

The Correlation Between Personal Hygiene, Densely Populated Area, and Ventilation with the Occurrence of Scabies Symptom at Darul Hikmah Islamic Boarding School, Cisauk in 2020

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ABSTRACT. Scabies disease is strongly affected by the clean and healthy behavior, especially the personal hygiene and bad sanitation can improve scabies infection. The maintenance of personal hygiene strongly determines the status of health, in which individual consciously and on their own initiative keep their health and prevent the occurrence of a disease. The highest incident on teenagers and children. Scabies is often referred to Islamic boarding school students' disease because they often exchange their stuff, borrow their clothes each other, towel, sarong, bolster and mattress, so that the factor of the disease get easily infected from one santri to another santri (Islamic boarding school student). The purpose of this research was to find out the occurrence of scabies at Darul Hikmah Islamic Boarding School, Cisauk. The type of this research used analytic research with cross-sectional design because in this research, variable independent and dependent were observed at the same time or period. Data collected by using questionnaires and observation sheet. The number of samples was 33 respondents. Data processing was done by using chi-square test analysis (continuity correction) on confidence level of 95% ($\alpha = 0,05$). Of the result of the research was found personal hygiene with scabies symptom at Darul Hikmah Islamic Boarding School, Cisauk (p-value 0,020), the densely-occupied house with scabies symptom at Darul Hikmah Islamic Boarding School, Cisauk (p-835) and ventilation with scabies symptom at Darul Hikmah Islamic Boarding School, Cisauk in 2020. Of this result of the research, it is expected that the santri are able to improve the cleanliness of their own and remain keeping the comfort of environment in order to make the environment clean and healthy..

Keywords: Personal Hygiene, Densely Populated Area, Scabies Symptom.

1. INTRODUCTION

Health is a human right and health is also a long-term investment. Upgrading the health is individuals' responsibility. The preservation of personal hygiene strongly determines the status of health, in which individual consciously and on their own initiative keep their health and prevent the occurrence of a disease [1]. One of the efforts of personal hygiene is to treat skin that functions to protect the body surface, maintain body temperature and excrete the certain excreta. Remembering that the skin plays important role as protector or keeps body parts, so the skin health is important to be maintained. The skin disease can be caused by fungi, virus, bacterial, and parasite. One of the skin diseases caused by parasite is scabies [1]. According to WHO there were 300 million cases of scabies in the world every year. Scabies belong to skin disease which endemic in tropical and subtropical climate region such as Africa, Egypt, USA, South America, North Australia, central Australia, Caribbean Island, India, South-East Asia. The occurrence of scabies symptoms in 2015 also had high prevalence in some countries such as Egypt was found (4,4%), Nigeria (10,5%), Mali (4%), Malawi

(0,7%), and Kenya (8,3%). The highest incident happened to children and teenagers [2]

In 2014 according to Alliance for the Control of Scabies, the occurrence of scabies symptom varied from 0,3% to 46%. Scabies were found in all countries with various prevalence. In some developing countries, scabies around 6% to 27% of general population, attacked all races and group of age and decline to high on children and teenagers [3]. Scabies prevalence in Indonesia according to data of Health Ministry, the scabies prevalence in Indonesia has been quite declined from year to year, it was seen from prevalence data in 2008 as many as (5,60%-12,96) in 2009 with prevalence as many as (4,9% to 12,95%) and the latest data, it was recorded in 2013 that scabies prevalence in Indonesia that was (3,9% - 6%). Even though there was decline, it has not been over for Indonesia free of scabies disease and remained becoming one of contagious disease in Indonesia [3]. Scabies in Indonesia placed the 12th ranking of disease that always occurred. [4].

The factor that played on the height of scabies prevalence in developing countries concerning with the poverty associated with the lowness of cleanliness level, water access is not reached and the density of

the area. The high of density of area and interaction or physical contact among individuals ease transmission and tungau infestation of scabies, therefore, the high scabies prevalence was generally found in environment with the densely-occupied house and interpersonal contact such as prison, orphanage, and Islamic boarding school [5]. Scabies prevalence in Indonesia as many as 4,6% - 12,95% and is the third rank of 12 skin diseases the most frequently happened in society, especially in in densely-occupied house such as children education park, prison, barrack, flat, and Islamic boarding school [6].

