Journal for Quality in Women's Health
DOI : https://doi.org/10.30994/jqwh.v7i1.242 https://jqwh.org/
ISSN: 2615-6660 (print); 2615-6644 (online) Vol.7 No 1. March 2024. Page. 37-43

Tersedia *online* di https://jqwh.org/index.php/JQWH

PERSONAL HYGIENE RELATIONSHIP AND ENVIRONMENTAL CLEANLINESS ON THE INCIDENCE OF SCABIES AT YAYASAN SUNAN KALIJAGA MALANG

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Received: March 5, 2024 ; Accepted: March 15, 2024; Published: March 25, 2024

ABSTRACT

Background : Scabies is an infectious disease caused by the parasite Sarcoptes scabiei which can dig tunnels in the skin and can cause itching. Scabies transmission can occur through direct contact or indirect contact. The purpose of this study was to determine the relationship between personal hygiene and environmental hygiene behavior towards the incidence of scabies in adolescents at the Yayasan Sunan Kalijaga Malang.
Method : The method used in this research is quantitative analytic observation with a cross sectional approach. Using the Simple Random Sampling technique, a sample of 70 respondents was obtained, the independent variable personal hygiene behavior and environmental hygiene used a questionnaire and the dependent variable the incidence of scabies used an observation sheet. Using the Chi-Square statistical test to determine the relationship between the two variables.
Result : The results of the study showed that most of the 70 respondents had sufficient personal hygiene, 33 respondents (45.7%), the majority had sufficient environmental hygiene, 44 respondents (62.9%), and the majority of respondents had no symptoms of scabies. as many as 49 respondents (70%).
Analysis : Statistical test analysis using Chi-Square showed p = 0.000 <0.05, so H_0 was rejected and H_1 was accepted, which means that there is a relationship between personal hygiene and environmental hygiene on the incidence of scabies at the Yayasan Sunan Kalijaga, Malang.
Conclution : Personal hygiene and environmental cleanliness must be implemented properly to reduce the risk of contracting a disease, if hygiene and environmental cleanliness are good, the level of health in the environment will also increase.

Keywords : Environmental Cleanliness, Personal Hygien, Scabies Disease Incidence

1. INTRODUCTION

Scabies is an infectious disease caused by the parasite Sarcoptes scabiei which can dig tunnels in the skin and can cause itching. Scabies transmission can occur through direct contact or indirect contact. Scabies can also be called scabies, the itch, sky-bees, gudik. Scabies is often considered a common disease that is not life-threatening so treatment is low. Based on its pathology, scabies is a chronic, serious disease and can cause dangerous complications if not treated immediately, namely secondary bacterial infections such as Streptococcus and Staphylococcusaureus species.

According to the World Health Organization (WHO) in 2010, scabies is a skin disease that is often found and often occurs, especially in developing countries. In the world, scabies can attack 130 million people at any time with incidence rates varying from 0.3% to 46%. Scabies often occurs in countries with tropical climates, high population density and low socio-economic conditions. Environmental health or environmental sanitation is an optimal environmental condition or condition, so that it has a positive influence on the realization of optimal health status.

The World Health Organization (WHO) stated that the incidence of scabies in 2014 was 130 million people worldwide. According to data from the Indonesian Ministry of Health (2013), there has been a decrease in the prevalence of scabies in Indonesia, namely by 3.9-6%. This can be seen from the 2008 prevalence data of 5.60%-12.96% and the 2009 prevalence of 4.9- 12, 95 %. Based on 2013 Riskesdas data, the prevalence of skin disease (Scabies) was 6.8%. The prevalence rate of scabies disease in Islamic boarding schools in the Greater Malang area of East Java Province is 61%, the highest rate occurs in Malang Regency, namely 48.6%, while the lowest rate is in Batu City at 12.4%. According to (Sutejo et al., 2017) the incidence of scabies in Islamic boarding schools in Malang is 89.9%. The incidence of scabies in Islamic boarding schools in Malang Raya is still quite high. Based on results from the Office of the Ministry of Religion for Malang City, Batu City and Malang Regency as well as monitoring in January-March 2014, it was found that 9 Islamic boarding schools had scabies incidence rates still above 50%. The fairly high prevalence of scabies is a condition that must be addressed immediately because educational goals (in Islamic boarding schools) will not be achieved properly if the students as students are in an unhealthy condition (sick with scabies).

