
Good	14	53,8	12	46,2	26	28,9		
Total	30	33,3	60	66,7	90	100		

Based on Table 7, it is known that the personal hygiene behavior of bathing among students at the Manhajul Ulum Islamic Boarding School in Ciamis Regency had the highest frequency in the poor category, namely 34 people (37.8%) out of 7 people (20.6%) who did not suffer from scabies and 27 people (79.4%) who suffered from scabies.

From the data analysis, a chi-square (χ^2) value of 7.558 and a ρ value of 0.023 were obtained, meaning that ρ value <0.05 and it can be concluded that H_0 is rejected and H_a is accepted, namely, there is a significant relationship between the personal hygiene behavior of bathing among students and the incidence of scabies at the Manhajul Ulum Islamic Boarding School in Ciamis Regency.

2. The relationship between personal hygiene behavior in sleeping habits and the incidence of scabies among students at the Manhajul Ulum Islamic Boarding School in Ciamis Regency

Table 8. Frequency Distribution of the Relationship between Personal Hygiene Behavior in Sleeping Habits and the Incidence of Scabies among Students at the Manhajul Ulum Islamic Boarding School in Ciamis Regency

Table 6. Frequency Distribution of scabies cases among students at the Manhajul Ulum Islamic Boarding School in Ciamis Regency

Occurrence of Scabies	Frequency	Percentage (%)
No Scabies	30	33,3
Scabies	60	66,7
Total	90	100%

Based on Table 6, it is known that the highest frequency of scabies cases among students at the Manhajul Ulum Islamic Boarding School in Ciamis Regency is suffering from scabies, with 60 people (66.7%).

b. Bivariate Analysis

1. The relationship between personal hygiene behavior, namely bathing, and the incidence of scabies among students at the Manhajul Ulum Islamic Boarding School in Ciamis Regency

Sleep Behavior	Occurrence of Scabies				Total	P value
	No Scabies		Scabies			
	F	%	F	%	F	%
Poor	7	19,4	29	80,6	36	40,0
Fair	9	31,0	20	69,0	29	32,2
Good	14	56,0	11	44,0	25	27,8
Total	30	33,3	60	66,7	90	100

Based on Table 8, it is known that the personal hygiene behavior and sleeping behavior of students at the Manhajul Ulum Islamic Boarding School in Ciamis Regency had the highest frequency in the poor category, namely 36 people (40.0%) out of 7 people (19.4%) who did not suffer from scabies and 29 people (80.6%) who suffered from scabies.

From the data analysis, a chi-square (χ^2) value of 8.974 and a p value of 0.011 were obtained, where p value <0.05 . It can be concluded that H_0 is rejected and H_a is accepted, namely, there is a significant relationship between the personal hygiene and sleeping behavior of students and the incidence of scabies at the Manhajul Ulum Islamic Boarding School in Ciamis Regency.

A. Univariate Analysis

Overview of personal hygiene behavior in bathing among students at the Manhajul Ulum Islamic Boarding School in Ciamis Regency

The results of the study show that the personal hygiene behavior in bathing among students at the Manhajul Ulum Islamic Boarding School in Ciamis Regency, involving 34 students (37.8%), falls into the category of poor personal hygiene behavior in bathing.

Based on the characteristics of the respondents, it was found that scabies was more prevalent among female students than male students, as female students paid less attention to hygiene, making them more susceptible to scabies.

The results of this study are in line with the opinion of Pratama & Septianawati (2017), who stated that female students are more likely to suffer from scabies. This is likely because female students pay less attention to their skin health compared to male students, who pay more attention to their skin health.

There are still some students who share towels with their roommates, making it easy for scabies to spread from one person to another. Towels that are used by students

in turn can become a medium for the transmission of sarcoptes scabiei mites, causing indirect transmission.

Poor towel hygiene causes scabies. This is in line with Mansyur's (2010) opinion that various items or towels that are not neatly arranged can make it easier for sarcoptes scabiei mites to move from the reservoir to surrounding items, thus reaching new hosts.

The habit of sharing towels and not drying them in the sun can increase the activity of sarcoptes scabiei mites on towels, making it easier for them to infect individuals with poor personal hygiene.

This is in line with Djuanda's (2006) research, which states that the cause of the ease with which scabies mites attach, multiply, and transmit to other students is damp towels that are rarely dried in the sun (Saputra et al., 2019).

Sharing towels that are damp and not dried in the sun can increase the activity of sarcoptes scabiei mites on towels, so that mites on the towels of students suffering from scabies can be transferred to healthy students.