Santri of Islamic boarding school is the important subject in scabies problem. The cause is the mutual home with a group of people which is one of the factors of risk of contagion of a wide range of diseases especially skin disease. Besides, the clean and health behavior especially the cleanliness of individual gets less attention from the santri. There are Islamic boarding schools that were built in slum area, dirty bathroom and water closet, humid environment and bad sanitation, moreover the unhealthy behavior such as hanging the underwear inside the room, prohibition for female santri to dry their cloths in the sunlight and exchange private items, such as comb and towel [2].

In Tangerang regency there are about 1000 licensed Islamic boarding school and 800 unlicensed Islamic boarding school. One of the Islamic boarding schools which is located in Tangerang regency is Darul Hikmah Islamic boarding school, Cisauk. According to one of the room officers at Darul Hikmah Islamic boarding school, talking about scabies disease becomes a problem that the santri have especially on female santri of Darul Hikmah Islamic boarding school. This disease makes the santri anxious so that it disturbs their activities. If one of the santri has scabies so she can infect the disease to other santri so that the number of the sufferers more and more increased from time to time. Darul Hikmah Islamic boarding school Cisauk becomes the place of the research to conduct the research because previously there were no researchers who conducted the research and there were many santri who complain the scabies disease.

The research of the research showed that females tended to be vulnerably infected scabies with prevalence 62,5% compared to men, that was with prevalence 37,5 [6]. Based on the background above, the researcher was interested in conducting the research about "how is the correlation between personal hygiene, densely-occupied house and ventilation with the occurrence of scabies symptom at Harul Hikmah Islamic boarding school, Cisauk 2020?" The purpose of this research was to find out the occurrence of scabies symptoms at Darul Hikmah Islamic boarding school, Cisauk in 2020

2. LITERATURE REVIEW

Scabies disease is a skin disease caused by infestation and sensitization *Sarcotes scabies* varieties *hominis*. Life cycle from ovum becomes adult lasts one month. Incubation time for two months until six weeks on the previous person who has not infected. Scabies is a infestation human skin caused by parasite of obligate penetration that is *S. scabies* var *hominis* to epidermis/ *Sarcoptes scabies* makes tunnel on lower corneum statum and release substance that has effect to keratinosit cell and fibroblast that initiate body reaction. Scabises lesi such as eruption of small papula that become inflamed especially there is around aksila. Umbilicus, and thigh [5].

The impact that is emerged cause of scabies because personal hygiene problem are, the firstly is physical impact, that is physical disorder that occurs because of disorder of health suffered by someone because there is maintenance of someone's cleanliness well. Irritation that often happens to skin integrity irritation, membrane mucosa irritation of mouth, infection on eyes and physical disorder on finger nail.

Secondly, psychological impact, they are social concerns related to personal hygiene such as discomfort disorder, social interaction and self-actualization, thirdly, scabies causes sign of reddish on skin and it will also be found in fingers, leg, neck, shoulder, under armpit, even genital area [5].

The factors that causes scabies is relation between socio-demographical factor with environment. Scabies can be affected by several risk factors such as the low economic level, bad hygienesity, densely-occupied house, and ventilation. Factors that play most with the occurrence of scabies symptom they are personal hygiene, densely-occupied house and ventilation

2.1 Personal Hygiene

Someone's personal hygiene determines the health status consciously in keeping their health and prevent the occurrence of disease especially irritation on skin. Personal hygiene factor strongly effects scabies disease. The higher the personal hygiene level of someone's, the smaller the factor of getting infected scabies, as Widuri, Candrawati and Musluhiya AF (2017) said that santri who do not keep their personal hygiene have great risk as many as 6,9 times get infected of scabies [7].

2.2 The densely-occupied house

The densely-occupied house has strong relation to the occurrence of scabies symptom. This can be explained that the most densely-occupied house will cause the direct contact of among occupant is very great. If a room there is scabies sufferer, the possibility of getting infected is great because the

direct contact of among occupant is very great [3]. The densely-occupied house becomes one of the causes of the height of the occurrence of scabies disease, scabies contagion or other contagious diseases faster because the densely-occupied house can effect the quality of air inside the house, where the more occupants, the faster the air inside get polluted, therefore, the carbohydrate inside the house will increase and degrade the content of oxygen in the room, the densely-occupied house is strongly related to the number of bacterial of causes of contagious disease.