Predisposing factors for scabies include personal hygiene, knowledge, behavior, environmental sanitation, socio-economics, culture, residential density, use of shared personal equipment (Sungkar, 2016). Personal hygiene is one of the factors that greatly influences the development and transmission of scabies, because poor personal hygiene can increase a person's risk of experiencing scabies compared to someone who maintains personal hygiene. There are several factors that influence the transmission of scabies, one of which is that living together, such as in Islamic boarding schools, carries the risk of being easily infected by sharing diseases, especially skin diseases. Transmission occurs if personal and environmental hygiene is not maintained properly. In fact, some Islamic boarding schools grow up in slum environments, dirty showers and toilets, lack of clean water, damp environments and poor sanitation. (Darmopoli, 2013).

Management of scabies is to improve personal and environmental hygiene, by not sharing personal equipment and changing bedding if it turns out to have been used by a scabies sufferer, avoiding direct contact with scabies sufferers, therapy cannot be carried out individually but must be carried out simultaneously and comprehensively. all groups of people around scabies sufferers, therapy is given with one of the topical drugs (scabicide), counseling and education requires a common understanding so that scabies eradication efforts can involve all parties. If the infection spreads among students in an Islamic boarding school, openness and cooperation from the Islamic boarding school management is needed.

Based on the description above, researchers are interested in examining the relationship between personal hygiene behavior and environmental cleanliness on the incidence of scabies in adolescents at the Sunan Kalijaga Foundation, Malang.

2. METHODS

The method used in this research is quantitative with Observational Analytics, namely a design used to find out how and why a phenomenon occurs through statistical correlation analysis (testing the relationship/influence) between cause and effect factors. This research uses a cross sectional approach, namely research carried out using a relatively short period of time and a certain place.

The independent variables in this research were personal hygiene behavior and environmental cleanliness, while the dependent variable was the incidence of scabies. To determine the relationship between independent and dependent variables using Chi-Square and Regression analysis.

3. RESULTS

Table 1 Distribution of Respondent Characteristics and Variables

Research result	Frequency	Percentage
Age		
11 years old	14	20 %
12 years old	20	28,6 %
13 years old	8	11,4 %
14 years old	11	15,7 %
15 years old	7	10 %
16 years old	10	14,3 %
History of Scabies		
There's a history	41	58,6 %
No history	29	41,4 %
Personal Hygiene		
Healthy	21	30%
Enough	32	45,7 %
Not enough	17	24,3 %
Environmental Hygiene		
Good	26	37,1 %
Enough	44	62,9 %
Not enough	0	0 %
Scabies Occurrence		
There are symptoms	21	30 %
No symptoms	49	70 %
Amount	**30**	**100%**

Table 2 Cross tabulation based on disease history and personal hygiene of teenagers at the Sunan Kalijaga Foundation, Malang

		History*personal hygiene			
		Personal Hygiene Criteria			Total
		Healthy	Enough	Not enough	
History	There's a history	7 10%	19 27.1%	15 21.5%	41 58.6%
	No history	14 20%	13 18.6%	2 2.9%	29 41.4%
	total off total %	21 30%	32 45.8%	17 24.2%	70 100%

Based on table 2 above, it is known that respondents have a history of illness scabies was found to have insufficient personal hygiene criteria, namely 15 respondents (21.5%), while respondents who had no history of scabies were found to have healthy personal hygiene criteria as many as 14 respondents (20%).

Table 3 Correlation coefficient (R) and coefficient of determination (R2) of personal hygiene on the incidence of scabies.

Model Summary[b]		
Model	R	R Square
1	.506[a]	.256

The R value or correlation coefficient is used to explain the close relationship between personal hygiene variables (X1) and the incidence of scabies (Y). In the output above, the R value is positive at 0.475, meaning that the correlation between the personal hygiene variables and the incidence of scabies is in the same direction as the correlation is strong. Next, the R square (R2) value or coefficient of

determination is used to predict how much influence the independent variable (X) has on the dependent variable (Y). The spss results above show an R Square of 0.226, meaning that the personal hygiene variable influences the incidence of scabies by 22.6% and the other 77.4% is influenced by other variables that are not in this study.

