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The Comparison Level of Parent's Knowledge Towards Interdigital Tinea Pedis (Athlete's foot) in Parents with and without Interdigital Tinea Pedis in Namu Trasi

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Abstract. ***Background****: Tinea pedis occurs in 30-70% of the world's population. In Indonesia, some data are known, such as statistical data on the prevalence of tinea pedis in several teaching hospitals, such as RS. Dr. Soetomo, RSCM, RS. Dr. Hasan Sadikin, RS. Dr. Sardjito obtained a relative yield of 16%. Therefore, public knowledge about tinea pedis is something that is very relatively owned by the community to respond to, control, and prevents the occurrence of tinea pedis.* ***Objective****: The purpose of this study was to compare the level of parental knowledge of Interdigital Tinea Pedis (Athlete's foot) in parents with and without Interdigital Tinea pedis in Namu Trasi.* ***Method****: This research was conducted using an analytical method of cross-sectional design with a collection technique using a questionnaire to be filled out by the respondent and then analyzed using a statistical program application.* ***Results****: The level of knowledge of parents with and without Interdigital Tinea pedis in Namu Trasi Village was 45.8% with good knowledge, 34.7% with sufficient knowledge, and 19.4% with poor knowledge.* ***Conclusion****: There is a significant difference between the level of parental knowledge of Interdigital Tinea pedis (Athlete's foot) in patients and non-patients with Interdigital Tinea pedis in Namu Trasi*

Keyword: *Knowledge, Parent, Tinea pedis*

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1 Introduction

Fungal infection of the skin is a skin disorder caused by fungi or often called dermatomycosis [1]. Fungal infections of the skin and nails are the most numerous and widespread group of mycoses. The incidence of superficial fungal infections or dermatomycosis is about 20-25% of the world's population and is expected to continue to increase making it one of the most frequent infections [2].

The most common dermatomycosis is dermatophytosis, this dermatophyte infection is known as "Tineas". Dermatophyte fungi are a group of fungi that can digest keratin, such as the stratum

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corneum in the epidermis, hair, nails, and cause dermatophytosis. Dermatophytes are divided into three genera, namely Trichophyton, Microsporum, and Epidermophyton as the main trigger of dermatophytosis [3].

It is estimated that Tinea pedis occurs in 30-70% of the world's population. This condition is mainly caused by T. rubrum, T. mentagrophytes var. interdigitale, and Epidermophyton floccosum, and males are more affected than females [4].

In Indonesia, the prevalence of Tinea pedis is not widely known. However, some data are known, such as statistical data on the prevalence of Tinea pedis in several teaching hospitals in Indonesia, such as RS. Dr. Soetomo, RSCM, RS. Dr. Hasan Sadikin, RS. Dr. Sardjito obtained a relative result of 16% [5]. In addition, the prevalence of the incidence of Tinea pedis in the Dermatophytosis Profile study at the Deli Serdang Regional General Hospital, North Sumatra found the number of cases from 2015 to 2017 was 345 cases dermatophytosis. Based on the results of the research conducted, the third most cases of dermatophytosis in 2015-2017 according to the location classification of the disease were Tinea pedis. In 2015 there were 23 cases (26.7%), 2016 obtained 30 cases (19.2%) and 2017 obtained 15 cases (14.6%) [6].

Tinea pedis, an infection of the feet and toes where this condition is a public health problem because it is contagious and recurring. Tinea pedis often occurs in someone who is in frequent contact with water and the use of closed shoes such as boots causes a humid environment and is suitable for fungal growth. Therefore, public knowledge about Tinea pedis is something that is very relatively owned by the community to respond, control, and prevent the occurrence of Tinea pedis [7].

At the Bendosari Health Center with an age range of 17-60 years, it was concluded that the level of knowledge of dermatomycosis sufferers in the good category was 55 respondents (94.8%) and the sufficient category was 3 respondents (5.2%) [8].

2 Methodology

This research is an analytical study with a cross-sectional design, as the study was carried out to compare the level of parental knowledge of Interdigital Tinea Pedis (Athlete’s foot) in parents of patients with and without Interdigital Tinea Pedis in Namu Trasi in one study. This research was conducted in Namu Trasi because after I conducted a preliminary survey on May 13, 2021, it was known information from the village head that the people there worked as farmers and gardeners, which made the people in Namu Trasi often use rubber shoes and were often exposed to water and a humid environment, which is a predisposing factor for Tinea pedis. The sample size was calculated using the Lemeshow formula for categorical analytic data against 2 independent proportions, namely 36 people/group and the sampling technique used the consecutive sampling

technique, namely the technique of all subjects being observed and meeting the sample selection criteria and then included in the sample until the required sample size fulfilled.