The santri who are in the dense board surrounding, the location of bathroom with no distance has the greater risk to get infected with scabies in the densely-occupied room. Referring to the Ministerial Health decree of Republic of Indonesia numb. 829/Menkes/SK/VII/1999 that states that the density of house/room is 8 meters and unsuggested to be used more than 2 people sleeping in one bedroom except under 5-year children.

This becomes the cause the height of the occurrence of scabies symptom, scabies infection or other infected diseases can be infected faster because the densely-occupied house can effect the quality of air inside, where the more occupants, the faster the air inside get polluted and the densely-occupied house is strongly related to the number of bacteria of contagious disease [8].

2.3 Ventilation

Room ventilation is a wind hole that is connected with outer air, functions as air cycle inside the room (neither window nor door). Ventilation hole is counted based on percentage of width of floor. Based on the stipulation of health condition, the good ventilation is between 7-15% of width of floor. (SNI 036572-2001). Based on the ministerial health regulation Numb. 1077, 2011, minimum of ventilation is 10% of width of floor [3].

3. RESEARCH METHOD

This research used analytic research. On analytic research, the researcher try to find out how and why this phenomenon happens, furthermore making analysis of dynamic of correlation between factor that effects the occurrence with effect factor with research design cross sectional that the research that is the research for studying correlation between factor that impact with effect by observation or data collecting all at once at the same time with univariate analysis and bivariate. This research has purpose to find out the correlation between personal hygiene,

densely-occupied house and ventilation with the occurrence of scabies symptom at Darul Hikmah Islamic boarding school, Cisauk in 2020. Population in this research are female santri at Darul Hikmah Islamic boarding school, Cisauk numbered 202 female santri. In this research, the researcher used purposive sampling method which is one of non-probability technique meaning it does not give the same chance to every member of population to be a sample of research. While a specific characteristics is made by the researcher so that the sample he took will meet the criteria supporting according to the research.

The formula to count the sample from population is found its number by using Isac and Michael's formula.

$$s = \frac{x^2 \cdot N \cdot P \cdot Q}{d^2 \cdot (N - 1) + x^2 \cdot PQ}$$

Explanation:

S : number of sample

χ^2 : Chi Kuadrat that the value depends on the freedom and mistake level

For freedom degree 1 and freedom 5% value of Chi kuadrat = 3,841

N : Number of population

P : correct chance (0,5)

d : 0,05

Q : incorrect chance (0.5)

d : 0,05

The bigness of number of sample in this research is determined by formula above that is by Isac and Michael's formula as follows = 132,67 is rounded off 133

Based on the calculation above, the number of samples taken in this research was 133 female santri who are on the first and the second grade of Junior high school and the first and the second grade of Senior high school.

4. RESULT AND DISCUSSION

4.1 Univariate Analysis

Univariate analysis was done to get the description of the variables the money researched. In this univariate analysis is showed distribution of frequency of each variable., both independent and dependent variables. The result of the univariate analysis as follows:

4.1.1 Characteristic of respondent

1) Age of respondents

Based on the result of the research was done to 133 respondents conducted at Darul Hikmah Islamic boarding school , Cisauk on female santri, found the result based on the age of the respondents as follows:

TABLE 1. Distribution of frequency of respondents based on the age.

No	age	Frequency	Percentage (%)
1	12	7	5,3%
2	13	41	30,8%
3	14	22	16,5%
4	15	15	11,3%
5	16	34	25,6%
6	17	13	9,8%
7	18	1	0,8%
Total		133	100%

Source : primary data, 2020

Based on table 1, was found that the most is the group age of 13 years old as many as 41 people (30,8%) and the fewest is the age group of 18 years old as many as 1 person (0,8%).

2) Class of respondents

Based on the research of research done to 133 respondents conducted at Darul Hikmah Islamic Boarding School on female santri, was the result based on class of respondents as follows

TABLE 2. Distribution of frequency of respondents

No	Group of Class	Frequency	Percentage (%)
1	1 SMP	38	28,6%
2	2 SMP	35	26,3%
3	1 SMA	27	20,3%
4	2 SMA	33	24,8%
Total		133	100%

Source : primary data, 2020

Based on table 2, found that the most is group of the first grade of Junior High School as many as 38 people (28,6%) and the fewest is the first grade of Senior High School as many as 27 people (20,3%).