Overview of personal hygiene and sleeping habits among students at the Manhajul

Ulum Islamic Boarding School in Ciamis Regency

The results of the study show that the personal hygiene and sleeping behavior of 36 students (40.0%) at the Manhajul Ulum Islamic Boarding School in Ciamis Regency was categorized as poor.

Based on the characteristics of the respondents, it was found that age also influences the incidence of scabies. Younger individuals are still dependent on their parents for self-care, so they are not yet able to take care of themselves properly and independently.

The results of this study are in line with Azizah's (2012) opinion, which states that this is because most 13-year-olds are still in junior high school, and the knowledge they have acquired is not as much as those who are 15 years old and above or who are already in senior high school.

Based on the results of this study, one of the factors that influence poor personal hygiene among students is their low knowledge about scabies. Their awareness of the importance of personal hygiene is also low due to their busy daily schedule of religious and school activities.

In fact, Islamic boarding schools have a daily cleaning schedule, which includes cleaning rooms and surrounding areas, but in reality, this schedule is not carried out on a daily basis, only on Sundays. The reason for this is the busy daily activities. If this continues, it will allow bacteria to grow rapidly due to the condition of the rooms, which are rarely cleaned.

Overcrowding is one of the causes of the high incidence of scabies, as the transmission of scabies and other infectious diseases is accelerated. Overcrowding affects the air quality in the rooms; the more occupants there are, the faster the air in the rooms becomes polluted. because CO₂ in the room will increase rapidly and reduce the O₂ level in the room. Housing density is closely related to the number of bacteria

that cause infectious diseases such as scabies.

In conditions where housing density does not meet the requirements, scabies bacteria can easily grow in the room because it is supported by a cramped room and the occupants are crowded together. The lack of cleanliness of the students' beds causes scabies to spread quickly because the dormitory beds are usually damp and the mattresses are rarely aired out and the sheets and pillowcases are rarely changed.

In addition to the students' bedding, the temperature and humidity of the students' bedrooms can also play a role in the breeding of sarcoptes scabiei mites. More humid and hot temperatures will cause mite activity to increase. High humidity measurements in student rooms will support the growth of sarcoptes scabiei mites outside their hosts.

At a temperature of 25°C with 100% humidity, sarcoptes scabiei mites can live longer outside their hosts (5 days). Meanwhile, decreasing humidity causes the survival rate of sarcoptes scabiei to also decrease.

This is in line with Djuanda (2006), who states that in addition to the students' bedding, the temperature and humidity conditions of the students' bedrooms can also play a role in the breeding of sarcoptes scabiei mites.

This causes mite activity to be higher at humid and hot temperatures. This is in line with research conducted by Sajida (2012), who stated that students assume that mattresses and bed sheets are still clean, so they do not dry them in the sun and wash bed sheets only once every two weeks, and are not good at maintaining bed hygiene.

B. Bivariate Analysis

The relationship between personal hygiene behavior, bathing behavior, and the incidence of scabies among students at the Manhajul Ulum Islamic Boarding School in Ciamis Regency

The results of the study indicate that the highest frequency of personal hygiene bathing behavior among students at the Manhajul Ulum Islamic Boarding School in Ciamis Regency was in the “poor” category, with 34 people (37.8%) out of 7 people (20.6%) who did not have scabies and 27 people (79.4%) who had scabies.

Data analysis yielded a chi-square (χ^2) value of 7.558 and a ρ value of 0.023, meaning that ρ value <0.05 . It can therefore be concluded that H_0 is rejected and H_a is accepted, namely that there is a significant relationship between the personal hygiene behavior of bathing among students and the incidence of scabies at the Manhajul Ulum Islamic Boarding School in Ciamis Regency.

Based on this study, it is known that the practice of exchanging towels will affect the incidence of scabies if the exchange occurs between people with scabies and those without scabies, so that towels can become a medium for the transmission of Sarcoptes scabiei mites. If towel sharing is done among students who do not have scabies and who practice good towel hygiene, scabies transmission will not occur.

The results of this study show that personal hygiene behavior, namely bathing, will affect whether or not students suffer from scabies. This is demonstrated by the large number of students who suffer from scabies due to poor personal hygiene behavior, as personal hygiene behavior is a risk factor for scabies.

The results of this study show that the highest prevalence of scabies affects women, with 50 cases (55.6%). This is because women pay less attention to personal hygiene than men, as they place more importance on personal cleanliness and therefore take better care of themselves.

