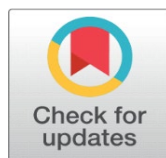


DESCRIPTION OF THE LEVEL OF KNOWLEDGE AND ATTITUDES ABOUT PERSONAL HYGIENE AGAINST *PITYRIASIS VERSICOLOR* IN CLASS 2016 STUDENTS AT THE FACULTY OF MEDICINE, INDONESIAN CHRISTIAN UNIVERSITY

Cicylia Alextria Isadora Nikita Mangindaan ¹, Rahayu Yekti ²  

¹ Medical Faculty student, Christian University of Indonesia, Jakarta 13630, Indonesia

² Biomedic Department, Medical Faculty, Christian University of Indonesia, Jakarta 13630, Indonesia



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Corresponding Author

Rahayu Yekti,
rahayuyekti637@gmail.com

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ABSTRACT

The study aimed to apprehend the knowledge and attitude about about Personal Hygiene toward *Pityriasis versicolor* in the students of Medical Faculty in Christian University of Indonesia class of 2016. This study was a descriptive study. The sample size in this study was 63 respondents who filled out a questionnaire. The sampling methods was Random Quota Sampling. From this study, we obtained the of students of Medical Faculty in Christian University of Indonesia class of 2016 who had a good knowledge were 49 respondents (77,8%) and who had an enough knowledge were 14 respondents (22,2%). And for the attitude who had a good attitude were 56 respondents (88,9%) and enough attitude were 7 respondents (11,1%). Using Chi-Square test, it achieved the p value of 0.177 ($p > 0.05$) thereby statistically there issignificant impact between personal hygiene and the incidence pityriasis versicolor.

Keywords: Hygiene Personal, Pityriasis Versicolor, Student, Attitude, and Knowledge

1. INTRODUCTION

Personal hygiene (self/personal hygiene) is the effort of individuals or groups to maintain health through individual hygiene by controlling environmental conditions [Depkes \(2008\)](#). Where an individual has efforts to maintain personal hygiene, including bathing, cleanliness of the skin, teeth, mouth, eyes, nose, ears, hair, feet, nails, and genitalia. Improper personal hygiene will make it easier for the

body to be attacked by various diseases, such as skin diseases, infectious diseases, oral diseases, gastrointestinal diseases and can eliminate the function of certain body parts such as the skin. [Mustikawati \(2012\)](#). Personal hygiene is an individual's self-care behavior to maintain their health, therefore personal hygiene is included in specific primary prevention measures. Personal hygiene is an important aspect of maintaining individual health because good personal hygiene will minimize the entry of micro-organisms that are everywhere and ultimately prevent a person from contracting diseases, both skin diseases, infectious diseases, oral diseases, and gastrointestinal diseases. [Zahra et al. \(2019\)](#).

Pityriasis versicolor is a superficial fungal infection of the skin, caused by *Malassezia*, a dimorphic, lipophilic fungus. This fungus is a normal flora on the skin but can cause disease if the hyphae turn into pathogens. Environment, genetics, and immunity are predisposing factors that can cause this fungus to become a pathogen and cause disease. This fungus develops well in a warm and humid atmosphere. There are differences in *Pityriasis versicolor* infection between children and adolescents, possibly caused by hormonal changes that cause increased sebum production and cause an environment rich in lipids where the fungus will grow more easily. In general, this disease occurs in adolescents and young adults who are more active, and this disease generally has an impact on the quality of life of someone who is infected [Rivard & Usn \(2013\)](#). This disease is found throughout the world, especially in tropical areas with hot and humid climates, including in Indonesia. Its prevalence reaches 50% in tropical countries. In Jakarta, this disease group always ranks second after dermatitis. *Pityriasis versicolor* is more common in young adults aged 15-24 years. Where at this age level in general is the age criteria of students. [Tan & Reginata \(2015\)](#). *Pityriasis versicolor* is a chronic superficial skin infection that does not give subjective symptoms, characterized by areas of segmented or discolored fine scales, scattered discretely or confluenty. *Pityriasis versicolor* is a disease process that appears when a fungus, namely *Malassezia* (one of the normal flora on the skin), transform into hyphae forms and cause changes in skin pigment. In this process, keratinase is also produced and causes the stratum corneum to loosen and cause scales to form. This disease can present either as hypopigmentation, hyperpigmentation, or a combination of both. [Rivard & Usn \(2013\)](#) [Leung et al. \(2022\)](#).