According to Nikmah, et al (2021) Personal hygiene behavior is an action to maintain a person's cleanliness and health for physical and psychological well-being. Many health problems a person suffers from not maintaining good personal hygiene, because personal hygiene is one of the factors for preventing skin diseases. Ways to maintain healthy skin include maintaining skin cleanliness, the habit of washing hands and nails, frequency of changing clothes, using towels at the same time and frequency of changing bed sheets (Prayogi, 2016). Personal hygiene in the adequate category means personal hygiene using bath soap (bar soap) alternately with friends, changing bed sheets more than 1 week, not drying pillows/mattresses once a week and using bed sheets together. According to researchers, maintaining personal hygiene is very important as an effort to prevent disease. Poor personal hygiene can make it easier for the body to get skin diseases. Bad habits such as using items simultaneously or alternately should be minimized or reduced to prevent the spread of skin diseases.

Table 4 Variable Characteristics Based on Environmental Cleanliness at the Sunan Kalijaga Malang Foundation

Category	Frequency	Percentage
Good	26	37,1 %
Enough	44	62,9 %
Not enough	0	0 %
Amount	70	100 %

Based on table 4 above, it is known that the environmental cleanliness of teenagers at the Sunan Kalijaga Foundation mostly has adequate personal hygiene, namely 44 respondents (62.9%).

Table 5 Cross tabulation based on disease history and environmental cleanliness of adolescents at the Sunan Kalijaga Foundation, Malang

history* environmental cleanliness					
		environmental cleanliness			Total
		good	enough	Not enough	
history	There's a history	12 17.2%	29 41.4%	0 0.00%	41 58.6 %
	No history	14 20%	15 21.4%	0 0%	29 41.40 %
	total off total %	26 37.2%	44 62.8%	0 0.00%	70 100%

Based on table 5 above, it is known that respondents who had a history of scabies received adequate environmental cleanliness criteria, namely 29 respondents (41.4%), while respondents who had no history of scabies received healthy environmental cleanliness criteria as many as 14 respondents (20%).

Table 6 Correlation coefficient (R) and coefficient of determination (R2) of environmental cleanliness on the incidence of scabies.

Model Summary		
Model	R	R Square
1	.393[a]	.155

The R value or correlation coefficient is used to explain the closeness of the relationship between the environmental cleanliness variable (X2) and the incidence of scabies (Y). In the output above, the R value is positive at 0.393, meaning that the correlation between the environmental cleanliness variables and the incidence of scabies is in the same direction as the correlation is strong. Next, the R square (R2) value or coefficient of determination is used to predict how much influence the independent variable (X) has on the dependent variable (Y). The spss output above shows an R Square of 0.155, meaning that the environmental cleanliness variable influences the incidence of scabies by 15.5% and the other 84.5% is influenced by other variables that are not in this study.

Factors that contribute to the high prevalence of scabies in developing countries are related to poverty which is associated with low levels of hygiene, difficult access to water, and residential density. High residential density and interaction or physical contact between individuals facilitate

the movement of scabies mites. Therefore, a high prevalence of scabies is generally found in environments with high population density and high interpersonal contact such as prisons, orphanages and Islamic boarding schools (Ratnasari, 2014).

Sufficient environmental cleanliness from the results of the research in question is environmental cleanliness whose implementation is still considered inappropriate or insufficiently improved, such as drying mattresses and sleeping equipment with frequency, sometimes even rarely, and often using mattresses or sleeping equipment interchangeably. In maintaining a clean environment, this could be an example of the transmission of skin diseases.

If we live in a clean environment, we will feel more comfortable living and avoid disease due to dirt and dust. Keeping the environment clean is very important. Keeping the environment clean is actually very easy, but sometimes the implementation is very lazy to do. If we do positive activities frequently, we will get used to always keeping the environment clean. If our parents teach us from an early age about the meaning of a healthy life, it will make us accustomed to keeping the environment clean. The smallest thing that can be done is to throw away the trash in its place. A clean and comfortable environment will make our hearts feel peaceful. By keeping the environment clean it will keep us away from various diseases. This is a good thing for respondents to do because students should keep their respective environments clean to prevent symptoms of scabies.

Table 7 Cross tabulation based on disease history and the incidence of juvenile scabies at the Sunan Kalijaga Foundation, Malang

history* incidence of juvenile scabies				
		incidence of juvenile scabies		Total
		symptom	No symptom	
history	There's a history	15 22.4%	26 37.2%	41 58.60 %
	No history	6 8.6%	23 32.8%	29 41.4%
total		21	49	70
off total %		30%	70.00%	100%

Based on table 7 above, it is known that respondents who had a history of scabies received the criterion of having symptoms of scabies, namely 15 respondents (22.4%), while respondents who had no history of scabies received the criterion of having symptoms of scabies, namely 6 respondents (8.6%).