The results of this study are in line with the opinion of Pratama (2017), who stated that there were more female students with scabies, namely 17 people. This is likely because female students pay less

attention to their skin health than male students, who pay more attention to their skin health.

This study is also in line with that conducted by Nuraini and Wijayanti at the Nurul Islam Islamic Boarding School in Jember in 2017, which showed a higher prevalence of scabies in women, namely 30 people (56.3%), compared to men, namely 26 people (46.4%).

Based on the analysis of questions 7, 8, and 9 in the questionnaire, it is known that one of the items that can transmit scabies through indirect contact is towels. The habit of borrowing and lending towels that are used alternately in a damp condition and not dried in the sun can increase the activity of Sarcoptes scabiei mites on towels, so that mites on the towels of students suffering from scabies can be transferred to healthy students.

Not all students have their own bathing equipment, so when students bathe using shared bathing equipment with fellow students, they take turns using towels because they are unaware that mites can survive on towels and transmit scabies.

This is in line with research conducted by Azizah (2013), which explains that poor towel hygiene causes a high incidence of scabies. Over a long period of time, these conditions can trigger the growth and transmission of scabies.

The high incidence of scabies is due to the poor hygiene of the towels they use. In addition, sharing towels, not drying them after use, and not washing them regularly are factors that affect the hygiene of towels.

Research conducted by Novi Nur Azizah (2013) at the Al-hamdulillah Islamic Boarding School in Rembang with a sample size of 60 people found that there is a relationship between bathing habits and the incidence of scabies ($p=0.000$) at the Al-hamdulillah Islamic Boarding School in Rembang.

Research conducted by Afriani (2017) at the Al-Falah IV Islamic Boarding School with 51 respondents found that there

is a relationship between bathing habits and the incidence of scabies with a p-value of 0.006 (< 0.05) at the Al-Falah IV Islamic Boarding School in Banding Agung District, South OKU Regency (Hamzah B & Akbar, 2020).

The relationship between personal hygiene behavior and sleeping behavior with the incidence of scabies among students at the Manhajul Ulum Islamic Boarding School in Ciamis Regency

The results of the study indicate that personal hygiene and sleeping behavior among students at the Manhajul Ulum Islamic Boarding School in Ciamis Regency showed the highest frequency in the “poor” category, with 36 people (40.0%) out of 7 people (19.4%) who did not suffer from scabies and 29 people (80.6%) who suffered from scabies.

The data analysis results obtained a chi-square (X^2) value of 8.974 and a ρ value of 0.011, so that ρ value < 0.05 and it can be concluded that H_0 is rejected and H_a is accepted, namely, there is a significant relationship between the personal hygiene behavior and sleeping behavior of students and the incidence of scabies at the Manhajul Ulum Islamic Boarding School in Ciamis Regency.

Based on the results of this study, the higher the level of education, the more knowledge they have, including health knowledge. Education in Islamic boarding schools has the same levels as general education, namely madrasah ibtidaiyah (elementary school), madrasah tsanawiyah (junior high school), and madrasah aliyah (senior high school). The educational material provided consists of general knowledge and religious knowledge, but with more emphasis on religious knowledge.

It is hoped that with increased education, knowledge about scabies will also increase, as highly educated students usually take the initiative to seek

information outside of formal education, for example from the internet.

Knowledge about scabies greatly influences the incidence of scabies because knowledge is a very important source for shaping a person's actions. Students lack understanding of the media that can transmit scabies.

This can influence the formation of students' daily actions that are risky for the transmission of scabies, such as the practice of exchanging prayer equipment and blankets due to students' ignorance that this can cause them to contract scabies.

This study is in line with Notoatmodjo's (2003) opinion that age affects a person's comprehension and mindset. As a person ages, their comprehension and mindset develop, so that the knowledge they acquire improves. In relation to the occurrence of scabies in a person, exposure experience plays a very important role because those who are older and have experience with scabies will certainly be more knowledgeable about prevention and transmission.

Based on this study, a large number of residents will cause overcrowding. This leads to unhealthy conditions because, in addition to the lack of oxygen consumption for each individual in that place, it can also result in a higher transmission of scabies between individuals.

High housing density and physical interaction or contact between individuals facilitate the transmission of scabies between individuals. Therefore, high prevalence of scabies is generally found in environments with high housing density and interpersonal contact, such as Islamic boarding schools.

