Ahmad Dahlan Medical Journal
VOL 5, No. 1, 63-70
http:// http://journal2.uad.ac.id/index.php/admj

Article

Relationship Between Attitude and Knowledge of the Behavior of Scabies Patients at PKU Muhammadiyah Delanggu Hospital

[1,2] Melok Tin Hartini[*], [1]Retno Indrastiti, [3]Rina Purnamasari,[2]Muhamad Ma'mun Sukri, [4]Putri Atthariq Ilmi
Email (Corresponding Author): *meloktin@gmail.com
[1]Department of Dermatology & Venereology, Faculty of Medicine, Universitas Muhammadiyah Semarang
[2]PKU Muhammadiyah Delanggu Hospital, Klaten, Central Java, Indonesia
[3]Department of Biomedical Sciences, Faculty of Medicine, Universitas Muhammadiyah Semarang, Indonesia
[4] Doctor internship, DKT Dr Soetarto Hospital, Yogyakarta, Indonesia

ARTICLE INFO

Article history
Received 04-01-24
Revised 30-04-24
Accepted 25-05-24

Keywords
Scabies,
Attitude,
Knowledge,
Behaviour

ABSTRACT

Scabies is a skin condition caused by Sarcoptes scabiei varian hominis infestation. Scabies risk factors include a person's education and attitude toward personal and environmental hygiene. This study aims to investigate the relationship between attitudes and knowledge of the behavior of scabies patients at PKU Muhammadiyah Delanggu Hospital. This is a cross-sectional analytic study. The participants in this study were scabies patients who examined themselves at PKU Muhammadiyah Delanggu Klaten Hospital between January and September 2023. The sequential sampling method was used to obtain a sample of 135 subjects. The Fisher exact test is used to analyze univariate and bivariate data. The majority of scabies patients were aged 10-19 years (30.4%), whereas the minority were aged 30-39 years (3.0%). Men 57.8% are more than women 42.2%. The majority of scabies diagnosis (68.1%) were obtained through auto anamnesis, and approximately half of the patients (50.4%) possessed three of the four cardinal symptoms used for scabies diagnosis. With a p-value of 0.546 (p>0.05), the Fisher exact test demonstrates that knowledge is not related to a patient's behavior. However, the attitude factors test showed a p-value of less than 0.001, indicating that attitudes affect how scabies patients behave at the PKU Muhammadiyah Delanggu Hospital's Dermatology and Venereology clinic in Klaten. The results of the research show that there was a significant relationship between attitudes, rather than knowledge, significantly predicting how scabies patients behave in the Dermatology & Venereology clinic of PKU Muhammadiyah Delanggu Hospital, Klaten.

INTRODUCTION

Scabies is a cutaneous illness caused by an infestation of *Sarcoptes scabiei* variant hominis[1]. Scabies is also known as *budukan, gudik*, sky-bees, and the itch. Nighttime irritation and cutaneous manifestations in the form of unique winding canaliculi are the most typical symptoms [2]. One of the most noticeable symptoms of the disease is an acne-like rash, notably between the fingers, skin folds of the wrists, elbows, knees, penis, breasts, or shoulders. Frequent Scratching may cause sores, which can lead to secondary infections [3]. The primary symptom of scabies is itching, which is not dangerous to humans but is exceedingly uncomfortable, disrupts everyday duties and reduces productivity[4].

According to World Health Organization (WHO) data, there were 130 million scabies cases globally in 2019. According to the International Alliance for the Control of Scabies (IACS), the global incidence of scabies is from 100 to 200 million cases each year, with 455 million events[2]. Scabies prevalence in Indonesia is decreasing year after year, according to Ministry of Health data. The 2018 prevalence was 5.60%-12.96%, the 2019 prevalence was 4.9-12.95%, and the 2020 prevalence was 3.9-6%. Although there has been a decrease, scabies is still one of the infectious diseases in Indonesia[5]. Scabies can be cured; however, treatment is frequently delayed because of a delayed diagnosis, leading to the disease spreading in groups[6].

