The Relationship Between Sufficient Knowledge and Behavior of Medical Students in Faculty of Medicine Universitas Sumatera Utara regarding Acne Vulgaris

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ABSTRACT

Background: Acne vulgaris is a chronic inflammation of pilosebaceous follicles caused by Propionibacterium acnes. The clinical symptoms are polymorphic skin eruption, especially blackheads, non-inflammatory papule, pustule, nodule, and cyst formation. Generally, patients tend to complain of the aesthetic disfigurement caused by acne vulgaris. Even though it is not life-threatening, acne vulgaris can seriously harm patients' confidence and might cause depression. One of risk factors is lack of knowledge and bad behavior. This research aimed to study the knowledge and behavior of medical students in University of North Sumatra regarding acne vulgaris in 2018. The research was observational cross-sectional study. Eighty-eight medical students in University of North Sumatra that fulfilled the inclusion criteria in this study were recruited and were randomized using consecutive sampling. The data was obtained by filling in the questionnaire to evaluate their knowledge and behavior. The accumulated data were processed with computer. The level of knowledge of the medical students in University of North Sumatra is 43.2% (sufficient) and the behavior of the medical students in University of North Sumatra was 68.2% (sufficient). There was a significant relationship between knowledge and behavior of the medical students in University of North Sumatera and acne vulgaris.

Keyword: Acne Vulgaris, Behavior, Knowledge, University Student.

ABSTRAK

Latar Belakang: Acne vulgaris merupakan inflamasi kronis folikel pilosebasea yang disebabkan oleh Propionibacterium acne. Gejala klinis yang muncul umumnya berupa erupsi kulit polimorfik dengan dominasi komedo hitam, papula non inflamasi, pustula, nodus, dan kista. Secara umum, pasien sering mengeluhkan gangguan kosmetik yang ditimbulkan akibat acne vulgaris. Walaupun tidak mengancam jiwa, acne vulgaris dapat membahayakan pasien karena dapat menyebabkan krisis kepercayaan dan depresi. Salah satu faktor risiko adalah pengetahuan dan perilaku buruk. Penelitian ini bertujuan untuk menilai pengetahuan dan sikap mahasiswa kedokteran di Universitas Sumatera Utara (USU) tentang acne vulgaris pada 2018. Penelitian ini berupa penelitian observasional potong-lintang. Sampel penelitian adalah 88 mahasiswa kedokteran USU yang memenuhi kriteria inklusi yang kemudian diacak menggunakan metode consecutive sampling. Data berasal dari kuesioner yang maharsiswa dengan acne vulgaris untuk menilai pengetahuan dan sikap yang selanjutnya diolah menggunakan komputer. Pengetahuan sampel didapati 43,2% (cukup), sedangkan sikap 68,2% (cukup). Penelitian berkesimpulan terdapat hubungan signifikan antara pengetahuan dan sikap mahasiswa kedokteran USU terkait acne vulgaris.

Keyword: Acne vulgaris, mahasiswa kedokteran, pengetahuan, sikap

1. Introduction

Acne vulgaris (AV) is a common inflammatory condition in the pilosebaceous unit that often occurs in adolescents and young adults.[1] As many as 90.6% of patients with acne vulgaris are aged 13-35 years and only 0.93% are aged 35-65 years. Acne can be a psychological disorder for adolescents. Especially for those who have insufficient knowledge and negative attitudes towards acne vulgaris.[2]

Knowledge has a very important role for the formation of a person's behavior. Knowledge is influenced by a variety of factors, one of which is education where it is expected that if someone with a high education, the wider the knowledge. A person's knowledge of an object has positive aspects and negative aspects, these two aspects will determine one's attitude.[3]

Acne vulgaris is a disease that can heal itself. Acne vulgaris has a place of predilection in the face and neck (99%), back (60%), chest (15%), and shoulders and upper arms. Sometimes patients complain of itching and pain. Some patients feel aesthetically disturbed. AV skin tends to be more oily or seborrheic, but not everyone with seborrhea is accompanied by acne vulgaris. The causes of acne vulgaris are multifactorial such as heredity, hormonal, high fat foods, the amount of oil because the sebaceous glands are too active, psychological, caused by bacteria (Propionibacterium acnes), excessive use of cosmetics, and chemicals exposed directly to the body causing effects side which causes acne vulgaris.[4]

