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The Relationship Between Personal Hygiene And The Incidence Of Pediculosis Capitis Among Students Of Sungai Beringin 02 Public Elementary School, District 50 Kota

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ABSTRACT

Introduction. Pediculosis capitis or commonly known as head lice is a skin infection that attacks the human head. It is caused by the ectoparasite *Pediculus Humanus Capitis*, which lives by sucking blood on the scalp of infected people. One of the factors that can be related to pediculosis capitis is personal hygiene. The general objective of this research is to determine the relationship between personal hygiene and the incidence of pediculosis capitis in students at Sungai Beringin 02 Public Elementary School, Kabupaten 50 Kota. **Methods.** This research uses an analytical observational method with a cross-sectional approach, namely a study conducted to study the dynamics of the correlation between two variables. The accessible population in this research is all students of Sungai Beringin 02 Public Elementary School, Kabupaten 50 Kota in 2023. **Results.** This study shows 63.6% of students are not infested with pediculosis capitis. The highest class infested with pediculosis capitis is class 3-4, there are 50%, 95% of students who are infested with pediculosis capitis are female, and 65.5% of students have good personal hygiene. The results of the research show that there is a relationship between personal hygiene and the incidence of pediculosis capitis in students because 68.4% of students who are infested with pediculosis capitis do not have good personal hygiene. **Conclusion.** The results of bivariate analysis show that there is a significant relationship between the level of personal hygiene and the incidence of Pediculosis Capitis in students at Sungai Beringin 02 Public Elementary School with a p-value of 0.001.

1. Introduction

Pediculosis capitis is a condition affecting the scalp skin caused by the ectoparasite *Pediculus Humanus Capitis*, which feeds on human blood.[1] Infestation by this ectoparasite is commonly found in primary school-aged children, especially those aged 8-10 years old.[3] Pediculosis capitis occurs 41 times more frequently in girls than in boys.[4] Data from the Centers for Disease Control and Prevention (CDC) in 2016 in the United States showed that approximately 6-12 million people are infected yearly.[5] In Indonesia, exact figures for the incidence of pediculosis capitis have not been obtained. However, a study conducted in 2018 at Miftahul Ulum Islamic Boarding School Kalisat Jember found that 74.6%, or 214 out of 287 students, had pediculosis capitis.[7] Another study also mentioned that in 2018, 58% of head lice cases were found in the orphanage Liga Dakwah Sumatera Barat, and 64.6% of cases in the boarding school An-Nahdliyah Islamic Childcare Center, Malang Regency in 2021.[9]

Several factors may be associated with pediculosis capitis, including population density, gender, age, economic status, personal hygiene, and the sharing of personal items.[1] Knowledge regarding personal hygiene behavior is still very limited, especially among primary school-aged children. Researchers are interested in conducting a study on students from Sungai Beringin 02 Public Elementary School Kabupaten 50 Kota to determine whether there is a correlation between personal hygiene and the occurrence of pediculosis capitis. This study is expected to be used as an educational tool and to prevent the spread of pediculosis capitis among all students of Sungai Beringin 02 Public Elementary School.

2. Methods

This study utilized an analytical observational method with a cross-sectional approach. The target population for this study was all students of Sungai Beringin 02 Public Elementary School, District 50 Kota. The sample selection criteria included:

1. Students present during data collection.

2. Students willing to participate as respondents.

The sampling method used in this research was purposive sampling, with univariate and bivariate data analysis.

3. Results

3.1. Frequency distribution of pediculosis capitis incidence among students of Sungai Beringin 02 Public Elementary School

Based on the research findings, the frequency distribution of students infested with head lice can be seen in Table 1.

3.2. Frequency distribution of pediculosis capitis incidence among students of Sungai Beringin 02 Public Elementary School based on classes

Based on the research findings, the frequency distribution of students infested with head lice based on classes can be seen in Table 2.

3.3. Frequency distribution of pediculosis capitis incidence among students of Sungai Beringin 02 Public Elementary School based on gender

Based on the research findings, the frequency distribution of students infested with head lice based on gender can be seen in Table 3.

3.4. Frequency distribution of students' personal hygiene levels at Sungai Beringin 02 Public Elementary School

Based on the research findings, the frequency distribution of students' personal hygiene can be seen in Table 4.

3.5. Analysis of the relationship between personal hygiene and incidence of pediculosis capitis among students of Sungai Beringin 02 Public Elementary School

Based on the research findings, the analysis of relationship between personal hygiene and incidence of pediculosis capitis among students can be seen in Table 5.