This research is also in line with the results of research by Khotimah (2013) which found that the prevalence of scabies was 52% at the ABahroniyyah Ngemplak Demak Islamic boarding school. These results show that scabies incidents still often occur in Islamic boarding school environments, so that scabies disease is identical to the disease of boarding school children. The reason is because Islamic boarding schools are educational facilities with high residential densities, poor environmental hygiene conditions, poor personal hygiene, and room sizes that are not suitable for the number of students.

Table 8 Results of analysis using Chi-Square Relationship between Personal Hygiene and Environmental Cleanliness on the Incidence of Scabies at the Sunan Kalijaga Foundation, Malang

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	29,869[a]	2	,000
Likelihood Ratio	29,314	2	,000
Linear-by-Linear Association	15,589	1	,000
N of Valid ACases	70		

The results of research analysis on the relationship between personal hygiene and environmental cleanliness on the incidence of scabies at the Sunan Kalijaga Malang Foundation based on statistical tests using Chi-Square showed that p = 0.000 < 0.05, so H0 was rejected and H1 was accepted, which means there is a relationship between personal hygiene and environmental cleanliness on scabies incident at the Sunan Kalijaga Foundation in Malang.

4. DISCUSSION

Scabies is a skin disease caused by infestation and sensitization to Sarcoptes scabiei var hominis. Many factors support the development of this disease, including low socioeconomic status, poor hygiene, promiscuous sexual relations, misdiagnosis and dermographic and ecological developments. This disease is characterized by itching at night and can be transmitted to other people directly or through skin-to-skin contact or indirectly or through objects (Linuwih, 2018).

The typical clinical symptom of scabies is intense itching, especially at night when the skin temperature is warmer. Places that are usually targeted are between the fingers, wrist flexors, front and back armpit creases, around the breasts, center (umbilicus) and waist, lower abdomen, genitalia and pubis area, lower buttocks and buttock creases (Irianto, 2018).

The success of sufferers in preventing the transmission of scabies to other people is largely determined by compliance and regularity in maintaining personal hygiene. Therefore, during treatment and care, a good level of behavior is required from the sufferer. Prevention of scabies in humans can be done by avoiding direct contact with sufferers and preventing the use of the sufferer's belongings together. Clothes, towels and other items that the sufferer has used must be isolated and washed in hot water. Clothes and cloth items are recommended to be ironed before use, and the sufferer's bed sheets must be frequently replaced with new ones, a maximum of once every three days. Objects that cannot be washed with water (pillows, pillows, blankets) are recommended to be put in a plastic bag for seven days, then washed dry or dried in the sun while turning them over at least every twenty minutes.

Maintaining personal hygiene such as clean hair, clean nails and hands, clean skin, clean clothes, clean towels, clean beds, clean bathrooms and toilets and cleanliness of the environment around where you live can help improve health and avoid skin disease

5. CONCLUSION

Based on the results of research conducted at the Sunan Kalijaga Malang Foundation on 70 respondents regarding the relationship between personal hygiene and environmental cleanliness on the incidence of scabies, it can be concluded as follows: The personal hygiene habits of teenagers at the Sunan Kalijaga Foundation mostly have adequate personal hygiene, namely 33 respondents (45.7%), Environmental cleanliness for teenagers at the Sunan Kalijaga Foundation mostly has sufficient environmental cleanliness, namely 44 respondents (62.9%), and It is known that of the 70 respondents, the majority of respondents had no symptoms of scabies, namely 49 respondents (70%).

Based on statistical tests using Chi-Square, the result was $p = 0.000 < 0.05$, so H0 was rejected and H1 was accepted, which means there is a relationship between personal hygiene behavior and environmental cleanliness on the incidence of scabies at the Sunan Kalijaga Foundation, Malang. Based on the results of statistical regression tests for the two independent variables (personal hygiene behavior and environmental cleanliness), the variable that dominates the influence on the dependent variable (the incidence of scabies), namely personal hygiene behavior, is 22.6%.

6. ACKNOWLEDGMENTS

We would like to thank the Indonesian Ministry of Education and Culture and the Institute for Research and Yayasan Sunan Kalijaga Malang.

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