4.1.2 Personal hygiene

Based on the result of the result done to 133 respondents conducted at Darul Hikmah Islamic Boarding School on female santri, was found the result based on class of respondents as follows

TABLE 3. Distribution of frequency based on personal hygiene

No	Personal Hygiene	Frequency	Percentage (%)
1	Bad Hygiene	64	48,1%
2	Good Hygiene	69	51,9%
Total		133	100%

Source : primary data, 2020

Based on table 3, showed that of 133 respondents. The respondent who have bad hygiene as many as 64 people (48%), while the respondents who have good hygiene as many as 69 people (51,9%)

4.1.3 Densely-occupied house

TABLE 4. Distribution of frequency of respondent based on densely-occupied house

No	Densely-occupied	Frekuensi	Presentase (%)
1	Requirement-fulfilling house	93	69,9%
2	Requirement-unfulfilling house	40	30,1%
Total		133	100%

Source : primary data, 2020

Based on table 4 showed that of 133 respondents who stay in unconditioned requirement-fulfilling house category as many as 93 people (69,9%), while requirement-fulfilling house as many as 40 people (30,1%).

4.1.4 Ventilation

Based on the result of the research done to 133 respondents conducted at Darul Hikmah Islamic boarding school, Cisauk on female santri, was found the result based on class of respondents as follows

TABLE 5. Distribution of frequency of respondents based on Ventilation

No	Ventilasi	Frekuensi	Presentase (%)
1	Requirement-fulfilling house	73	54,9%
2	Requirement-unfulfilling house	60	45,1%
	Total	133	100%

Source : primary data, 2020

Based on table 5, showed that of 33 respondents, ventilation with requirement-fulfilling house category as many as 73 people (54,9%), while ventilation with conditional as many as 60 people (45,1%).

4.1.5 Occurrence of scabies symptom

Based on the result of the research done to 133 respondents conducted at Darul Hikmah Islamic boarding school, Cisauk on female santri, found the result based on occurrence of scabies symptom of respondents as follows;

TABLE 6. Distribution of frequency of respondents based on occurrence of scabies symptom

No	Scabies	Frekuensi	Presentase (%)
1	Non scabies symptoms	23	17,3%
2	Scabies symptoms	110	82,7%
	Total	133	100%

Source : primary data, 2020

Based on table 6, showed that of 133 respondents with scabies symptom category numbered 110 people (82,7%), while non-scabies symptom category numbered 23 people (17,3%). The result of data collecting of occurrence of scabies symptom with 133 female santri at Darul Hikmah Islamic boarding school, cisauk by using questionnaire, found the result that of 133 female santri with scabies numbered 110 people (82,7%), while female santri with no scabies numbered 23 people (17,3%).

Scabies is a contagious disease caused by tungau Sarcoptes, scabies Varias Hominis. This disease is related to individual's hygiene and density of house/room, therefore, scabies often outbreaks in one boarding school. This condition causes the santri feel uncomfortable.

The result of analysis showed that occurrence of scabies symptoms at Darul Hikmah Islamic boarding school, Cisauk quite high on female santri. The santri have bad habit so that the occurrence of Scabies symptom become higher. One of the habits is to exchange cloth among them and do not take a shower after doing activities. Based on the result of interview with the head of team of cleaning service of female santri at Darul Hikmah, Cisauk, gets information that the santri's clothes, which fell down from the wash pole, or santri's clothes in the boarding were not admitted by the owners will be collected and will be held reauction to be sold to other santri with cheaper price and there were no routine schedule for spread clothline. There are still many santri who ignore cleanliness both their own cleanliness of boarding surrounding. This causes the number of scabies symptom at Darul Hikmah Islamic boardung school is very high.

This research in line with the research of Siti Riptifah, Tri Handari, and Mushidah Yamin (2017), found that santri with scabies at An-nur Islamic boarding school, Ciseeng, Bogor regency, this research found that santri with scabies as many as 49 (65,3%) and santri with no scabies as many as 26 (34,7) and the research conducted by Rofifah, the sabies occurrence at Al Ikhsan Islamic boarding school, Beji, Banteng district, Banyumas Regency in 2018.

Of 93 people (100%) who became respondents, there were 56 people (60,2%) positively suffered from scabies and there were 37 people negatively suffered from scabies. Santri with scabies spread in all rooms in the boarding [9].

