

Scabies Infection Control Analysis at Pondok Pesantren (Boarding School) Darussalam Banyuwangi District

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Abstract— *Scabies is one of the disease that is transmitted by direct contact or indirectly, which can strike at any age. Pondok Pesantren (boarding school) Darussalam has the highest number of students, consists of 4.305 students coming from all provinces in Indonesia. This research is to analyze the infection and control of scabies at Darussalam boarding school Banyuwangi District. This research is analytic observational research by cross sectional framework. Sample technique using is simple random sampling by the sample size of 109 respondents and with a degree of error of 10%. Direct observation implemented in association with control of scabies infection included personal hygiene (hand and nail hygiene, cleanliness cleanliness bedding) and humidity for environmental sanitation. Result of the research shows no correlation between hand and nail hygiene with scabies incidence in Darussalam Blokagung Village boarding school ($p=0,216$), the result shows correlation between cleanliness of the bed with scabies incidence in Darussalam Blokagung Village boarding school ($p=0,065$), the result shows differences between suffering from scabies and the absence of scabies ($p=0,062$), the result shows correlation between sex with scabies incidence in Darussalam Blokagung Village boarding school ($p=0,018$). The suggestion for Assyafak Health Post is not just implementing curative efforts, but also promotive and preventive efforts in accordance with the Permenkes RI No. 1, 2013.*

Keywords— *Scabies, Infection, Control.*

I. INTRODUCTION

Pondok Pesantren (boarding school) is one of the public places that became a means of transmitting the disease when hygiene and sanitation are not maintained properly. According to the Islamic statistical data analysis (2012), Pondok Pesantren (boarding school) which has the

highest number of students are located in West Java province, East Java province, Central Java province, and Banten, approximately 78.6% of the total boarding school in Indonesia.

Ministry of religious, Banyuwangi district, department Pondok Pesantren (boarding school-Kasi Pontren) data in 2015 showed that the total number Pondok Pesantren (boarding school) are 143. The number of male students and female students are 11. 359 and 11. 728, so the total is 23.087 students in Banyuwangi. The highest number of students are Pondok Pesantren (boarding school) Darussalam Dusun Blokagung with 4.899 students.

Pondok Pesantren (boarding school) Darussalam Blokagung is located in Dusun Blokagung Karangdoro village, Tegalsari subdistrict, Banyuwangi district, East Java province. The Pondok Pesantren (boarding school) is one of the boarding school whose the most students staying. The boarding school was established in 1951 and the founder is KH. Syafa'at Mukhtar Abdul Ghofur. Total students based on data from Ponpes Darussalam Dusun Blokagung 2015 approximately 4,631 students consisting of 1,970 male students, and of 2,264 female students, the number of kid-students are 52 children, and students of the village are 304 persons.

Fatmasari research results (2013) in terms of health, in general, stated that in general, traditional Pondok Pesantren (boarding school) still requires the attention of various parties involved, both in terms of access to health services, health behavior and health aspects of the environment. Pondok Pesantren (boarding school) assessed to be less attention to the health of students and the environment, (Rizki et al, 2012). Infectious diseases based on environment and behavior such as skin diseases are still a dominant public health problem in the traditional Pondok Pesantren (boarding school) (Wijayanti, 2007).

One of the diseases contained in Pondok Pesantren (boarding school) based on the results of research that has

been done is scabies. Data on the incidence of disease scabies in Pondok Pesantren (boarding school) Darussalam for four months can be seen in Table 1. below:

Table 1. Scabies incidence data in Pondok Pesantren (boarding school) Banyuwangi 2015

No	Month / Year	Scabies incidence
1	November 2014	47
2	December 2014	56
3	January 2015	25
4	February 2015	27

Source: Secondary Data of 2015

As we know scabies is one of the disease that is transmitted by direct contact or indirectly, which can strike at any age. Pondok Pesantren (boarding school) Darussalam is one of Pondok Pesantren (boarding school) located in Banyuwangi and have the highest number of students, consisted of 4,305 students who stay in Pondok Pesantren (boarding school) coming from all of the provinces in Indonesia.

II. MATERIAL METHODS

Type of the research is observational analytic and cross sectional framework, because the observation and measurement of research variables done at a time.

The study population was all MTs students who live in dormitories of Pondok Pesantren (boarding school) Darussalam and never went home with a total sample of 109 responden, obtained from the formula calculation of the sample size and sampling technique is simple random sampling.

The collection of primary data in the form of qualitative and quantitative data obtained by researchers, through the skin swab examination by trained analysts; indeph interview is used to determine the management of Pondok Pesantren (boarding school) Darussalam and to discover its role in controlling the infection of scabies. Pesantren organizers to be interviewed are the kyai as leader of the boarding school, ustadz who teaches about personal hygiene and environmental sanitation in accordance with the curriculum at the boarding school students and supervisors who oversees students who live in dormitories boarding school; direct observation in boarding school associated with scabies infection control is personal hygiene (cleanliness of the skin, hands and nail hygiene, cleanliness bedding, and clothing and towels alternately habits) and environmental sanitation (water supply, and population density); and direct measurement

to scabies infection control which is environmental sanitation (ventilation, lighting, temperature, and humidity).