Scabies is a disease that easily spreads both directly through skin-to-skin contact, such as shaking hands, sleeping together, and during sexual intercourse, and indirectly through things, such as clothes, towels, bed linen, pillows, and blankets[7]. Multiple clinical signs can result from an infection with Sarcoptes scabiei[3]. However, there are four cardinal signs of a scabies infestation: canaliculi in the skin, nocturnal pruritus (itching at night), attacking groups of people, such as in boarding homes or dorms, and the identification of Sarcoptes scabiei parasites from cutaneous specimen[8]. A person is diagnosed with scabies if 2 of the 4 cardinal signs are found. [3] Nonetheless, the identification of mites, eggs, and scabies scales is necessary for a complete diagnosis of scabies. Skin scrapings, epidermal shave biopsy, topical tetracycline, dermoscopy, and burrow ink can all be used to detect mites, eggs, and scabies scales[9].

Poor personal and environmental hygiene is a risk factor for scabies. Poverty, low levels of personal hygiene, and densely populated environments are also factors that contribute to the incidence of scabies cases in developing countries[10]. A high population density and close contact between people facilitate the spread of Sarcoptes scabiei infection[11]. In communities, a lack of education as well as knowledge about personal hygiene will have an impact on scabies transmission.

The numerous, heavily populated boarding schools that encircle PKU Muhammadiyah Delanggu Hospital are what drew us to perform our research there. Scabies incidence is

undoubtedly increased by high population densities and unsanitary conditions; attitudes and information regarding scabies episodes also play a crucial role in this process. This also piques our interest, and we aim to investigate the relationship between attitudes and knowledge on the behavior of scabies patients.

METHODS

This is an analytical study with a cross-sectional method. The population in this study were patients with scabies who were examined at PKU Muhammadiyah Delanggu Klaten Hospital from January to September 2023. A sample of 135 people was obtained using consecutive sampling methods. The research instrument used a questionnaire. Subjects were interviewed using a questionnaire guide that had been tested for validity. The questionnaire used was about attitudes and knowledge about personal hygiene behavior.

This study received ethical approval from the Faculty of Medicine, Sultan Agung Islamic University with number No.117/III/2023 / Bioethics Commission. The diagnosis of scabies is based on the criteria of PERMENKES Number 5 of 2022 concerning Clinical Practice Guidelines for Doctors in Primary Health Care Facilities. The diagnosis is established by history taking and physical examination which meets the criteria for 2 of the 4 cardinal signs for the diagnosis of scabies, namely: (a) nocturnal pruritus; (b) attacking humans in a group; (c) polymorphic images were found in the predilection areas of lesions in the thin stratum corneum (between fingers, volar wrists, and feet) or canaliculi are found; (d) mites were found by microscopic examination.

Attitudes, knowledge, and behavior are the independent variables in the study. Knowledge describes patients' knowledge about scabies, including its causes, symptoms, location, risk factors, and prevention. Attitudes describe their attitudes toward scabies, including vigilance, and personal and environmental cleanliness. Behavior describes their behavior toward scabies, including their hygiene and hygiene habits. The values of the questionnaire used a scoring system according to Aliffiani and Mustaqim 2020 with the following values good attitude > 71% and not good attitude <70%, high knowledge >71% and low knowledge <70%, and good behavior > 71% and not good behavior <70%.[1] To determine the frequency distribution of the study subjects' characteristics, the data analysis included univariate and bivariate using the Fisher exact test.

RESULTS

According to Table 1's characteristics, the majority of scabies patients (30.4%) are between the ages of 10 and 19, while the least number (3.0%) are between the ages of 30 and 39. Male patients made up 57.8% of the total, compared to female patients' 42.2%. The majority of patients (76.3%) said they lived at home. About half of the patients (50.4%) had three out of the

four cardinal symptoms used for scabies diagnosis, and auto anamnesis was the primary method of scabies diagnosis (68.1%).