This research is supported by the research conducted by Tarigan [10], found the result that frequency of occurrence of scabies symptom occurred with santri of Motholiul Huda Al Kautsar Islamic boarding school. Pati regency. Santri with scabies as many as 39 (84,8%) and santri with no scabies as many as 7 (15,2%). This was caused by the santri's bad cleanliness practice; some other things exchange towel in which the santri get easily infected of scabies. Even though scabies does not cause death, but this disease make trouble for the santri. The habit like towel using together, direct contact with santri with scabies happened every time so that scabies occurred at Islamic boarding school., therefore it is necessary for specific control to santri to prevent the occurrence of scabies get increased.

4.2 Bivariate Analysis

In bivariate analysis was done to find out some variable of personal hygiene, density of house/room and ventilation related to the occurrence of scabies symptom.

4.2.1 The correlation between personal hygiene with occurrence of scabies symptom at Darul

Hikmah Islamic boarding school, Cisauk.

TABLE 7. The correlation between personal hygiene with occurrence of scabies symptom at Darul Hikmah Islamic boarding school, Cisauk.

No	Personal Hygiene	Skabies				Total	P- Value	
		Tidak Skabies		Skabies				
		N	%	N	%	n	%	
1	Bad Hygiene	10	15,6	54	84,5	64	100	0,020
2	Good Hygiene	24	34,8	45	65,2	69	100	
Total		34	25,6	99	74,4	133	10	

Source : primary data 2020

Based on table 7 that of 64 female santri who had bad hygiene a many as 10 (15,6%), female santri with no scabies and 54 (84,5%) female santri with scabies. And of 69 female santri with no scabies with good hygiene as many as 24 (34,8%) female santri with no scabies and 45 (65,2%) with scabies.

The result of statistical analysis used Continuity Correction test was p-value = 0,020 because value P & It; 0,05 so that it can be concluded there is correlation between personal hygiene with occurrence of Scabies symptom at Darul Hikmah Islamic boarding school, Cisauk.

The result of the research can be concluded that not all santri have scabies symptom or get scabies even though density of house/ requirement-unfulfilling house. This can happen because some other factors influence each other, one of them is personal hygiene.

Personal hygiene in this research covers an action of santri especially female santri in keeping and maintaining their own cleanliness and health, from clean clothes, clean skin, clean hand and finger nail, clean genitalia, clean towel and clean bed and bedspread, WHO explained that scabies is a contagious disease especially through direct contact with skin. Someone is told hygiene if he can keep his cleanliness of his body covering skin, finger nail, hair, mouth, and teeth, clothes, eyes, nose, ear, genital, and towel and base of bed.

This research in line with the research conducted by Hayyu Afiena titled the correlation between personal hygiene and sanitation with occurrence of scabies at Ma'rifatul Ulum Islamic boarding school, Bringin Ngawi [11]. The result of the research was said that there was correlation between personal hygiene with the occurrence of scabies at Ma'rifatul Ulum Islamic boarding school, Bringin Ngawi

regency, because it was obtained based on Chi-square test that has been done correction (continuity correction) with p-value 0,001 & gt; ($\alpha = 0,05$).

The result of the research conducted by Sekar that conclude that there was correlation of level of knowledge and practice on personal hygiene with the occurrence of scabies symptom on santri at Roudhotul Qur'an Islamic boarding school, Banyumas. Someone's bad cleanliness behavior strongly influences someone to have scabies, conversely on someone's good cleanliness behavior so that tungau will get difficult to infect individual because tungau can be extinguished by taking a shower with soap, diligent to do laundry and clean base of bed [12].

This is not in line with the research conducted by Desmawati and Dewi titled the correlation between personal hygiene and sanitation with the occurrence of scabies symptom at Al-Kautsar Islamic boarding school, Pekanbaru. Based on the statistical chi-square test was found that p-value = 0,781 & gt; (0,05), it means that Ho fail, unaccepted so that it can concluded that there is no correlation between personal hygiene with the occurrence of scabies symptom [13].

The result of analysis that personal hygiene is one of the efforts that can prevent scabies. Based on the result of analysis conducted at Darul Hikmah Islamic boarding school, Cisauk get the result that the lack of good personal hygiene on santri, this is caused by some santri who did not keep their own cleanliness such as cloth exchanging, did not take a shower after taking exercise or doing other activities that excrete much sweat, and ordering mattress that are piled up so that this can make growth and as a source of infection of scabies disease.

