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Research Article

The Relation Between Face Cleansing with Acne Vulgaris Case

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Abstract

Acne vulgaris is a common skin disease that affecting 85%-100% population. Acne vulgaris is a multifactorial disease affecting the pilosebaceous follicle. One of the factors that affecting acne vulgaris is face cleanliness. The purpose to keep face cleanliness is to decrease the presence of microorganism from the surface skin. This study was conducted to determine the relation between facial cleanliness with the incidence of acne vulgaris. This is an observational with cross sectional study and to analize data using both chi square and mann whitney methods. This samples in this study is a college student aged 18-22 years old. The results of bivariate analysis to mann whitney test obtained p = 0.022, thus there is a significant relation between the frequency of face washing with the incidence of acne vulgaris, while the results of the chi square test obtained p = 0.590, thus there is no significant relation between face washing after using cosmetics with the incidence of acne vulgaris.

Introduction

Acne vulgaris (AV) or acne is the most troublesome skin problem for teenagers and young adults, although acne is not a fatal disease but it is quite worrying. At the age of adolescents and young adults, they are very concerned with facial skin problems, because it is very supportive of their appearance. If acne vulgaris arises on their faces, it is not uncommon for permanent acne scars and they will experience stress until a crisis of confidence. One of them is like now, that is the age of social media that makes women, especially female students, pay more attention to the state of their faces, because if one acne appears acne or acne alone makes them less confident to show their faces in their social media [1].

Acne vulgaris classification is distinguished based on the number of lesions found in a person, if the number of lesions there are less than 30 is called the mild type, 30-125 is called the moderate type, and if it is more than 125 is called the heavy type [2]. The lesion can be in the form of blackheads, pustules, papules , nodes or cysts [3]. Until now the cause of acne vulgaris is not known with certainty, but there are several factors associated with the emergence of acne vulgaris, namely genetic factors, stress factors, facial hygiene factors, cosmetic use factors and milk consumption factors [4].

Research by Hanna S et al in California shows acne vulgaris is a common skin disease in 85% of adolescents and young adults. As many as 30% of California people believe that lack of facial hygiene is a contributing factor for acne vulgaris [5].

In a study in Saudi Arabia, 17.6% of people believed that lack of facial skin cleanliness was a risk factor for acne vulgaris [6]. Research in Pakistan stated that 64% of patients believed that acne vulgaris arises from a lack of skin hygiene [7]. Cleanliness is very important to guard so that we avoid various diseases. Especially the cleanliness of the facial skin, because our skin is often exposed to dirt and dust, plus the type of oily face and frequent sweating will facilitate the onset of acne vulgaris. One of the things you can do to keep your face clean is to wash your face. Washing your face is a small thing that is easy to do, but not a few teenagers and young adults who forget to wash their faces after the move because they are too busy with their routine. Research by Al-Kubaisy et al shows that more frequent face washing has a significant relationship to the decrease in the prevalence of acne vulgaris in Syria [8].

Method

The design of this study was an observational analytic study using a cross-sectional study design, with the scope of Skin Health and Gender Sciences. The scope of the study is Skin Health and Sex. The scope of the research location were students of the Faculty of Medicine of the Indonesian Christian University (Cawang, East Jakarta), students of the Gunadarma University (Bekasi), and students of the University of Paramadina (Mampang, Jakarta). The time of the study will be carried out in November-December 2016.

Target population in this study were students of the Faculty of Medicine of the Indonesian Christian University (UKI), students of the University of Gunadarma, and students of the University of Paramadina. The sample of this study were female students aged 18-22 years. The research tool used in this study is a list of questions (questionnaire) that have been tested for quality and reliability. The questionnaire will be consulted with competent experts. The form of the questionnaire used as a data collection tool is the form of closed questions.

Results and Discussion

The results of the research that has been done will be analyzed using a program or software SPSS version 23.0, with the test results of the analysis of univariate by using descriptive and bivariate by using the method of chi square and methods mann whitney.

