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Alamat Penyunting dan Pelaksana Tata Usaha : Lembaga Penelitian dan Pengabdian Masyarakat Universitas Nahdlatul Ulama Surabaya. Kampus A Jl. Smea no 57 Surabaya. Kampus B Jl. Jemursari no 51-57 Surabaya. Website: <http://unusa.ac.id/home>. Email: [jhs2018@unusa.ac.id](mailto:jhs2018@unusa.ac.id)

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## HYGIENE AND SANITATION PRACTICE: BASIS FOR THE STUDENT HEALTH FORMATION

Adistha Eka Noveyani<sup>1</sup>, Ancah Caesarina Novi Marchianti<sup>2</sup>, Pipiet Wulandari<sup>3</sup>

<sup>1,2,3</sup> Universitas Jember, Jember, Indonesia

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### CORRESPONDENCE

E-mail: adistha.en@unej.ac.id

### A B S T R A C T

**Introduction:** Islamic boarding school is a gathering place for students from various districts. This place is known to have many health problems, from personal hygiene to environmental health. Cleanliness of the environment and students' room are determined by their daily habits. Lack of concern in maintaining environmental cleanliness can risk diseases, including scabies. This study aimed to determine the knowledge, attitudes and behavior of students in the Islamic boarding school area related to the incidence of scabies as a basic analysis of health cadre training. **Method:** This is a quantitative descriptive study. Data was collected by structured interview using questionnaire. The sample of this study was students of Nuris high school who were member of the Red Cross Youth (PMR) extracurricular. The study was conducted in October-November 2019 at Nuris Islamic boarding school Jember. **Result:** The results of this study showed that most respondents had good knowledge related to personal hygiene and environmental health. Also most of their attitude tend to agree on personal hygiene and environmental health activities. However, in the results of their daily behavior / habits, there are a number of things that need attention. Most (73%) students borrowed a sarong / veil from one to another, and most (57%) still occasionally borrowed clothes from their friends, some still borrowed each other's personal toiletries such as soap, toothbrushes and towels, almost half (43%) of students wore the same clothes for more than a day, almost half (47%) also did not take a bath after their activities / sports, and almost half (47%) only occasionally cleaned their beds after or about to go to bed. These habits need to be changed. Since behavior easier to be changed by the example of fellow students. Furthermore, training already conducted to PMR members who later became health cadres in order to control environmental cleanliness and reduce the incidence of scabies in Islamic boarding schools. **Conclusion:** Despite having quite a good knowledge and attitude, bad behavior from a number of students could be a trigger for the incidence of scabies or other skin diseases. So, after we conducted training and format the health cadres among students, we hope that dorm supervisor regularly monitors the sanitation cleanliness and santri behavior.

## INTRODUCTION

Islamic boarding school is an Islamic educational institution where students gather to study Islam (Sutisna, 2010; Aryanti, 2012). The student there called santri. It should keep a good hygiene and environmental sanitation control to avoid diseases, especially infectious diseases, for example by providing clean water, rubbish bins, and maintaining environmental cleanliness (Kemenkes RI, 2019).

The large of Nurul Islam Islamic boarding school is 5 hectare in Summersari sub-district, which is 5 km from the Jember district central park and less than 3 km from Jember University. The

boarding school foundation organizes formal and non-formal education, starting from the Playgroup level to senior high school. The total number of santri and employees is 3438 people. It has some dormitories where 1 room contains 20-40 people. Facility for bathing, washing, and lavatory uses permanent water storage for the needs of all residents. The santri ablution water is flowed through pipes to the ablution place in the form of showers.

Poor hygiene and environmental sanitation control increases the risk of infectious skin diseases (WHO, 2014). Some skin diseases often found, such as scabies, tinea pedis caused by fungus, can be transmitted through direct or indirect contact (Harahap, 2000). Preliminary study conducted by the our research team to the boarding school's caregivers resulted that many santris have scabies with varying severity, ranging from mild to severe, and its location not only between the fingers and toes but has spread throughout the body. Factors that trigger it are poor personal hygiene, including rarely of bathing, not using soap, wearing clothes and towels alternately, not paying attention to clean bedding, and sleeping together with many santris (Setyowati and Wahyuni, 2014). Hence, to reduce and prevent the appearance of skin diseases is improving personal hygiene and environmental sanitation. Besides, for sustainability of socialization and supervision of the program, cadres from the santri of this Islamic boarding school are selected. However, before conducting the training to prospective cadres, we need a basic analysis regarding their knowledge, attitudes and behavior related to personal hygiene and environmental sanitation. So this study aims to assess the knowledge, attitudes and behavior of prospective health cadres as a database in conducting appropriate training.