The female santri of Darul Hikmah Islamic boarding school, Cisauk should keep personal

hygiene because hygiene or cleanliness is efforts to preserve healthy life covering cloth cleanliness, skin cleanliness, hand and finger nail cleanliness, genitalia cleanliness, towel cleanliness, bed cleanliness and bedsheet. Doing habits such as exchanging cloth, soaking cloth with detergent, taking a shower with soap, can reduce the risk of getting scabies because by

keeping cleanliness will create comfort on the female santri Darul Hikmah Islamic boarding school.

4.2.2 Correlation between densely-occupied house/room with the occurrence of scabies symptom at Darul Hikmah Islamic boarding school, Cisauk

TABLE 8. Correlation between densely-occupied house/room with the occurrence of scabies symptom at Darul Hikmah Islamic boarding school, Cisauk

Islamic boarding school, Cisaatuk								
No	Densely -occupied	Skabies				Total		P- Value
		No scabies		Scabies				
		N	%	n	%	n	%	
1	Requirement unfulfilling -	17	18,3	76	81,7	93	100	0,835
2	Requirement fulfilling –	6	15,0	34	85,0	40	100	
Total		23	17,3	110	82,7	133	100	

Source : primary data 2020

Based on table 8 that of 93 female santri who stayed in requirement-unfulfilling house, female santri with no scabies as many as 17 (18,3%) and 76 (81,7%), female santri with scabies. Of 40 female santri with requirement-fulfilling house as many as 6 (15,0%) with no scabies and 34 (80,0%), female santri with scabies.

The result of statistical analysis by using continuity correction test was obtained p-value 0,835 because p-value > 0,05 so that it can be concluded there is no correlation between densely-occupied house with the occurrence of scabies symptom at Darul Hikmah Islamic boarding school, Cisauk. The problem related to the occurrence of scabies symptom at Islamic boarding school is scabies disease in which scabies disease is a skin disease which is mostly suffered in densely-occupied house.

According to Ministerial Health regulation of Republic of Indonesia number 829 in health conditional housing said that the density of bedroom that bedroom minimum 8 meters and unsuggested to be used by 2 sleeping people in one bedroom, except the children under 5 years old.

This research is in line with the research conducted by Ahwath Riyaldhy Ridwan, Sahudin and Karma Ibrahim (2017) titled the correlation between knowledge, personal hygiene, and densely-occupied house with scabies symptom on female santri at Darul Mukhlisin Islamic boarding school. Kota Kendari 2017. By using the result of statistical test of chi-

square test on the confidence level of 95% with p-value 0,232 > ($\alpha = 0,05$) meaning that there is no correlation between densely-occupied house with occurrence of scabies symptom at Darul Mukhlisin Islamic boarding school, Kota Mandiri 2017.

This research is not in line with the research conducted by Nisa, FR, & Rahmalia, D (2019) that the result of statistical test was obtained p-value = 0,037 which can be concluded that there is significant correlation between densely-occupied room of male santri with the occurrence of scabies symptom at Darurrahmah Islamic boarding school, Gunung Putri, Bogor and supported who stated that the height of scabies prevalence caused the densely-occupied room. With the high densely-occupied house/room so that it is easy to get infected of scabies.

The number of occupants in one room that exceeds condition and capacity will increase the temperature of the room to become hot caused by the excretion of body temperature and will also increase the humidity due to water either from breath or evaporation of body liquid from skin so that room condition become uncomfortable (Rofifah, et 2019)(9).

Based on the survey and direct observation on variable of densely-occupied house on building of dormitory shows that the room which is measured 80 m² occupied by 23 female santri, if we referred to the ministerial health regulation number 829, 8 m² room should be for 2 people. If we see the densely-occupied

room, every santri turn out to get 6,8 m² and unconditional health decided. This is based on the santri are in one room in which each room is limited by wardrobe and each room is densely occupied so that it the atmosphere of the room becomes humid and stuffy.

The building width is not equal with the number of occupants will cause the house/room dense. This causes unhealthy condition because the lack of

oxygen consumption, every individual in that place get infected of scabies as well and the infection will be higher [9]

4.2.3 Correlation between ventilation with the occurrence of scabies symptom at Darul Hikmah Islamic boarding school, Cisauk

TABLE 9. The correlation between ventilation with the occurrence of scabies symptom at Darul Hikmah Islamic boarding school, Cisauk.