Table 1. Characteristics of Scabies Patients in the Dermatology and Venereology Clinic of PKU Muhammadiyah Delanggu Hospital Klaten

Patient characteristics (n = 135)	***n (%)***
Age (year)	
< 10 years	35 (25,9)
10-19 years old	41 (30,4)
20-29 years old	18 (13,3)
30-39 years old	4 (3,0)
40-49 years old	10 (7,4)
50-59 years old	10 (7,4)
≥ 60 years	17 (12,6)
Gender	
Male	78 (57,8)
Female	57 (42,2)
Place of residency	
Hut/mess	32 (23,7)
Home	103 (76,3)
Anamnesis	
Alloanamnesis	43 (31,9)
Autoanamnesis	92 (68,1)
Number of cardinal signs (out of 4 signs)	
2	57 (42,2)
3	68 (50,4)
4	10 (7,4)

Table 2. Overview of knowledge, attitudes and behavior of patients with scabies in the Dermatology and Venereology clinic of PKU Muhammadiyah Delanggu Hospital, Klaten.

Variables	***n (%)***
Knowledge	
Low	9 (6,7)
High	126 (93,3)
Attitude	
Not good	3 (2,2)
Good	132 (97,8)
Behavior	
Not good	11 (8,1)
Good	124 (91,9)

The description of knowledge, attitudes, and behavior of patients with scabies in the Dermatology and Venereology clinic of PKU Muhammadiyah Delanggu Klaten Hospital shows that the majority of patients have high knowledge (93.3%), good attitudes (97.8%) and good behavior (91.9%).

According to Table 3, of the 126 patients with good knowledge, the majority (92.1%) also exhibited good behavior, and of the 8 patients with limited knowledge, the most (88.9%) did as

well. The results of the Fisher Exact Test, which had a p value of 0.546 (p>0.05), show that there is no correlation between knowledge and the behavior of scabies patients at the Dermatology and Venereology clinic of PKU Muhammadiyah Delanggu Hospital in Klaten. Although the prevalence value (PR) >1, the CI (95%) value covers the number 1 (0.201-9.754), indicating that limited knowledge is not a factor that leads to the poor behavior of scabies patients. This is consistent with the prevalence ratio (RP) value obtained.

Table 3. The relationship between knowledge and attitudes with the behavior of patients with scabies in the Dermatology and Venereology clinic of PKU Muhammadiyah Delanggu Hospital Klaten

Variables	*Behavior*		*p*	*RP (CI95%)*
	Not good	*Good*		
Knowledge				
Low (n=9)	1 (11,1)	8 (88,9)	0,546	1,400 (
High (n = 126)	10 (7,9)	116 (92,1)		0,201-9,754)
Attitude				
Poor (n = 3)	3 (100,0)	0 (0,0)	<0,001	16,500
Good (n = 132)	8 (6,1)	124 (93,9)		(8,429-32,297)

Table 3 presents a contrast to the attitude variable. It indicates that out of the 132 patients with a good attitude, the majority (93.9%) also behaved well, whereas the remaining 3 patients with a low attitude (100.0%) also behaved poorly. The results of the Fisher Exact Test, with a p-value of less than 0.001, suggest that the behavior of scabies patients at the dermatology & venereology Clinic at PKU Muhammadiyah Delanggu Hospital, Klaten, is influenced by their attitude. Because the prevalence ratio (RP) value obtained is greater than 1 and the 95% confidence interval does not cover the number 1 (8,429 - 32,297). The results support the idea that the negative attitude of scabies patients influences their behavior. According to the RP score of 16.500, patients are 16.5 times more likely to act negatively than those who have a positive attitude.

DISCUSSION

Based on study findings from PKU Muhammadiyah Delanggu Hospital, it was discovered that respondents with scabies were mostly between the ages of 10 and 19. The findings of this study are consistent with the findings of Bancin et al, who found that the age range 15-24 had the highest prevalence of scabies. This is the beginning of adolescence, which typically begins in middle school. In this circumstance, early adolescents would have a lot of direct interactions with the school environment. Their frequent direct contact with their surrounding pupils is one of the things that leads to them getting scabies[12].

Male patients outnumbered female patients (42.2%) in terms of gender. This is corroborated by Ratnasari and Sungkar research, which found that men are more susceptible to scabies than women, with a prevalence rate of 64.9% in men and 35.1% in women. This shows that since poor personal hygiene is the most frequent precipitating factor for this skin condition, men are generally more likely to develop it[13].