## METHOD

This was a descriptive study. The population was all students of the Islamic Boarding School Nurul Islam Jember. For sampling method, we used purposive sampling. The sample was 30 santris, which were all members of the Red Cross Youth extracurricular. The study conducted in the Islamic Boarding School Nurul Islam Jember, from September to October 2019. The variables in this study were the knowledge, attitudes and behavior (habits) of santris. We conducted a survey. Data collection was carried out quantitatively through a closed questionnaire. Data analysis was presented descriptively.

**RESULT**

**Table 1. Knowledge Level of Respondents Related to Personal Hygiene and Sanitation (n=30)**

Knowledge Level	n	%
Good	21	70
Moderate	8	27
Poor	1	3

The knowledge level of students related to Personal hygiene and environmental sanitation showed in table 1. Most (70%) students have a good understanding of personal hygiene and environmental sanitation.

**Table 2. Students' Attitude Related to Personal Hygiene (n=30)**

No	Attitude	Agree n (%)	Disagree n (%)	Strongly Disagree n (%)
1	Take a bath twice/day	28 (93)	2 (7)	0
2	Take a bath after outdoor/sweaty activity (ie. sports)	15 (50)	11 (37)	4 (13)
3	Sharing toiletries (ie. soap, soap sponge, towel) will not potentially cause any skin diseases	4 (13)	1 (3)	25 (83)
4	Drying clothes under the sun	26 (87)	1 (3)	2 (7)
5	Sharing clothes will not potentially cause any skin diseases	2 (7)	4 (13)	24 (80)
6	No need to wash your hands before eating	1 (3)	2 (7)	27 (90)
7	You should wash your hands with soap after defecation	21 (70)	3 (10)	6 (20)
8	Dirty and long hand nail will not affect your health	2 (7)	6 (20)	22 (73)
9	clean and cut nails at least once a week	26 (87)	2 (7)	0
10	Going outside without wearing any footwear can be a carrier for microbes like viruses and bacteria	29 (97)	1 (3)	0
11	Washing your feet before sleeping	25 (83)	5 (17)	0
12	Shampooing is not always necessary	1 (3)	6 (20)	23 (77)
13	Rinse your hair at least twice a week	23 (77)	6 (20)	1 (3)
14	Clean your genital while bathing	28 (93)	1 (3)	1 (3)
15	Clean with water after urinating from back to front	7 (23)	6 (20)	17 (57)
16	Always change clothes after bathing	21 (70)	8 (27)	1 (3)
17	Tidy the bed before and after sleeping	25 (83)	4 (13)	0
18	Drying the mattress under the sun at least once a week	27 (90)	3 (10)	0
19	Change the bed linen at least once a week	19 (63)	11 (37)	0
20	Change clothes at least once a day	18 (60)	12 (40)	0

Furthermore, the description of the students' attitude related to personal hygiene and sanitation presented in table 2 and 3. Table 2 showed some students disagreed to two personal hygiene activities. 37% of them disagreed that after outdoor/ sweaty activity they should take a shower, and almost a half (40%) disagreed if they should change their clothes at least once a day. However, most of them (90%) strongly disagree if they should not wash hands before eating, and 80% of them strongly disagree if sharing clothes will not potentially cause any skin diseases.