Table 1. Frequency distribution of pediculosis capitis incidence among students of Sungai Beringin 02 Public Elementary School

Variable	f	Percentage (%)
Pediculosis capitis	20	36.4%
No pediculosis capitis	35	63.6%
Total	55	100%

Table 2. Frequency distribution of pediculosis capitis incidence among students of Sungai Beringin 02 Public Elementary School based on classes

Variable	f	Percentage (%)
Class 1 – 2	3	15%
Class 3 – 4	10	50%
Class 5 – 6	7	35%
Total	20	100%

Table 3. Frequency distribution of pediculosis capitis incidence among students of Sungai Beringin 02 Public Elementary School based on gender

Variable	f	Percentage (%)
Female	19	95%
Male	1	5%
Total	20	100%

Table 4. Frequency distribution of students' personal hygiene levels at Sungai Beringin 02 Public Elementary School

Variable	f	Percentage (%)
Good	36	65.5%
Not good	19	34.5%
Total	55	100%

Table 5. Analysis of the relationship between personal hygiene and incidence of pediculosis capitis among students of Sungai Beringin 02 Public Elementary School

Personal Hygiene	Pediculosis Capitis Incidence						p-value
	Positive		Negative		Total		
	f	%	f	%	f	%	
Good	7	19.4%	29	80.6%	36	65.5%	**0,001**
Not Good	13	68.4%	6	31.6%	19	34.5%	
Total	20	36.4%	35	63.6%	55	100%	

4. Discussion

Based on the frequency distribution of students infested with pediculosis capitis, this study shows that out of the total 55 students, 20 students (36.4%) were infested with pediculosis capitis. This is in line with a study conducted by Sulistyani in 2019, which was carried out in a primary school in the Bangunharjo Sewon Bantul Yogyakarta area, where the number of respondents who did not experience pediculosis capitis was higher at 61.7%.[4] The incidence rate of pediculosis capitis among students of Sungai Beringin 02 Public Elementary School is lower because most students already have good personal hygiene behavior and sufficient knowledge. Knowledge can be acquired by students through education and motivation from parents and teachers at school. The dissemination of information about personal hygiene conducted by local healthcare workers in coordination with educators and parents makes parents more attentive to their children's personal hygiene.[8]

Based on the research findings, the frequency distribution of students infested with head lice based on classes shows that in classes 3-4, there were 10 respondents (50%) infested with head lice. This is consistent with a study conducted by Nunung Sulistyani in 2019 on primary school students in Bangunharjo Sewon Bantul Yogyakarta, where the research results found that 60.8% of respondents aged 8-9 years were infested with head lice.[4] Students in grades 3-4 of primary school are usually aged 8-10 years. This age is a transition period from childhood to adolescence, where they can be considered as children but much more independent. Parents no longer fully supervise every activity of their children. This makes children tend to neglect their personal hygiene. The behavioral characteristics of children aged 6-7 years are different from those of children aged 9-10 years. On average, children aged 6-7 years still depend on their parents for personal hygiene. Usually, a child's personal hygiene is still under the supervision of parents and teachers at school.[8] Children aged 11-12 years are considered to be in the early adolescent phase. Behavioral changes from childhood to early adolescence are influenced by emerging motivation in a child, so in students in grades 11-12.[10,11]

Based on the research findings, the frequency distribution of students infested with head lice based on gender shows that there are 19 respondents (95%) who are female and infested with head lice. This is consistent with a study conducted by Nur Hidayah in 2019 on primary school students at Inpres Benteng Timur Selayar, South Sulawesi, where the research explained that 90.44% of respondents with pediculosis capitis were female.[7] The reason for this difference in gender distribution is likely due to the fact that boys tend to have short hair, while girls generally have long hair. Long hair requires better maintenance; if the hair is left damp after washing or sweaty, it becomes a preferred medium for the development of head lice. Primary school-aged girls typically wear headscarves while engaging in activities in school areas. This can affect the absorption of sweat on the scalp, making the hair more humid.[12]

Based on the research findings, the frequency distribution of students' personal hygiene shows that out of the total 55 students, 36 students (65.5%) have good personal hygiene. Currently, various health-related information can be obtained through various media. Children already receive information on personal hygiene from their parents at home and teachers at school. The high level of children's knowledge about personal hygiene can be influenced by the role of educators in school, support from parents, the availability of personal hygiene facilities, and access to various health media. This has led to generally good personal hygiene levels among children.[13-5]

Based on research findings the Analysis of the Relationship between Personal Hygiene and Incidence of pediculosis capitis among Students shows statistical analysis using the chi-square test, resulting in a p-value of 0.001. Since p-value 0.001 < 0.005, the null hypothesis (H0) is rejected, meaning there is a significant relationship between personal hygiene and the incidence of pediculosis capitis among students of Sungai Beringin 02 Public Elementary School. If students have poor personal hygiene, they are at risk of pediculosis capitis. This is because respondents who suffer from pediculosis capitis are more likely to have poor personal hygiene compared to those with good personal hygiene. Out of 20 respondents suffering from pediculosis capitis, 68.4% of them have poor personal hygiene. This is supported by a study conducted by Rahmi Amir et al. in 2023, which showed that pediculosis capitis with poor personal hygiene accounted for 80.8% of respondents. The chi-square test results from that

study indicated a relationship between personal hygiene and the incidence of pediculosis capitis among female students at the Islamic boarding school DDI Ujunglare Parepare, with a p-value of 0.037 < 0.050.[16]

5. Conclusion

The prevalence of pediculosis capitis among all students is lower than those not infested.mThe frequency of pediculosis capitis mostly occurs in students in grades 3-4, where students are aged 8-10 years old. The frequency of pediculosis capitis mostly occurs in female students. Most students have good personal hygiene. Bivariate analysis shows a significant relationship between personal hygiene levels and the incidence of pediculosis capitis among students of Sungai Beringin 02 Public Elementary School, where students with poor personal hygiene are at risk of pediculosis capitis.

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