The process of synthesizing melanin is called melanogenesis and three important enzymes are needed in the formation of pigment, these enzymes include tyrosinase, tyrosinase-related protein1 (TRP1) and tyrosinase-related protein2 (TRP2). -Aquino (DQ). Cysteine will then convert DQ to cysteinyl DOPA and will be oxidized, also polymerized into pheomelanin which is reddish yellow. If there are no thiol compounds (cysteine and glutathione or thioredoxin), DQ will immediately become DOPAchrome which is blackish brown. DOPAchrome will spontaneously lose carboxylic acid and 5,6 dihydroxyindole (DHI) which is immediately oxidized and polymerizes into a blackish brown. TRP 2 will convert DOPAchrome to DHI-2carboxyl acid (DHICA). Furthermore, tyrosinase and TRP1 will convert into melanin which is light brown in color. DHI melanin and DHICA melanin are blackish brown in color called eumelanin. [Zokaei et al. \(2019\)](#) [Suryaningsih & Soebono \(2016\)](#). As a result of these fungal changes, it causes hypopigmented and hyperpigmented lesions. Hypopigmentation lesions occur due to *Malassezia* sp. Producing carboxylic acid (azelaic acid), this acid acts as a tyrosinase inhibitor, inhibits the transformation of tyrosine in the pigment melanin and produces a metabolite (pityriacitrin) which has the ability to absorb ultraviolet light. [Zokaei et al. \(2019\)](#).

Based on the background above, the researcher is interested in conducting research on describing the level of knowledge and attitudes about personal hygiene against *Pityriasis versicolor*

2. RESEARCH METHOD

This research is a descriptive survey research. The subjects of this study were students of class 2016 at the Faculty of Medicine at the Indonesian Christian University. This research was conducted by distributing questionnaires to assess the level of personal hygiene against *Pityriasis versicolor*.

3. RESULTS

In [Table 1](#) Based on age, it is known that of the 63 respondents, the majority were 20 years old, as many as 40 people (63.5%) and the smallest number were 22-year-old respondents, 3 people (4.8%).

Table 1

Table 1 Age of Respondent		
Age (years)	Frequency	Percent
19	8	12.7%
20	40	63.5%
21	12	19%
22	3	4.8%
Total	63	100%

Furthermore, to determine the level of respondents' knowledge of *Pityriasis versicolor*, a categorization of respondents' answers was carried out by calculating the score interval for each category of knowledge level (Good-Adequate-Poor) as follows:

$$\text{Interval} = \frac{\text{Maximal score} - \text{Minimal score}}{\text{Categori}}$$

$$\frac{15 - 0}{3} = 5.$$

Based on the calculation results, the score interval for each category is 5, so the guide for categorizing the level of knowledge of respondents is as follows:

Score 0 – 5 = Poor

Score 6 – 10 = Adequate

Score 11 – 15 = Good.

Furthermore, based on the score interval guide, the categories of respondents' knowledge levels are as follows:

Table 2

Table 2 Knowledge Category		
	Frequency	Percent
Good	49	77.80%
Adequate	14	22.2%
Total	63	100%

Based on the results of data processing presented in Table 2, it can be seen that of the 63 respondents, most of the 49 people (77.8%) have a good level of knowledge, while the rest are respondents who have a sufficient level of knowledge about *Pityriasis versicolor*, 14 people (22.2%).

Furthermore, to determine the level of respondents' attitudes towards Pityriasis versicolor, categorization of respondents' answers was carried out by calculating the score interval for each category of knowledge level (Good-Enough-Poor) as follows:

$$\text{Interval} = \frac{\text{Maximal score} - \text{Minimal score}}{\text{Categori}}$$

$$\frac{60 - 15}{3} = 15.$$

Based on the calculation results, the score interval for each category is 15, so the guide for categorizing the attitude of the respondents is as follows:

Score 15 – 30 = Poor

Score 31 – 45 = Enough

Score 46 – 60 = Good.

Furthermore, based on the score interval guide, the categories of respondents' attitudes are as follows:

Table 3

Table 3 Attitude Category		
	Frequency	Percent
Good	56	88.9%
Enough	7	11.1%
Total	63	100%

Based on the results of data processing presented in Table 3, it can be seen that of the 63 respondents, the majority of 56 people (88.9%) had a good attitude, while the rest were respondents who had a sufficient attitude towards *Pityriasis versicolor*, 7 people (11.1%).