Table 3. Students' Attitude Related to Sanitation (n=30)

No	Attitude	Agree n (%)	Disagree n (%)	Strongly Disagree n (%)
1	Clean the bath up at least once a week	25 (83)	5 (17)	0
2	Using clean water for bathing, washing clothes, etc	30 (100)	0	0
3	Squatting pan is better than sitting toilet and should having septic tank	26 (87)	4 (13)	0
4	Trash bin at each dorm room is not necessity	1 (3)	5 (17)	24 (80)
5	Landfill located near water source (for bathing, washing clothes, drinking etc)	3 (10)	3 (10)	24 (80)
6	Unseparated organic and anorganic trash bin	2 (7)	11 (37)	17 (57)
7	Littering can encourage the spread of diseases and contaminate water	30 (100)	0	0

Table 3 showed all students agreed that bathing and washing clothes should use clean water and littering can encourage the spread of diseases and contaminate water. However, only 3% agreed that trash bin at each dorm room is not necessity.

Table 4. Student Behavior Related to Personal Hygiene (n=30)

No	Behavior	Always (4-7x/week) n(%)	sometimes (1-3x/week) n(%)	Never n(%)
1	Showering daily (at least once a day)	26 (87)	2 (7)	2 (7)
2	Showering after sweaty activity/sports	11 (37)	14 (47)	5 (17)
3	Borrowing friend's soap	1 (3)	3 (10)	26 (87)
4	Borrowing friend's toothbrush	0	2 (7)	28 (93)
5	Borrowing friend's towel	0	8 (27)	22 (73)
6	Share soap with friend(s)	2 (7)	6 (20)	22 (73)
7	Share toothbrush with friend(s)	1 (3)	3 (10)	27 (90)
8	Share towel with friend(s)	1 (3)	7 (23)	22 (73)
9	Changing clothes at least once a day	2 (7)	15 (50)	13 (43)
10	Drying towel under the sun	13 (43)	16 (53)	1 (3)
11	Having long and dirty fingernails	0	7 (23)	23 (77)
12	Washing hand before eating	13 (43)	15 (50)	2 (7)
13	Washing your feet before sleeping	20 (67)	9 (30)	1 (3)
14	Washing hair with shampoo at least twice a week	25 (83)	4 (13)	1 (3)
15	Washing clothes with detergent	30 (100)	0	0
16	Washing clothes using well water source	19 (63)	9 (30)	3 (10)
17	Changing underwear after showering	25 (83)	5 (17)	0
18	Washing genital while showering	30 (100)	0	0
19	Drying clothes inside the room/dorm	27 (90)	0	3 (10)
20	Drying clothes under the sun matahari	29 (97)	1 (3)	0
21	Clean hand Membersihkan tangan dengan sabun sesudah BAB/BAK	23 (77)	5 (17)	2 (7)
22	Cleaning bed sheet before sleeping	17 (57)	13 (43)	0
23	Throwing trash to trash bin	30 (100)	0	0
24	Hanging clothes on hanging area	27 (90)	3 (10)	0
25	Borrowing friend's clothes (whether same room/separate)	0	17 (57)	13 (43)
26	Borrowing friend's sarong/veil (whether same	0	22 (73)	8 (27)



No	Behavior	Always (4-7x/week) n(%)	sometimes (1-3x/week) n(%)	Never n(%)
	room/separate)			
27	Throwing toiletries package (sanitary pad, shampoo, soap, etc) to trash bin	29 (97)	0	1 (3)
28	Throwing sanitary pad to trash bin	26 (87)	0	4 (13)
29	Wearing personal praying clothes (mukena)	23 (77)	3 (10)	4 (13)
30	Using personal praying mat (sajadah)	26 (87)	3 (10)	1 (3)

Student behavior related to personal hygiene sanitation showed at table 4 and 5. There are several findings that indicated a lack of personal hygiene and poor sanitation control. from table 4, the majority (73%) of students sometimes borrowed a sarong / veil from one another; and 57% of them sometimes borrowed clothes from their friends; some students still borrowed other's personal toiletries such as soap, toothbrushes and towels; 43% of students wear the same clothes for more than 1 day; 47% of them also did not take a bath after their sweaty activity / sports and rarely clean the bed sheet before laying down to their bed or before they sleep; and almost all students (90%) dry their clothes inside the room.