Although not including a serious illness that can cause death, acne vulgaris if left untreated can cause depression and a crisis of sufferers' self-confidence.[5] The presence of acne vulgaris can make life unpleasant, and acne often occurs in people in their teens and twenties, who are the age group who are least prepared to face the psychological effects of acne vulgaris.[6]

Acne vulgaris is established based on history and physical examination. Currently the classification used in Indonesia (by FKUI / RSCM) to determine AV degrees, which are mild, moderate, and severe, is a classification according to Lehman.[7]

Research on knowledge and behavior has been done at SMAN 14 Semarang.[8] In the study it was found that there was a relationship between knowledge and behavior towards acne vulgaris. Therefore, researchers are interested in conducting research on the incidence of acne vulgaris specifically to find out whether there is a relationship between the knowledge and behavior of students of the Medical Faculty of the University of North Sumatra towards acne vulgaris.

2. Method

The study was observational with a cross sectional design, namely a study connecting students' knowledge and behavior towards the incidence of acne vulgaris in the Faculty of Medicine, University of North Sumatra. This faculty was established on August 20, 1952. The faculty is located at Jl. Dr. Mansyur No. 5 Medan, North Sumatra. This faculty was one of the Faculties at the University of North Sumatra whose status was accredited with rank A (very good). This research was conducted from September to November 2018. This research was conducted by giving questionnaires to students of the Faculty of Medicine, University of North Sumatra who suffered from acne vulgaris. The population in this study were students of the Faculty of Medicine, University of North Sumatra in 2015, 2016, and 2017. The material used in this research was a questionnaire compiled by the researcher, consisting of 11 knowledge questions and 11 behavior questions. The questionnaire has been validated by researcher. The research sample was calculated by the Slovin formula:[9]

$$n = \frac{N}{n\,(d)^2 + 1}$$

Information:
n = Sample size
N = Population
d = Degree of precision 95% or sig. = 0.05 or 90% precision or sig. 0.1

The amount of sample required with a 90% degree of precision in my research is as follows:

$$n = \frac{690}{690 \times (0.1)^2 + 1}$$

n = 88 people

With the details of 2015 students as many as 200/690 x 88 = 26 students, 2016 students as much as 230/690 x 88 = 29 students, and 2017 students as many as 33 students. The sampling technique in this study used consecutive sampling. In consecutive sampling, all populations who were willing and fulfilled the inclusion criteria were included (suffering from acne vulgaris) in the study until the required number of subjects was fulfilled. This consecutive sampling is a type of nonprobability sampling. Knowledge and behavioral data were collected by distributing questionnaires to USU students who had been diagnosed with acne vulgaris by their supervising doctor. knowledge and behavior will be divided into 3 categories based on the questionnaire value, good if 80-100% of the total score, sufficient (enough) if 60-79% of the total score, and lack(less) if

3. Results and Disscussion
Result

From table 1 it could be seen that the majority of the respondents were female (44.3%). From table 1 it can be seen that the largest group at the age of 19 (30.7%), followed by group at the age of 21 (27.3%), and group at the age of 20 (22.7%). It can also be seen that majority of the respondents were from year of 2017 (42%).

Table 1. Characteristics of Research Respondents

Characteristics	N = 88	%
Gender		
Male	39	44,3
Female	49	55,7
Age		
18	16	18,2
19	27	30,7
20	20	22,7
21	24	27,3
22	1	1,1
Enrollment Year		
2015	26	29,5
2016	29	33
2017	33	37,5

Table 2. Frequency Distribution of Repondent's Level of Knowledge

Knowledge	N = 88	Percentage (%)
Good (80-100%)	13	14,8
Sufficient (60-79%)	38	43,2
Lack (<59%)	37	42

From table 2 it can be seen that the majority of the respondens' level of knowledge were sufficient (43,2%), followed by group with lack of knowledge (42%), and group with good knowledge (14,8%).