School, Cisaatuk.								
No	Ventilation	Skabies				Total		P- Value
		Tidak Skabies		Skabies				
		N	%	N	%	n	%	
1	Requirement - unfulfilling	14	19,2	59	80,8	73	100	0,687
2	Requirement – fulfilling	9	15,0	51	85,0	60	100	
Total		23	17,3	110	82,7	133	100	

Source : primary data 2020

Based on table 9 that of 73 female santri whose requirement-unfulfilling ventilation is as many as 14 (19,2%) female santri with no scabies and 59 (80,8%) female santri with scabies. And of 60 female santri with requirement-fulfilling ventilation as many as 9 (15,0%) with no scabies and 51 (85,0%) female santri with scabies.

The result of statistical analysis by using continuity correction test was obtained p-value = 0,687 because p-value > 0,05, so it can be concluded that there is no correlation between ventilation with the occurrence of scabies symptom at Darul Hikmah Islamic boarding school, Cisauk.

Requirement-unfulfilling ventilation will cause the air cycle imperfect inside the room. Besides ventilation functions as to come the light of the sun into the room. The thing contaminated by tungau scabies must be dried under the sunlight because the sunlight is able to kill tungau scabies. According to the ministerial health regulation of Republic of Indonesia number 829 in the condition of housing health said that condition for ventilation that can be told to meet the requirement if ventilation minimum 10% of width of floor.

This research is in line with the research conducted by Ummu Fariyah and R. Azizah titled environmental sanitation factor related to scabies at Qomaruddin Islamic boarding school, Gresik regency. By using the result of statistical test of Chi-square with P-value = 0,144 > 0,05 meaning that there is no correlation between ventilation with the

occurrence of scabies symptom at Qomaruddin Islamic boarding school. Gresik Regency [14].

The result of this research is not in line with the research conducted by Ibadurrahmi et al. titled factors that have effect to the occurrence of scabies disease on santri at Qotrun Nada Islamic boarding school Cipayung Depok that stated that variable of ventilation has effect to the occurrence of scabies disease with p-value 0,031 and the research conducted by Nisa and Rahmalia (2019) with the result of statistical test was obtained P-value = 0,047, so it can be concluded that there is significant correlation between room ventilation to the occurrence of scabies disease at Darrurrahmag Islamic boarding school, Gunung Putri, Bogor [6].

Room with no good condition causes the air inside the room does not circulate well. The room will become hot and the occupants will easily get sweat. If in the room, there is a scabies sufferer, there will probably be greater infection.

Based on the result of survey and observation at Darul Hikmah Islamic boarding school, Cisauk showed that ventilation in each room of female santri has enough ventilation in several rooms but in fact in application, there are still ventilation that are cut off or intentionally covered by cardboard by santri so that the rooms become stuffy.

5. CONCLUSION

This research has purpose to find out the correlation between personal hygiene, densely-occupied house and ventilation with the occurrence of scabies symptom at Darul Hikmah Islamic boarding school, Cisauk in 2020. The researcher draws the conclusion from the result of analysis by using data of research obtained from questionnaire collecting and direct observation. Based on the result of the research personal hygiene, densely-occupied house, and ventilation with the occurrence of scabies disease at Darul Hikmah Islamic boarding school, Cisauk 2020, the researcher draws the conclusion as follows.

- Based on the result of the research that there is correlation between personal hygiene with the occurrence of scabies symptom at Darul Hikmah Islamic boarding school, Cisauk 2020 with p-value = 0.020 because the santri's bad habits that can cause the occurrence of scabies.
- Based on the research that there is correlation between densely-occupied house/room with the occurrence of scabies symptom at Darul Hikmah Islamic boarding school, Cisauk 2020 with p-value = 0,835 because although the high densely-occupied house/room is health requirement-unfulfilling room, the occurrence of scabies symptom can happen due to some factors that meet them.
- Based on the result of the research that there is no correlation between ventilation with the occurrence of scabies symptom at Darul Hikmah Islamic boarding school, Cisauk in 2020 with p-value = 0,687 because ventilation is health requirement-unfulfilling room because of ventilation coverage intentionally by santri by covering ventilation with cardboard or gift paper.