Table 5. Student Behavior Related to Sanitation (n=30)

No	Behavior	Always (4-7x/week) n(%)	sometimes (1-3x/week) n(%)	Never n(%)
<b>ROOM</b>				
1	Sweeping the floor	24 (80)	6 (20)	0
2	Mopping the floor	4 (13)	25 (83)	1 (3)
3	Throwing waste of room outside (to the bigger trash bin)	25 (83)	4 (13)	1 (3)
4	Drying the bed	4 (13)	15 (50)	11 (37)
5	Changing bed sheet	13 (43)	13 (43)	4 (13)
6	Opening the window	28 (93)	1 (3)	1 (3)
<b>BATHROOM</b>				
1	Cleaning bathroom floor	19 (63)	9 (30)	2 (7)
2	Draining the bathroom	10 (33)	17 (57)	3 (10)
3	Cleaning the bathroom	10 (33)	17 (57)	3 (10)
4	Cleaning the toilet	16 (53)	12 (40)	2 (7)
<b>MOSQUE</b>				
1	Washing the praying mat	19 (63)	10 (33)	1 (3)
2	Sweeping the mosque floor	13 (43)	11 (37)	6 (20)
3	Mopping the mosque floor	7 (23)	14 (47)	9 (30)
4	Changing praying mat at mosque	6 (20)	13 (43)	11 (37)
5	Cleaning the mosque carpet	6 (20)	13 (43)	11 (37)
6	Water used for ablution does not stagnate	18 (60)	7 (23)	5 (17)

Most of them always sweep the floor, clean the bathroom floor, and wash the praying mat. They sometimes mopping the floor, draining the bathroom, and mopping the mosque floor. However, they never dry the bed outside, clean all the bathroom, clean the mosque carpet.

## DISCUSSION

The majority of students had good knowledge related to personal hygiene and sanitation. This could be caused by they joined The Youth Red Cross as their high school activity, so they were exposed to health-related knowledge. However, it did not make the students' attitudes and habits (behavior) as good as their knowledge. Spreading of scabies is through direct and indirect contact from the friends who have scabies. Transmission through indirect contact such as through bed, bed sheet, clothing, or towels plays an important role. The practice of borrowing personal equipment between student is one of potentially source of spreading the disease. Previous study from Handayani (2007) showed that there was a significant relationship between the habit of sharing bath soap, the habit of sharing towels, the habit of changing clothes, the habit of using sleeping blankets and the habit of sharing prayer tools with the incidence of scabies (Handayani, 2007).

In addition, rarely clean the bed sheet after and before going to sleep is risk factors of scabies infection. As previous study stated, students who had poor cleaning bad sheet activity, have an 1.3 times risk of getting scabies compared to students who practiced a good bed sheet cleanliness (Mayrona, Subchan and Widodo, 2018).

The attitude and behavior of students who tend to make themselves moist like not bathing after sweaty activities and not changing clothes several times more than 1 day, become a place for bacteria to grow. Besides that, almost all students dried clothes inside their dorm rooms. If the underpants and clothes were not completely dry yet, it could make it easier for scabies mites to move from the reservoir to the surrounding materials so that they reach a new host. Therefore, underwear and towel should be clean and dry. After use, towels should be directly dried until completely dry.

However, good knowledge and positive attitude tendencies and behaviors / habits that appear from students PMR members in maintaining personal hygiene and sanitation became a potential skill to become independent health cadre, who then will be given a training of personal hygiene and sanitation for daily application and its impact when neglecting this. Having right knowledge

and a positive attitude make easier on the process of receiving information related to personal sanitation and the environment. Thus, the socialization of personal hygiene and environmental sanitation will be easily transmitted by independent health cadres to other students. That's why, the active role of health cadre is very important, for creating personal hygiene and environmental sanitation awareness among Islamic boarding school residents. So, the good sanitation could be practiced regularly. The socialization of environmental sanitation through poskestren (health service of Islamic boarding school) is also in line with the East Java Provincial Government's program in the context of the government's efforts to disseminate the Clean and Healthy Behavior (PHBS) programs in East Java Province.

## CONCLUSION

Despite having good knowledge and attitudes, some santri's behavior was lacking in personal hygiene, which increased the risk of various skin diseases. We recommend each dorm supervisor regularly monitor the sanitation cleanliness and santri behavior regarding personal hygiene after training and the formation of health cadres. Also, for further research is expected conducting direct observations on environmental sanitation in around the Islamic boarding school.

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