III. RESULT AND DISCUSSION

Infection Control Analysis of research results Pesantren Darussalam Scabies On Banyuwangi are as follows:

3.1 Hand hygiene and Nails With Scabies incidence in Pondok Pesantren (boarding school) Darussalam Blokagung Village 2015

Table 2. Results of the Chi Square Hands Hygiene and Nails with scabies incidence in Pondok Pesantren (boarding school) Darussalam Blokagung Village 2015

Hand hygiene and Nails	Scabies		No Scabies		Totaly	%
	Totaly	%	Totaly	%		
Qualify	22	20,2	39	35,8	61	56,0
Not Qualify	12	11,0	36	33,0	48	44,0
Totaly	34	31,2	75	68,8	109	100
$p = 0,216$						

Source: Primary Data of 2015

Table 2. of the chi square test result shows that there is no relation between hand hygiene and nail with the incidence of scabies in Pondok Pesantren (boarding school) Darussalam Blokagung village p value = 0.216 ($\alpha = 0.1$). It can be seen from the results of the interview using a questionnaire and skin swabs showed that the number of students who qualify and suffered from scabies were 19.3%, and 35.8% of them did not suffer from scabies. As for the ineligible and suffered from scabies were 11.0% of students and those that did not suffer from scabies were 33.0% of students.

Results showed no significant caused by students after making contact, for example after completion of cleaning the bathroom (67.9%), washing hands with soap after BAB / BAK (61.5%).

Cleaning the nail in the bath (53.2%) and cut the nails once a week (74.3%). At the time of interview and observation, the students nails looked clean and short. Results of this study was not consistent with Hapsari study (2014) showed that there is a relationship between hand hygiene and nail with the incidence of scabies, value $p = 0.042$ and OR = 3,400.

3.2 Cleanliness Bedding With the Incidence of Scabies in Pondok Pesantren (Boarding School) Darussalam Blokagung Village 2015

Table 3. Results of the Chi Square Cleanliness Bedding With the Incidence of Scabies in Pondok Pesantren (Boarding School) Darussalam Blokagung Village 2015

Cleanliness Bedding	Sick Skabies		Not sick Skabies		Totally	%
	Totally	%	Totally	%		
Qualify	21	19,3	32	29,4	53	48,6
Not Qualify	13	11,9	43	39,4	56	51,4
Totally	34	31,2	75	68,8	109	100
p = 0,065						

Source: Primary Data of 2015

Table 3. of the results of the test chi square test shows that there is a correlation/ relationship between cleanliness bedding with scabies incidence in Pondok Pesantren (Boarding School) Darussalam Blokagung Village p value = 0.065 ($\alpha = 0.1$). These results can be seen from the interview and examination of the skin swab showed that the number of qualified students suffer from scabies were 19.3% and students who did not suffer from scabies were 29.4%. As for the number of students who did not qualify and suffer from scabies were 11.9% and that did not suffer from scabies were 39.4%.

Observations on students at the time of sleeping, they did not use the bed and mattress. At the time of their sleep, they used a blanket and prayer mat as bedding. Blanket and prayer mat used as bedding is not dried in the sunlight (89.0%) and was used interchangeably with other students (47.7%).

The bedding sometimes washed, even some them have never been washed. The use of bedding alternately or together cause *Sarcoptes scabiei* mites easily move from mats to the body of the students.

According to Mansour (2007) transmission of scabies indirectly caused by bedding, and according to Musleh research results (2012), a higher incidence of scabies occur in respondents who are not sunning mattress in the sunlight (54.5%) and shows the relationship between the mattress sunning at least once two weeks with the incidence of scabies. This study is in line with Frenki research results (2011) that stated the cleanliness of the bed and bed covering significantly related to the incidence of scabies, with the value $\rho = 0.000$ ($\rho < 0.05$).

3.3 Differences Between Students’s Chamber Humidity of Students suffered from Scabies and students who did not suffer from Scabies In Pondok Pesantren (Boading School) Darussalam Blokagung Village 2015

Table 4. Analysis of Students’s Chamber Humidity of Students suffered from Scabies and students who did not suffer from Scabies In Pondok Pesantren (Boading School) Darussalam Blokagung Village 2015

Mean	Scabies Disease	
Humadity	Scabies	No Scabies
	64,891	72,316
p = 0,062		

Source: Primary Data of 2015

Table 4. shows that the differences test results of the student’s room humidity between Students suffered from Scabies and students who did not suffer from Scabies shows no difference, p value = 0.062 ($\alpha = 0.1$). According to the Minister of Health Regulation No. 829 of 1999 on the health requirements of housing stated that air quality in the house does not exceed the following conditions: a comfortable air temperature ranged between 18 ° C to 30 ° C, air humidity ranging from 40% to 70%. The results showed that the differences test results of student’s room humidity between Students suffered from Scabies and students who did not suffer from Scabies shows no difference, p value = 0.062 ($\alpha = 0.1$). With a qualified humidity *Sarcoptes scabiei* can not proliferate.