Table 3. Frequency Distribution of Respondent's Behavior

Behavior	N = 88	Percentage (%)
Good (80-100%)	17	19,3
Enough (60-79%)	60	68,2
Less (<59%)	11	12,5

From table 3 it can be seen that the majority of the respondents had sufficient behavior (68.2%).

Table 4. Relationship between Knowledge and Behavior

N = 165		Behavior			Total	P Value
		Good	Sufficient	Lack		
Knowledge	Good	7	4	2	13	
	Sufficient	6	29	3	38	0,01
	Lack	4	27	6	37	
Total		17	60	11	88	

From table 4 it can be seen that 13 respondents had good knowledge about acne vulgaris. Among them, 7 respondents had good behavior.

It can also be seen that 38 respondents had sufficient knowledge and most of the respondents among them had sufficient behavior.

Thirty-seven respondents were found to have lack of knowledge about acne vulgaris. Among them, however, 4 respondents had good behavior, and as many as 27 respondents had sufficient behavior, while only 6 respondents had bad behavior.

Discussion
In table 2 it can be seen that the level of knowledge of students regarding acne vulgaris is the most with enough categories. This is in accordance with Rahmawati's research on the relationship between the level of knowledge and attitudes of adolescents to acne at the AL Huda VIP Vocational School in Kebumen which shows the highest level of knowledge of Kebumen VIP AL-Huda Vocational School students in enough categories, 32 students and in the category good as many as 25 students.[10] However, this study is not in accordance with Andy's research on the knowledge and attitudes of adolescents at Medan's Santo Thomas 1 High School about acne which showed the highest level of knowledge of Medan's Santo Thomas 1 High School students in the lowest category, namely 43 students.[11] In the study of Hulmani et al about Knowledge, attitude and practice toward acne vulgaris among acne vulgaris, 72% of the research samples were well-informed.[12]

There are several factors that can affect one's knowledge. These factors are education, work, experience, beliefs, and socio-culture.[13] Possibly, differences in education, employment, experience, beliefs and socio cultural causes of differences in level of knowledge.

In table 3, it can be seen that the behavior of students towards acne vulgaris is at most categories. This is different from the study of Hulmani et al. about Knowledge, attitude and practice toward acne vulgaris among acne vulgaris.[12] There were behavioral results. 46% of acne samples did not see a doctor. In the study of Pokharel and Harish about Acne vulgaris: knowledge and attitude among Nepali school students there were 69% of the study sample behaving well on acne.[14]

Behavior is a person's response or reaction to external stimuli. There are three factors that influence behavior, namely: predisposing factors are factors which include knowledge and attitudes of a person towards a stimulus or stimulus that is obtained, enabling factors are factors that include the availability of facilities and infrastructure or facilities to support the occurrence of a behavior that happens to someone, and reinforcing factors are factors that include attitudes and behavior of community leaders and religious leaders.[3]

Possible, differences in predisposing factors, enabling factors, and reinforcing factors that influence the behavior of the research sample are different behavioral outcomes.

From table 4 the chi-square test cannot be done because there is still a frequency of expectations below 5%. So that the Fisher 's Exact Test is done, the P value is 0.01. The value of P value <0.05 means that the research working hypothesis is accepted, that is, there is a significant relationship between the knowledge and behavior of FK USU students on the incidence of acne vulgaris.

The value of P value of 0.01 indicates a significant relationship between knowledge and behavior of USU FK students on the incidence of acne vulgaris. This shows that people with good knowledge about acne vulgaris

tends to have good behavior. Knowledge is defined as the result of sensing humans through their senses. Giving information will increase one's knowledge. Knowledge can make someone have awareness so that someone will behave according to the knowledge they have. Behavior changes based on knowledge, awareness, and positive attitudes are lasting because they are based on their awareness rather than compulsion.[13]

Every human being has a different level of knowledge. The level of knowledge starts from knowing, comprehension, application (application), analysis (analysis), synthesis (synthesis), and evaluation (evaluation). The higher the level of one's knowledge, the higher the individual's ability to make an assessment of a material or object. This assessment will be someone's basis for action.[13]

