



Individual Risk Factors Associated with Scabies in Boarding School

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Abstract. Scabies is still a health problem that often occurs in boarding school environments. Several previous studies have discussed the risk factors for scabies in several boarding schools, but those discussing scabies in boarding schools in the Central Java region are still limited. This study aims to analysed individual risk factors related to occurrence of scabies in boarding schools, Central Java. Case control study conducted on VIP AL-HUDA Middle School students, Kebumen City, Central Java Province. Purposive sampling technique. Research data uses questionnaires and physical examination to diagnose scabies. Analysis using chi-square. The results of the analysis show that knowledge ($p=0.010$), attitude ($p=0.027$), behavior ($p= 0.010$) were related to occurrence of scabies.

Keywords: Scabies, Boarding School, Risk Factors.

1. Introduction

Sarcoptes scabiei hominis variety is cause of dermatitis disease called scabies [1][2]. Scabies is a cosmopolitan disease in Indonesia and often occurs in areas where hygiene is not maintained [1]. Several previous studies showed a fairly high prevalence of scabies in boarding schools in Central Java, such as in Kendal at 26.8% [3][4], and in Wonosobo at 28% [5].

Symptoms that appear in scabies sufferers include itching and tunnel lesions that occur in predilection locations such as the interdigital, axilla, around the umbilicus, scrotum, and areola mammae. Community groups that are vulnerable to scabies are groups in close proximity to each other, such as prisons, dormitories, boarding schools, sanatoriums, orphanages and nursing homes [2].

Several risk factors related to scabies include personal hygiene, environmental sanitation, physical water conditions, age, residential density, room ventilation [6], and knowledge level [6][7]. Other factors such as skin cleanliness, hand cleanliness, and bed cleanliness are also risk factors for scabies [4]. Environmental factors including the physical

environment, biological environment, social environment was also risk factors for scabies [7]. There are still limited studies discussing risk factors for scabies, which is why author wants to know the risk factors associated with scabies in boarding schools.

2. Methods

Case control study conducted on students of VIP AL-HUDA Middle School, Kebumen City, Central Java Province. Purposive sampling technique. Case group is students who suffer from scabies and control group is those who do not suffer from scabies. Each group consisted of 30 students with a ratio between the case group and the control group of 1:1. Inclusion criteria include age 13 – 14 years, staying for a minimum of 6 months in boarding school. Research data is in the form of a questionnaire. Diagnosis of scabies is made based on the history and physical examination carried out by a doctor. Analysis using chi-square. The research has received ethical approval from the UMY Faculty of Medicine with number 301/EC/-KEPK FKIK UMY/XI/2021.

3. Result

From 30 samples were divided into 2 groups, namely 15 students in the case group (scabies) and 15 students in the control group (no scabies). The sample characteristics in table 1 showed that 16 students (53.3%) were 13 years old, 16 students (53.3%) female, 16 students (53.3%) had less knowledge, 17 students (56.7%) had good attitudes, and good behavior by 16 students (53.3%).

Table 1. Student characteristics.

Variable	Percentage (%)
Age (yo)	
13	16 (53.3)
14	14 (46.7)
Sex	
Male	14 (46.7)
Female	16 (53.3)
Knowledge	
Less	16 (53.3)
Good	14 (46.7)
Attitudes	
Less	13 (43.3)
Good	17 (56.7)
Behavior	
Less	14 (46.7)
Good	16 (53.3)

Scabies	
Yes	15 (50.0)
No	15 (50.0)

From table 2, it was found that there was a relationship between knowledge and the occurrence of scabies ($p=0.010$, $PR=11.000$, $CI=1.998 - 60.572$) Attitude is related to the occurrence of scabies ($p=0.027$, $PR=8.000$, $CI=1.522 - 42.042$). Behavior is related to the occurrence of scabies ($p=0.010$, $PR=11.000$, $CI=1.998 - 60.572$)

Table 2. Analysis of relationship between knowledge, attitudes and behavior with scabies

Risk factors	P-value	PR (95% CI)
Knowledge		
Less	0.010	11.000 (1.998 - 60.572)
Good		
Attitudes		
Less	0.027	8.000 (1.522 - 42.042)
Good		
Behavior		
Less	0.010	11.000 (1.998 - 60.572)
Good		

4. Discussion

Knowledge about scabies is related to occurrence of scabies. These results are similar to previous research in Tasikmalaya which stated that there was a relationship between knowledge about scabies and occurrence of scabies in boarding schools [8]. Previous research at South 1 Health Center, in South Singkawang also stated that there was a relationship between knowledge to occurrence of scabies. [9] However, there are studies that state that knowledge is not a factor in the risk of scabies [4].

With good knowledge, students are expected to be able to make efforts to prevent scabies, as in previous research which stated that there was a relationship between scabies knowledge and how to prevent scabies [10] and scabies knowledge was related to the quality of life of scabies sufferers [11]. Knowledge of risk factors for scabies includes changing clothes together, sanitation hygiene such as skin cleanliness, hand cleanliness, and bed cleanliness [4]. Personal hygiene is related to the occurrence of scabies [9].

Attitudes are related to occurrence of scabies. The results of this study are different from previous research which stated that attitudes were not related to the incidence of scabies at the Nurul Musthofa Boarding School in Tanjung Tabalong [12], but at the Ar-Rofi'I Boarding School it was stated that there was a relationship between attitudes and occurrence

of scabies [13]. Another research conducted among correctional inmates in Bangka Belitung Province which discussed attitudes also showed that there was a relationship between attitudes and occurrence of scabies [14]. Attitudes are also related to how to prevent scabies [10].

Behavior related to occurrence of scabies. The results of this study are similar to previous research which stated that there was a relationship between PHBS behavior and occurrence of scabies at the An-Nur Ngrukem Boarding School Sewon Bantul, Yogyakarta [15], and however, this result was different from research conducted in Malang which stated that there was no relationship between behavior and occurrence scabies [11][12]. The behavior of implementing health protocols during the COVID-19 pandemic is also related to the incidence of scabies [16].

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