Inclusion criteria in this study are: Parents of patients with and without Interdigital Tinea pedis are domiciled in Namu Trasi Kec. Sei Bingai, Kab. Langkat, Case samples were taken based on clinical symptoms of Interdigital Tinea Pedis and consultation and direction from a dermatologist specialist, Parents aged 30 – 70 years. The exclusion criteria in this study were: Parents who could not be reached and did not fill out the questionnaire completely. The data used in this study is a type of primary data, namely data obtained directly from the research subject. Primary data in this study were obtained using a questionnaire in the form of a questionnaire. The questionnaire used contains true and false statements to reveal the comparison of the level of parental knowledge of Interdigital Tinea Pedis (Athlete's foot) in parents of patients with and not patients with Interdigital Tinea Pedis in Namu Trasi, where this study uses a modified questionnaire of previous studies that entitled "Tingkat Pengetahuan Ibu Rumah Tangga Tentang Tinea Pedis Di Kelurahan Tembung Tahun 2015".

Primary data obtained from respondents were then processed and analyzed using univariate analysis to describe the characteristics of respondents and bivariate analysis was carried out to determine whether or not there was a difference in the level of knowledge of parents of patients with and without Interdigital Tinea Pedis against Interdigital Tinea Pedis (Athlete's foot). Analysis of statistical test results to see the close relationship between the two variables used the Chi-Square test with the help of a computer program application, namely SPSS.

3 Result

From table 1, the characteristics of respondents based on the latest education on the types of respondents, for without Tinea pedis respondents, it can be seen that the highest score was 26 respondents with high school education, followed by 6 respondents with undergraduate education and 4 respondents with junior high school education. In the type of respondents who are sufferers of Tinea pedis, it can be seen that the highest number is in the characteristics of the last education, namely 14 with the last education being elementary school, followed by 11 respondents with the last education being high school, 9 people with the last education being junior high school and 2 people not attending school.

Table 1 Frequency distribution of characteristics of the last education based on the types of respondents

Last education	**Respondent**	
	Without Tinea pedis	**With Tinea pedis**
Unschooled	0	2
Primary School	0	14
Junior High School	4	9
Senior High School	26	11

Bachelor	6	0
Total	**36**	**36**

Based on table 2, it can be seen that the characteristics of respondents based on sources of information on the types of respondents, in respondents without Interdigital Tinea Pedis, it can be seen that the highest score as many as 15 respondents received information about Interdigital Tinea Pedis type from health workers, followed by 10 respondents received information about Interdigital Tinea Pedis from family, 5 respondents got information about Interdigital Tinea Pedis from friends, 1 respondent got information about Interdigital Tinea Pedis from television, 1 respondent got information about Interdigital Tinea Pedis from magazines/newspapers, 1 respondent got information about Interdigital Tinea Pedis from school and 3 respondents did not receive information about Interdigital Tinea Pedis. In the type of respondent who is a sufferer of Tinea pedis, it can be seen that the highest number of characteristics of information sources is as many as 13 respondents received information about Interdigitalis Tinea Pedis from friends, 8 respondents received information about Interdigital Tinea Pedis from health workers, 3 respondents received information about Interdigital Tinea Pedis from their family, 3 respondents received information about Interdigital Tinea Pedis from television, 1 respondent received information about Interdigital Tinea Pedis from magazines/newspapers, 1 respondent received information about Interdigital Tinea Pedis from neighbors and 7 respondents did not receive information about Interdigital Tinea Pedis.

Table 2 Frequency distribution of information source characteristics based on the types of respondents

Resources	**Respondent**	
	Without Tinea pedis	**With Tinea pedis**
Friend	5	13
Family	10	3
Television	1	3
Magazines/newspapers	1	1
Health Care Worker	15	8
School	1	0
Neighbor	0	1
Never got the information	3	7
Total	**36**	**36**

From table 3, the characteristics of respondents based on gender in the types of respondents, 15 respondents were male and 21 female respondents without Tinea Pedis. In the type of respondents who are sufferers of Tinea pedis, as many as 9 respondents are male and 27 respondents are female.

Table 3 Frequency distribution of gender characteristics based on the types of respondents

Gender	**Respondent**

	Without Tinea pedis	**With Tinea pedis**
Male	15	9
Female	21	27
Total	**36**	**36**

From Table 4, it can be seen that based on the level of knowledge of respondents in patients with Tinea pedis, as many as 10 people have good knowledge, 17 people have sufficient knowledge and 9 people have less knowledge with a percentage in the good knowledge category of 27.8%, sufficient knowledge of 47 .2%, and 25% less knowledge.