A similar study was conducted by Pokharel and Harish on acne vulgaris: knowledge and attitude among Nepali school students who sought a relationship between the level of knowledge and behavior regarding acne vulgaris and found a significant insignificant relationship between knowledge and behavior regarding acne vulgaris.[14] A person's knowledge is one of the predisposing factors in forming a person's behavior. Knowledge is one stimulus in forming this behavior. Knowledge is a very important domain in the formation of one's actions.[13] The possibility of differences in factors that influence knowledge (experience, beliefs and social culture) and behavior (predisposing factors, enabling factors and reinforcing factors) in the research sample results in different behavioral outcomes

4. Conclusion
From the research results it can be concluded that the hypothesis is accepted, there is a significant relationship between the level of knowledge and behavior of USU Medical Faculty medical students and the incidence of acne vulgaris with the P value in this study being 0.01.

5. Recommendations
Recommendations for this study can be given to all of the aspects found in this study such as: (1) For students to increase their knowledge and behavior towards acne vulgaris by diligently reading health articles, especially regarding acne vulgaris. (2) For parents to be able to provide information about personal hygiene, especially facial hygiene to their children. This effort is useful to prevent the emergence of acne so that students will avoid the psychological problems caused by the acne itself. (3) For further research it is expected to be able to further expand other variables (connecting with environmental influences, economic status, or sources of information).

References
[1]   C. Simon, Acne vulgaris. Oxford University Press, Oxford, 2012.
[2]   S. N. Purba, Tingkat pengetahuan dan sikap mahasiswa FK USU tentang akne vulgaris, Universitas Sumatra Utara, Medan, 2008.
[3]   S. Notoatmodjo, Promosi kesehatan dan ilmu perilaku, Rineka Cipta, Jakarta, 2007.
[4]   A. Yuindartanto, Acne vulgaris. Fakultas Kedokteran UI, Jakarta 2009.
[5]   D. Purvis, E. Robinson, S. Merry, and P. Watson, 'Acne, anxiety, depression and suicide in teenagers: A cross sectional survey of New Zealand secondary school students', J. Paediatr. Child Health, vol. 42, no. 12, pp. 793 796, Dec. 2006, doi: 10.1111/j.1440 1754.2006.00979.x.
[6]   R. Graham-Brown and T. Burns, Lecture Notes Dermatologi, 8th ed. Erlangga, Jakarta, 2007.
[7]   S. M. Wasitaatmadja, Ilmu penyakit kulit kelamin, 5th ed. Balai Penerbit FKUI, Jakarta, 2007.
[8]   D. Purnamasari, Hubungan pengetahuan dan perilaku dengan derajat keparahan akne vulgaris pada siswa-siswi SMAN 14 semarang, Universitas Muhammadiyah Semarang, Semarang, 2012.
[9]   Riduwan and Akdon, Rumus dan Data dalam Aplikasi Statistik. Bandung, Bandung, 2005.
[10] I. N. Rahmawati, Hubungan antara tingkat pengetahuan dan sikap remaja tentang jerawat di SMK VIP Al-huda kebumen, Sekolah Tinggi Ilmu Kesehatan Muhammadiyah Gombong, Kebumen, 2017. Accessed: Mar. 22, 2018. [Online]. Available: http://elib.stikesmuhgombong.ac.id/53 2/1/INTAN%20NUR%20RAHMAW ATI%20NIM.%20A11300901.pdf
[11] Andy, Pengetahuan dan Sikap Remaja SMA Santo Thomas 1 Medan Terhadap Jerawat Universitas Sumatra Utara, Medan, 2009. Accessed: Mar. 23, 2018. [Online]. Available: http://repository.usu.ac.id/handle/1234 56789/14281
[12] M. Hulmani, A. Bullappa, S. Kakar, and P. Kengnal, Knowledge, attitude and practice towards acne vulgaris among acne patients, Int. J. Res. Dermatol., vol. 3, no. 1, p. 107, Feb. 2017
[13] S. Notoatmodjo, Ilmu perilaku kesehatan. Rineka Cipta, Jakarta, 2010.

[14] G. Pokharel and H. B, 'Acne Vulgaris: knowledge and attitude among Nepali school students', Int. J. Nurs. Res. Pract., vol. 1, no. 1, pp. 29–33, 2014.