ACKNOWLEDGMENT

References in this research are written by using Mendeley software with American Physiological Association format for conformity of bibliography with references that are involved in this research

REFERENCES

- [1] Akmal SC, Semiarty R, Gayatri G. Hubungan Personal Hygiene Dengan Kejadian Skabies Di Pondok Pendidikan Islam Darul Ulum, Palarik Air Pacah, Kecamatan Koto Tangah Padang Tahun 2013. *J Kesehatan Andalas*. 2013;2(3):164.
- [2] Ridwan A, Sahrudin S, Ibrahim K. Hubungan Pengetahuan, Personal Hygiene, Dan Kepadatan Hunian Dengan Gejala Penyakit Skabies Pada Santri Di Pondok Pesantren Darul Muklisin Kota Kendari 2017. *J Ilmu Mhs Kesehatan Masy Unsyiah*. 2017;2(6):198175.
- [3] Riptifah. Analisis Faktor Kejadian Penyakit Skabies di Pondok Pesantren An-Nur Ciseeng Bogor 2017. *J Kedokt dan Kesehat*. 2018;14(2):74–82.
- [4] Parman P, Hamdani H, Rachman I, Pratama A. Faktor Risiko Hygiene Perorangan Santri. *J Ilmu Univ Btanghai Jambi*. 2017;17(3):243–52.
- [5] Prayogi S, Kurniawan B. Pengaruh personal hygiene dalam pencegahan penyakit skabies. *J Major [Internet]*. 2016;5(5):140–3. Available from: <http://juke.kedokteran.unila.ac.id/index.php/majority/article/view/939>
- [6] Ibadurrahmi H, Veronica S, Nugrohowati N. Faktor-Faktor Yang Berpengaruh Terhadap Kejadian Penyakit Skabies Pada Santri Di Pondok Pesantren Qotrun Nada Cipayang Depok Februari Tahun 2016. *J Profesi Med J Kedokt dan Kesehat*. 2017;10(1):33–45.
- [7] Saputra R, Rahayu W, Putri RM. Hubungan Perilaku Hidup Bersih Dan Sehat (PHBS) Dengan Timbulnya Penyakit Scabies Pada Santri. *Nurs News (Meriden) [Internet]*. 2019;4(1):41–53. Available from: <https://publikasi.unitri.ac.id/index.php/fikes/article/view/1472>
- [8] Nisa FR, Rahmalia D. Faktor-faktor yang Berhubungan dengan Kejadian Skabies pada Santri Putra di Pondok Pesantren Darurrahmah Gunung Putri Bogor. *J Kesehat Masy*. 2019;3(1):16–23.
- [9] Rofifah TN, Lagiono L, Utomo B. Hubungan Sanitasi Asrama Dan Personal Hygiene Santri Dengan Kejadian Scabies Di Pondok Pesantren Al Ikhsan Desa Beji Kecamatan Kedungbanteng Kabupaten Banyumas Tahun 2018. *Bul Keslingmas*. 2019;38(1):102–10.
- [10] Tarigan SDW. Terjadinya Penyakit Scabies Di Pondok Pesantren Matholiul Huda Al Kautsar Kabupaten Pati. *J Kedokt Diponegoro*. 2018;7(1):113–26.
- [11] Hayyu Afiena. Hubungan Tingkat Pengetahuan Dan Perilaku Kesehatan Lingkungan Terhadap Kejadian Skabies Di Pondok Pesantren Roudhotul Qur'an Banyumas. *Gastrointest Endosc [Internet]*. 2018;10(1):279–88. Available from: <http://dx.doi.org/10.1053/j.gastro.2014.05.023> %0Ahttps://doi.org/10.1016/j.gie.2018.04.013 %0Ahttp://www.ncbi.nlm.nih.gov/pubmed/29451164%0Ahttp://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=PMC5838726%250Ahttp://dx.doi.org/10.1016/j.gie.2013.07.022
- [12] Sekar Pundi Nofianti. Hubungan Tingkat Pengetahuan dan Perilaku Kesehatan Lingkungan Terhadap Kejadian Skabies di Pondok Pesantren Roudhotul Qur'an Banyumas. *BMC Public Health [Internet]*. 2017;5(1):1–8. Available from: <https://ejournal.poltektegal.ac.id/index.php/siklus/article/view/298%0Ahttp://repositorio.unan.edu.ni/2986/1/5624.pdf%0Ahttp://dx.doi.org/10.1016/j.jana.2015.10.005%0Ahttp://www.biomedcentral.com/1471-2458/12/58%0Ahttp://ovidsp.ovid.com/ovidweb.cgi?T=JS&P>
- [13] Desmawati, Pristiana AD, Hasanah O. Hubungan Personal Hygiene Dan Sanitasi Lingkungan. *Jom*. 2015;2(1).