Existing research indicates that the incidence rate of scabies ranges from 0.3% to 46%, with children being the most vulnerable due to low-resource communities being particularly susceptible to the disease. The most prevalent cause leading to the high occurrence of scabies in underdeveloped nations is poverty, which is associated with poor personal hygiene, limited access to water, and overcrowding. Increased air humidity, temperature, a lack of natural lighting, knowledge, attitudes, behaviors, and ventilation can all contribute to an increase in scabies prevalence[14].

Table 4 demonstrates that the majority (88.9%) of the 8 patients with limited knowledge behaved well, and the majority (92.1%) of the 126 patients with strong knowledge likewise behaved well. The Fisher exact test yielded a p-value of 0.546 (p>0.05), indicating that knowledge is unrelated to the behavior of scabies patients at the PKU Muhammadiyah Delanggu Hospital's Dermatology and Venereology Clinic in Klaten. Patients with scabies are aware that scabies can infect anyone, yet they continue to assume that there is no need to be concerned. Other factors that influence the level of knowledge are age and education[6]. A person's knowledge increases along with their level of education. This is because knowledge is gained both from personal experience and from learning from the experiences of others[15]. In addition, higher education will result in good knowledge[16]. This study includes knowledge about the causes of scabies, signs and symptoms of scabies, the predilection of scabies, how it is transmitted, and how to prevent scabies[17].

The age of the respondent is the aspect that differentiates their level of maturity. Age has a profound impact on a person's knowledge, attitude, and behavior. The number of scabies instances that occur in an individual is significantly influenced by their exposure experience, as older individuals with scabies may be better able to avoid and spread the disease[16,17]. In certain impoverished nations, scabies seem to affect children and teenagers more frequently[19].

Table 4 demonstrates that the Fisher exact test yielded a p-value <0.001 for the attitude factor, suggesting a significant relationship between attitude and the behavior of scabies patients in the Dermatology and Venereology Clinic of PKU Muhammadiyah Delanggu Hospital, Klaten. The PR score of 16.500 indicates that patients with a negative attitude are 16.5 times more likely to behave poorly than patients with a good attitude. The results of another study showed that, when the bivariate analysis was done, the attitude had an impact on the behavior of scabies

patients with a p-value of 0.017. Research indicates that a negative attitude is linked to a 61.5% greater incidence of scabies[17]. Compared to a negative responder attitude, a positive respondent attitude is linked to a decreased risk of scabies. Additional elements that impact attitudes are the role of local family doctors and the assistance of local health managers, which includes the function of cadres in the community. One of the main factors influencing behavior is attitude[20]. Human behavior regarding measures aimed at preventing disease will not alter in the absence of a positive attitude[21].

CONCLUSION

The research shows that there was a significant relationship between attitudes, rather than knowledge, significantly predicting how scabies patients behave in the Dermatology and Venereology clinic of PKU Muhammadiyah Delanggu Hospital, Klaten.