3.4 Correlation between Sex With the incidence of Scabies On Pondok Pesantren (Boarding School) Darussalam Blokagung Village 2015

Table 5. Results of the Chi Square Sex With the incidence of Scabies On Pondok Pesantren (Boarding School) Darussalam Blokagung Village 2015

Sex	Scabies		No Scabies		Totally	%
	Totally	%	Totally	%		
Men	16	14,7	53	48,6	69	63,3
Women	18	16,5	22	20,2	40	36,7
Totally	34	31,2	75	68,8	109	100
p = 0,018						

Source: Primary Data of 2015

Table 5. of the chi square test result shows that there is a correlation/relationship between the sexes with the incidence of scabies in Pondok Pesantren (boarding school) Darussalam Blokagung Village p = 0.018 ($\alpha = 0.1$).

Skin swab results to students at the Pondok Pesantren (boarding school) Darussalam Blokagung village on the incidence of scabies, shows that there were 16 male students who suffered from scabies (14.7%) and those

who were not suffer from scabies 53 persons (46.6%). While female students who suffered from scabies were 18 persons (16.5%) and those who were not suffer from scabies were 22 persons (68.8%). Questionnaire interviews shows there were some students who take turns clothes, towels and praying equipments as well as moving from one room to another rooms.

IV. CONCLUSION

According to the research that has been done, there are conclusion as follows:

1. There is no correlation/relationship between hand hygiene and nail with the incidence of scabies in Pondok Pesantren (Boarding School) Darussalam Blokagung Village
2. There is correlation/relationship between the cleanliness of the bedding with the incidence of scabies in Pondok Pesantren (Boarding School) Darussalam Blokagung Village
3. There is a difference between The humidity of the student's room between the students suffered from Scabies and the students who did not suffer from Scabies Pondok Pesantren (Boarding School) Darussalam Blokagung Village
4. There is a correlation/relationship between the sexes with the incidence of scabies in Pondok Pesantren (Boarding School) Darussalam Blokagung Village.

V. SUGGESTION

1. Pondok Pesantren (Boarding School) Darussalam:
 - a. Pondok Pesantren (Boarding School) managemnet: create a curriculum about prevention of infectious diseases, especially scabies infection.
 - b. Assyfaq Health posts: the post shall not just implementing curative efforts, but also promotive and preventive efforts in accordance with the Permenkes RI No. 1, 2013.
 - c. Students: the students must obey the rules at Pondok Pesantren (Boarding School) Darussalam Blokagung Village to prevent the scabies infection
2. The Ministry of Religious Affairs of Banyuwangi district, particularly department of Pondok Pesantren (boarding school-Kasi Pontren) improve monitoring of the boarding school regularly.
3. Health Office of Banyuwangi must increase promotion and prevention of scabies infections towards the students at the Pondok Pesantren (Boarding School) to prevent the scabies infection among the students.

REFERENCES

- [1] Kementerian Agama Kabupaten Banyuwangi Bagian Seksi Pondok Pesantren (Kasi. Pontren) tahun 2015.
- [2] Keputusan Menteri Kesehatan RI. No. 829. 1999. Tentang Persyaratan Rumah Sehat..
- [3] Fatmasari A., Supriyono A. dan Eko H., (2013) Hubungan Antara Hygiene Perorangan Dengan Kejadian Scabies Di Pondok Pesantren Roudlotul Muttaqin Mijen Semarang, Karya Ilmiah. Universitas Dian Sastro Semarang. Program Studi Kesehatan Masyarakat. Email : safety.holic@gmail.com.
- [4] Rizki A, Evi N, Irnawati M., (2012) Analisis Fisik, Biologis Dan Kimia Terbatas Pada Air Sungai Singolot Dan Air Bersih Yang Digunakan Oleh Para Santri Serta Keluhan Kesehatan Kulit Pada Pondok Pesantren Purba Baru Kabupaten Mandailing Natal, skripsi. Universitas Sumatera Utara.
- [5] Wijayanti, K., (2007) Peran Pos Kesehatan Pesantren Dalam Meningkatkan Kesehatan Reproduksi Remaja. Buletin penelitian sistem Kesehatan. Surabaya.
- [6] Hapsari N. I. W., (2014) Hubungan Karakteristik, Faktor Lingkungan dan Perilaku dengan Kejadian Scabies di Pondok Pesantren Darul Amanah Desa Kabunan Kecamatan Sukorejo Kabupaten Kendal, skripsi. Fakultas Kesehatan, Universitas Dian Nuswantoro Semarang.