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Knowledge and Behavior Aspect Related to Scabies Incidence in Syamtalira Bayu Health Center, Northern Aceh Regency

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A B S T R A C T

Scabies is a contagious skin infection caused by the parasite Sarcoptes scabiei and the most common cause of itchy skin. Factors that influence 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. This study aimed to determine the knowledge and behavior related to scabies incidence in Syamtalira Bayu Health Care Center, Northern Aceh. This research is an observational study with descriptive design. The study was carried out in October 2019 at the Syamtalira Bayu Community Health Center, Northern Aceh regency, Indonesia. A total of 100 respondents were participated in this study. The inclusion criteria were man and woman aged 16-45 years, lived in Syamtalira Bayu regency and agreed to participate in study. Fifty percent of respondents suffered from scabies. Most of them had behavior related scabies, such as alternating prayer tools (70%), alternating towels (53%), and sleeping together (64%). The knowledge level in people of Syamtalira Bayu Regency is good. However, they did not apply and practice the knowledge into their daily life, as seen on behavior related incidence scabies is still high.

1. Introduction

Scabies is a contagious skin infection caused by the parasite *Sarcoptes scabiei* and the most common cause of itchy skin.[1] Scabies is often ignored because it is not life-threatening so that the priority of treatment is low, but actually chronic and severe scabies can cause dangerous complications. Scabies often causes discomfort because it causes very itchy lesions. Patients with scabies often scratch and cause secondary infections, especially by group A *Streptococci* (GAS) and *Staphylococcus aureus*.[2]

Complications due to secondary infestations of GAS and *Staphylococcus aureus* are common in children in developing countries. World Health Organization (WHO) stated that the incidence of scabies in 2014 was 130 million people in the world, while according to the International Alliance for the Control Of Scabies (IACS) the incidence of scabies started from 0.3-46%.[3] Previous studies stated that the prevalence of scabies in Indonesia has decreased from year to year.[4,5] Although there has been a decline in prevalence, Indonesia has not been free from scabies disease and is still one of the infectious disease problems in Indonesia.

Factors that influence 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.[7,8] The high density of occupancy and interaction or physical contact between individuals facilitates the

transmission and infestation of scabies mites. Therefore, a high prevalence of scabies is generally found in environments with high population density and interpersonal contacts, such as prisons, orphanages, and Islamic boarding schools.[9,10] Places that have a high density have a high risk for transmission of scabies, especially dormitories and Islamic boarding schools. This study aimed to determine the knowledge and behavior related to scabies incidence in Syamtalira Bayu Health Care Center, Northern Aceh.

2. Methods

This research is an observational study with a descriptive design. The study was carried out in October 2019 at the Syamtalira Bayu Community Health Center, Northern Aceh regency, Indonesia. The population of this research is the entire community of Syamtalira Bayu district. A total of 100 respondents participated in this study. The inclusion criteria were man and woman aged 16-45 years, lived in Syamtalira Bayu regency, and agreed to participate in study. This study has received approval from the ethical committee of the Faculty of Medicine, Universitas Malikussaleh, Indonesia.

Data were obtained using a questionnaire and structured interviews. The questionnaire contains questions related to the respondents' knowledge, attitudes, and personal hygiene actions toward scabies. The observed results are the results of the respondent's level of knowledge, attitudes, and personal hygiene actions. Obtained data were presented in table and narrative sentences.

3. Results and Discussion

The majority of participants were female (75%), aged 36-45 (43%), and had junior high school education (30%) (Table 1). Most participants had good knowledge about scabies. Knowledge about scabies in North Aceh is very easy to obtain, either through indirect or direct media. Examples of direct media such as counseling, health promotions, and education from doctors and others. While examples of indirect media such as health posters, banners, and others. Most participants in the Syamtalira Bayu district had received health promotions about scabies, but it did not reduce the incidence of scabies or accelerate the healing of scabies as expected.

Table 1. Respondent characteristics.

Characteristics	Frequency (%)
Gender	
Male	25 (25)
Female	75 (75)
Age (years old)	
16-25	29 (29)
26-35	28 (28)
36-45	43 (43)
Education	
Primary school	25 (25)
Junior high school	30 (30)
Senior high school	28 (28)
College	17 (17)
Knowledge level	
Good	86 (86)
Bad	14 (14)

Table 2 presents the incidence and behavior-related scabies. Fifty percent of respondents suffered from scabies. Most of them had behavior-related scabies, such as alternating prayer tools (70%), alternating towels (53%), and sleeping together (64%). Scabies is a disease that is difficult to eradicate in humans, especially in a community in closed dense housing.[10]

Table 2. Incidence and behavior-related scabies.

Incidence and behavior	Frequency (%)
Suffered from scabies	
Yes	50 (50)
No	50 (50)
Alternating prayer tools	
Yes	70 (70)
No	30 (30)
Alternating towels	
Yes	53 (53)
No	47 (47)
Sleeping together	
Yes	64 (64)
No	36 (36)

Scabies is a contagious skin infestation caused by the parasitic mite *Sarcoptes scabiei.*[11] The pathophysiology of scabies involves several stages of the mite's life cycle, as well as the host's immune response to the infestation. When a female mite burrows into the skin, it creates a tunnel, laying eggs as it goes. The eggs hatch into larvae, which then molt into nymphs and eventually mature into adult mites. The adult mites mate on the skin surface, and the females burrow back into the skin to lay their eggs, starting the cycle anew.[12-14]

As the mites burrow into the skin, they cause intense itching and an inflammatory response. The host's immune system responds to the presence of the mites and their feces, which contain allergenic proteins, leading to the characteristic skin rash and symptoms of scabies. The typical symptoms of scabies include intense itching, especially at night, and a rash characterized by small, red bumps or pimple-like lesions. The rash is often most prominent in areas where the mites burrow, such as between the fingers, on the wrists and elbows, and around the waistline. In severe cases, the rash can become crusted and scaly, leading to skin infections and other complications. Scabies is highly contagious, and it can spread through close personal contacts, such as skin-to-skin contact or sharing clothing or bedding.[15-17] Treatment typically involves the use of topical or oral medications to kill the mites and their eggs, along with measures to prevent re-infestation and control the spread of the infestation to others.[14]

4. Conclusion

The knowledge level of the people of Syamtalira Bayu Regency is good. However, they did not apply and practice the knowledge in their daily life, as seen the behavior-related incidence of scabies is still high.

5. References

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