REFERENCES

1. Aisyah PB, Naibaho ML. The Relationship Between the Level of Knowledge of Scabies and Personal Hygiene with the Incidence of Scabies and Dermatological Quality of Life at the Cempaka Putih District Health Center. *Malahayati Nurs J* 2023; 5: 2693-2706.
2. Tahani A, Risnawati R. The Relationship between Personal Hygiene Behavior and the Suspected Incidence of Scabies Disease at Darul Falah Islamic Boarding School in 2021. *Ibnu Sina J Kedokt dan Kesehat - Fak Kedokt Univ Islam Sumatera Utara* 2022; 21: 202-206.
3. Kurniawan Marsha, Ling Michael Sie Shun F. Diagnosis and Therapy of Scabies. *Mirror of the World of Medicine* 2020; 47: 104.
4. Nurhidayat, Firdaus FA, Nurapandi A, et al. Analysis of Factors Affecting the Occurrence of Scabies in Santri. *Healthc Nurs J* 2022; 4: 265-272.
5. Lilia D, Novitry F. The relationship between the habit of using shared towels, residential density, and ventilation with the incidence of scabies at the an Nur Orphanage in the Uptd Work Area of the Sukaraya Health Center, Ogan Komering Ulu Regency in 2022. *J Midwife Mandira Cendikia* 2022; 1: 51-58.
6. Sunarno J malis, Hidayah AI. Overview of Knowledge Attitudes and Behavior of Patients with Scabies in the UPTD Puskesmas Pejawaran Area in 2021. *Medsains* 2021; 7: 1-10.
7. Setyoningrum U. The relationship between scabies knowledge and the incidence of scabies in adolescents. *Indones J Nurs Res (IJNR)* 2023; 6: 12-19.
8. Haußmann A. Scabies. *Dtsch Arztebl Int* 2018; 115: A1339.
9. Kurniati K, Zulkarnain I, Listiawan MY. Correspondence of Pathognomonic Clinical Features of Scabies Infestation with Positivity of Dermoscope Examination and Skin Scrapings. *Berk Ilmu Kesehat Kulit dan Kelamin* 2014; 26: 1-8.
10. Egeten EAK, Engkeng S, Mandagi C. Relationship between Knowledge and Attitude with Prevention Methods of Scabies Disease in Pakuweru Village, Tenga District, South Minahasa Regency. *Public Health* 2019; 8: 203-210.
11. Avidah A, Krisnarto E, Ratnaningrum K. Risk Factors for Scabies in Conventional and Modern Islamic Boarding Schools. *Herb-Medicine J* 2019; 2: 58.
12. Bancin MMMC ana; KR. Prevalence of Scabies Patients in the Skin and Sex Poly of Meuraxa Hospital, Banda Aceh City, 2016-2018 Period. *Candidate J Ris and Inov Educ* 2020; 2: 20-26.
13. Ratnasari AF, Sungkar S. Prevalence of Scabies and Associated Factors in Pesantren X, East Jakarta. *eJournal Kedokt Indones*; 2. Epub ahead of print 2014. DOI: 10.23886/ejki.2.3177.
14. Naftassa Z, Putri TR. The Relationship Between Gender, Education Level and Knowledge Toward the Incidence of Scabies in Santri Pondok Pesantren Qotrun Nada Depok City. *Biomedika* 2018; 10: 115-119.
15. Vetronela. The Relationship between Knowledge and Personal Hygiene Behavior with the Occurrence

of Scabies in Residents of Kubu Raya Regency Student Dormitory. *J Chem Inf Model* 2018; 53: 1689-1699.
16. Abdillah KY. Relationship between knowledge level and the incidence of scabies in Islamic boarding schools. *J Med Hutama* 2020; 02: 261-265.
17. badurrahmi H, Nugrohowati N, Veronica S. Factors affecting the incidence of scabies disease in students at Qotrun Nada Islamic Boarding School Cipayung Depok February. *J Profesi Med* 2016; 10: 33-45.
18. Djajakusumah TS, Susanti Y. Incidence and Characteristics of Scabies Patients at Al-Islam Hospital Bandung Medical Education, Faculty of Medicine, Islamic University of Bandung, Introduction Scabies is a skin disease caused by infestation and sensitization to sarcopt. 1023-1028.
19. Simanjuntak AM, Andriyani Y. Knowledge and Attitude of Santri regarding Personal Hygiene towards the Incidence of Scabies in Modern Ta'dib Al Syarikin Pesantren Medan. *Scr SCORE Sci Med J* 2022; 3: 114-118.
20. Ulya T, Syaidatussalihah S, Halid M. Education on Clean and Healthy Living Behavior to Prevent Scabies Transmission Among Santri Pondok Pesantren Al-Muwahhidin Lelede. *SELAPARANG J Pengabdi Masy Berkemajuan* 2023; 7: 511.
21. Aulia AA, Mulianto N, Widhiati S. The Relationship between Healthy Living Behavior (Knowledge, Attitude, and Action) with the Incidence of Scabies at Daarul Qur'an Islamic Boarding School in Surakarta. *Nexus Kedokt Komunitas* 2017; 6: 79-89.