Table 4

Table 4 Correlation Between Knowledge and Attitude					
Crosstabulation knowledge and attitude					p Value
		Attitude			
		Good	Enough	Total	
Knowledge	Good	Count	45	4	49
		Expected Count	43.6	5.4	49.0
		%	91.80%	8.2%	100.0%
Adequate		Count	11	3	14
		Expected Count	12.4	1.6	14.0
		%	78.6%	21.4%	100.0%
Total		Count	56	7	63
		Expected Count	56.0	7.0	63.0
		%	88.9%	11.1%	100.0%

Based on the results of data processing, it can be seen that of the 49 respondents who have good knowledge, 45 people (91.8%) have more good attitudes. Furthermore, of the 14 respondents who had sufficient knowledge, 11 people (78.6%) also had more good attitudes.

4. DISCUSSION

Based on the results of the study in [Table 2](#), which was conducted on 63 respondents, it showed that the results of the knowledge level of students at the Faculty of Medicine at the Christian University of Indonesia class of 2016 regarding personal hygiene against *Pityriasis versicolor* were in the good category, 49 respondents (77.8%), for the adequate category, 14 respondents (22.2%) and no students fall into the poor category. Knowledge is defined as remembering a material that has been studied before. Included in this level of knowledge is recalling something specific and all the material studied or stimuli that have been received [Pakpahan et al. \(2021\)](#). This research is not in accordance with the results of previous research by Adhi Khrisnamukti, the results of students' knowledge level SMA Negeri 1 Semarang regarding Personal Hygiene for Tinea versicolor Disease (*Pityriasis versicolor*) is good as many as 4 respondents (9%), enough as many as 30 respondents (70%) and less as many as 9 respondents (21%) [Khrisnamurti \(2014\)](#). This is because students of the Faculty The 2016 batch of Indonesian Christian University Medicine have learned more about *Pityriasis versicolor* than students of SMA N 1 Semarang, which causes a difference in knowledge between the two. Humans get information from the senses and reason, so that tool is considered a source of knowledge. Knowledge is formed by the structure of a person's conception when he interacts with his environment [Rusuli & Daud \(2015\)](#). So, it can be seen that knowledge of maintaining personal hygiene is related to phlegm (*Pityriasis versicolor*) based on information, experience, association and culture of each person.

Attitude is a reaction or response that is still closed from someone towards a stimulus or object, the attitude itself has limitations which can be concluded that the attitude cannot be seen directly, but can only be interpreted in advance from closed behaviour. Attitude has main components including trust or ideas or concepts, emotional life or evaluation of an object, and tendencies to act. These three components together form a complete attitude (total attitude). In determining this attitude knowledge, thoughts, beliefs, and emotions play an important role. [Pakpahan et al. \(2021\)](#).

Based on [Table 3](#), most of the 63 respondents had a good attitude, namely as many as 56 respondents (88.9%) and only 7 respondents (11.1%) who had an enough attitude and no students were included in the poor category, this it can be concluded that students of the Faculty of Medicine at the Indonesian Christian University have a good attitude. These results are in accordance with previous research, namely the level of knowledge and attitudes of dermatomycosis sufferers at the Bendosari Sukoharjo Health Center conducted by Muhammad [Rizki \(2018\)](#) explaining that the attitudes of respondents in the sufficient category were 2 people (3.4%), while in the good category there were 56 people (96.6%) [Rizki \(2018\)](#). This shows that most of the patients who seek treatment at the Bendosari Health Center have a good attitude and only a small number have an adequate attitude. This is because sufferers already have knowledge about the disease, therefore it can be seen that knowledge and attitudes have a relationship that cannot be separated from one another. Knowledge is important in applying the attitude of bathing 2x a day, not using clothes and towels alternately, someone who produces excessive sweat must change frequently and live in a humid temperature. According to

Notoatmodjo's theory, knowledge is one of the most important things in applying attitudes. The results of this study note that students have good knowledge in maintaining hygiene to avoid Pityriasis versicolor, so they can also apply a good attitude, because they know things that must be considered such as bathing must be 2x a day because the activities carried out every day are supported by the type gender and also age which affects the activity of sebum production by the sebaceous glands, then do not wear tight clothes, do not take turns wearing clothes or towels.

Based on the test results presented in [Table 4](#), it is known that the p value (0.177) > 0.05, it is concluded that the relationship between knowledge and attitudes about personal hygiene towards *Pityriasis versicolor* is significant. This is not the same as research conducted by [Zahra et al. \(2019\)](#) which said that there is no relationship between knowledge and attitudes about personal hygiene towards Pityriasis versicolor, but according to the results of research by [Ramdan \(2013\)](#) knowledge has a significant relationship with the occurrence of *Pityriasis versicolor* [Zahra et al. \(2019\)](#) [Tumilaar & Suling \(2019\)](#).

CONFLICT OF INTERESTS

None.

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