Table 4 Frequency distribution of the level of knowledge of parents with Interdigital Tinea Pedis

Level of Knowledge	**Parents with Interdigital Tinea Pedis**	
	n	**%**
Good	10	27,8%
Fair	17	47,2%
Poor	9	25%
Total	**36**	**36**

From Table 5, it can be seen that based on the level of knowledge of the types of respondents, parents without Interdigital Tinea pedis have good knowledge of 23 people, sufficient knowledge is 8 people and less knowledge is 5 people with a percentage of good knowledge category of 63.9 %, sufficient knowledge is 22.2% and less knowledge is 13.9%.

Table 5 Frequency distribution of the level knowledge of parents without Interdigital Tinea Pedis

Level of Knowledge	**Parents without Interdigital Tinea Pedis**	
	n	**%**
Good	23	63,9%
Fair	8	22,2%
Poor	5	13,9%
Total	**36**	**36**

Based on Table 6, it can be seen that parents without Interdigital Tinea Pedis have good knowledge of 23 people, 8 people have sufficient knowledge and 5 people lack knowledge. Respondents who are sufferers of Tinea pedis have good knowledge of 10 people, 17 people have sufficient knowledge and 9 people have less knowledge. It can be seen that the results of the level of knowledge in the good category have the largest percentage of 45.8% (33 people), followed by the level of knowledge in the sufficient category of 34.7% (25 people) and the level of knowledge with the less category of 19.4% (14 people).

Table 6 Frequency distribution of the level knowledge based on the types of respondents

		Respondent			
		Without Interdigital Tinea pedis	**With Interdigital Tinea Pedis**	**n**	**%**
Level of Knowledge	Good	23	10	33	45,8%
	Fair	8	17	25	34,7%
	Poor	5	9	14	19,4%
	Total	**36**	**36**	**72**	**100%**

Based on the results of the statistical test in table 7, it can be seen that based on the results of the analysis using the Chi-Square test, the p-value <0.05 is 0.009

Table 7 Comparison of the level of knowledge of parents with and without Interdigital Tinea Pedis against Interdigital Tinea Pedis (Athlete's foot)

Variable	**Level of Knowledge**			**p-value**
	Good	**Fair**	**Poor**	
Respondent				
Without Interdigital Tinea Pedis	23	8	5	0,009
With Interdigital Tinea Pedis	10	17	9	
Total	**33**	**25**	**14**	
%	**45,8%**	**34,7%**	**19,4%**	

4 Discussion

From the results of the study above, it can be concluded that the level of knowledge of parents with Interdigital Tinea Pedis against Interdigital Tinea Pedis (Athlete's foot) can be concluded to have sufficient knowledge. This is in line with research conducted by Roy Rinaldi Marpaung that the level of knowledge of the respondents studied had a sufficient level of knowledge, namely 45 respondents (62.9%) [9]. The lack of knowledge of parents with Interdigital Tinea Pedis is also similar to the results of Priyatno's research (2019) which states that almost half of the total sample has a level of knowledge about preventing the recurrence of Tinea pedis (Athlete's foot) with a moderate category [10]. Likewise with the results of research conducted by Nurjannah (2012) states that school-age children have poor hygiene knowledge [11].

Parents who are not with Interdigital Tinea Pedis against Interdigital Tinea Pedis can be concluded to have good knowledge. This is similar to the research conducted by Maria Chindyvita Darung that the overall knowledge score of respondents has a good knowledge level of 54.4% [12]. Differences in the level of knowledge of Interdigital Tinea Pedis (Athlete's foot) in parents with and without Interdigital Tinea Pedis may occur because the level of knowledge is influenced by many factors such as education, experience, sources of information, social culture, and many more [13].

The existence of differences in the level of knowledge can be proven by using the Chi-Square statistical test, the p-value <0.05 is equal to 0.009 so that Ho is rejected and it can be concluded that in this study there was a significant difference between the level of parental knowledge of Interdigital Tinea Pedis (Athlete's foot) in parents with Interdigital Tinea Pedis with parents who are not patients with Interdigital Tinea Pedis.

The difference in the level of knowledge can be influenced by the level of education and the source of information obtained. Where in general, the higher a person's education, the wider the knowledge that person, and information obtained from various sources will affect a person's level of knowledge. A person who gets a lot of information from the right sources, for example, health workers, tends to have better knowledge of health information than just hearing or seeing it [14].

The above statement relates to the characteristics of the respondents in this study. Where in the group of parents who are not tinea pedis sufferers have a higher level of education than the group of parents with tinea pedis with the majority of high school and undergraduate education levels. Likewise, with the characteristics of the source of information, the majority of parents with tinea pedis received information from health workers, while the majority of parents with tinea pedis received information from friends. This can be seen in table 1 and table 2.

5 Conclusion

There is a significant difference between the level of parental knowledge of Interdigital Tinea Pedis (Athlete's foot) in parents with and without Interdigital Tinea Pedis in Namu Trasi statistically where the p-value is 0.009 (p<0.05)

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