The number of occupants in a room that exceeds the requirements and capacity will increase the room temperature due to the release of body heat and will also increase humidity due to water vapor from breathing and evaporation of body fluids from the skin. This causes the room to be uncomfortable.

The results of this study show that personal hygiene and sleeping habits affect whether or not students suffer from scabies. This is demonstrated by the large number of students who suffer from scabies due to poor personal hygiene and sleeping habits, which are risk factors for scabies.

In dry conditions, *sarcoptes scabiei* mites only survive for 2-3 days and hatch within 6 days, whereas in humid conditions, *sarcoptes scabiei* mites can survive for up to 6 weeks. Student rooms with unsatisfactory humidity provide an opportunity for mites to survive and multiply, thereby increasing the likelihood of scabies among students in those rooms. Thus, the poorer the humidity in a room, the greater the incidence of scabies.

Scabies is highly contagious because it is transmitted through direct contact, so direct contact with an infected person can lead to transmission. This is why scabies, with its high prevalence, is often found in Islamic boarding schools, given that the dormitories in these schools are inhabited by many individuals, increasing the opportunity for scabies transmission.

Based on the analysis of questions 8, 9, and 10 in the questionnaire, it is known that poor bed hygiene can lead to an increase in scabies cases. The poor hygiene of the students' beds may be due to their lack of cleaning and maintenance of their beds. For example, they rarely change their bed sheets and dry their mattresses. Boarding school students also often move to their friends' beds, making it easy for scabies to spread.

Based on this study, respondents were not good at maintaining the cleanliness of their beds and bed sheets because they assumed that their mattresses and bed sheets were still clean, so they did not dry and wash their bed sheets once every two weeks.

In addition, the respondents lacked knowledge that mattresses and bed sheets should be aired out once every two weeks.

The respondents' lack of knowledge was due to a lack of socialization from local health workers, which was caused by a shortage of health workers who were unable to reach all areas of their work, including the Manhajul Ulum Islamic Boarding School in Ciamis Regency.

These results are in line with Handayani's (2007) research, which shows that 62.9% of students with scabies have a habit of sleeping with friends who have scabies, and 60% have a habit of sharing blankets with friends who have scabies.

This is supported by Ma'rufi's (2007) research, which concluded that the behavior that triggers scabies is boarding school students sleeping together and huddling with friends in one room because they have a 21.3 times greater risk of contracting scabies compared to boarding school students who do not sleep together and huddle with friends in one room.

Research conducted by Handayani (2007) explains that poor bed hygiene causes a high incidence of scabies. Over a long period of time, this condition can trigger the growth and transmission of scabies.

Research conducted by Parman (2017) at the Al Baqiyatushaliyah Islamic Boarding School with a sample size of 63 people found that there is a relationship between bed and bed sheet hygiene and the incidence of scabies ($p=0.000$) at the Al Baqiyatushaliyah Islamic Boarding School.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the study entitled "The Relationship between Personal Hygiene Behavior, Bathing Behavior, and Sleeping Behavior with the Incidence of Scabies among Students at the Manhajul Ulum Islamic Boarding School in

Ciamis Regency," which has been discussed in the previous chapters, the following conclusions can be drawn:

1. The personal hygiene behavior of bathing among students was mostly in the poor category, with 34 people (37.8%).
2. The personal hygiene behavior of sleeping among students was mostly in the poor category, with 36 students (40.0%).
3. There is a significant relationship between personal hygiene behavior in bathing and the incidence of scabies among students at the Manhajul Ulum Islamic Boarding School in Ciamis Regency.
4. There is a significant relationship between personal hygiene behavior in sleeping and the incidence of scabies among students at the Manhajul Ulum Islamic Boarding School in Ciamis Regency.

Suggestion

1. For educational institutions: Educational institutions are expected to provide education in the form of counseling by appointing nursing students as educators and health resource persons for students regarding scabies.
2. For Islamic boarding schools: It is recommended that the management of Islamic boarding schools hold regular activities to clean the dormitory area in order to break the chain of scabies transmission.
3. In addition, health posts should maximize their cooperation with health workers to provide health information and health services for students.
4. For students: Students are expected to prevent the transmission of scabies by improving personal hygiene, not sharing items or objects with friends who have scabies, and avoiding direct contact, such as skin contact or

sleeping with friends who have scabies.

5. For future researchers: This study is expected to serve as a reference for further research on personal hygiene behavior, bathing behavior, and sleeping behavior in relation to scabies cases among students, using different research methods and designs.

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