Univariate Analysis

Univariate analysis discusses the description and analysis of the description of the research variables obtained by researchers and consists of a description of the characteristics of respondents, which aims to determine the characteristics of the respondents used as samples in this study. Data obtained from the distribution of this questionnaire is the primary research data. With the following results:

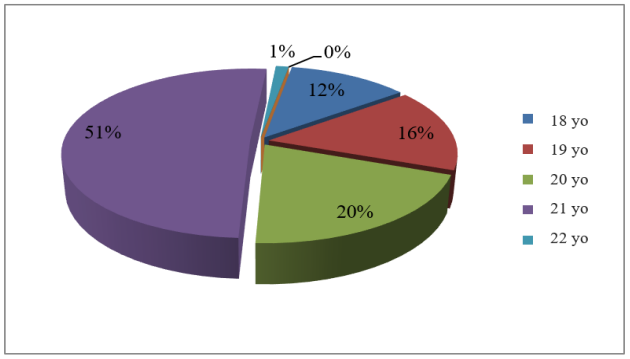

Figure 1: Age of respondents.

Based on figure 1, it can be seen that the age of most respondents is 21 years old, which is 199 respondents (50.8%) and the least is respondents who are 22 years old, which is as many as 5 respondents (1.3 %).

Table 1: Respondents distribution frequency based on acne problem experiences.

		Frequency	Percentage
Having acne problems	Not	196	50
	Moderate Acne (<20 pimples)	164	41.84
	Heavy Acne (> 20 zits)	32	8.2
Total		392	100

Based on table 1, it can be seen that respondents who do not have acne vulgaris problems are 196 respondents (50%), respondents who have moderate acne vulgaris problems are 164 respondents (41.84%) and respondents who have severe acne vulgaris problems are 32 respondents (8, 2%).

Table 2: Distribution frequency on respondents face cleansing habits.

		Frequency	Percentage
Frequency of facial cleansing	1 time a day	1	0.3
	2 times a day	201	51.3
	3 times a day	129	32.9
	4 times a day	45	11.5
	5 times a day	16	4,1
Total		392	100

Based on table 2, it can be seen that the frequency of cleaning the face in one day by respondents at most is 2 times a day, which is 201 respondents (51.3%), and at least is 1 time in one day, which is as much as 1 respondent (0.3%).

Table 3: Distribution frequency on respondents face cleansing habit after using cosmetics.

		Frequency	Percentage
Clean the face after using cosmetics	No	7	1.8
	Yes	385	98.2
Total		392	100

Based on table 3, it can be seen that respondents who cleaned their faces after using cosmetics, as many as 385 respondents (98.2%), and respondents who did not clean their faces after using cosmetics, namely as many as 7 respondents (1.8%).

Table 4: Distribution frequency based on types of facial cleansers.

		Frequency	Percentage
Types of facial cleansers	Water only	8	2
	Soap	237	60.5
	Cleansing milk / toner	147	37.5
Total		392	100

Based on table 4, it can be seen that the type of facial cleanser most used by respondents is soap, which is 237 respondents (60.5 %) and the least is water, which is as many as 8 people (2 %).

Table 5: Distribution frequency based on respondent's usage of make up.

		Frequency	Percentage
Like dressing up / not	Never or once a week	203	51.8
	More than 1 times a week	189	48.2
Total		392	100

Based on table 5, it can be seen that respondents who do not or 1x a week like to dress up, as many as 203 people (51.8 %) and respondents who like to dress up> 1x in a week , as many as 189 people (48.2 %).

Table 6: Distribution frequency based on respondents face cleansing habit after outdoor activities.

		Frequency	Percentage
Clean the face after activities outside the home	No	83	21.2
	Yes	309	78.8
Total		392	100

Based on table 6, it can be seen that respondents who wash their faces after activities outside the home, as many as 309 people (78.83%) and respondents who do not clean their faces after activities outside the home, as many as 83 people (21, 2 %).

Table 7: Distribution frequency based on respondents face cleansing habit after exercise.

		Frequency	Percentage
Clean your face after exercising	No	65	16.6
	Yes	327	83.4
Total		392	100

Based on table 7, it can be seen that respondents who clean their faces after exercising, as many as 327 people (83.4 %) and respondents who do not clean their faces after exercising, as many as 65 people (16.6 %).

Bivariate Analysis

Bivariate analysis is to get the relation between independent variable (frequency of facial cleansing habits or Facial cleansing habit after using cosmetics) with the dependent variable (acne vulgaris). The purpose of bivariate analysis is to see the relationship between variables.

To understand the correlation between the independent variable and the dependent variable used, the method used are chi-square and mann whitney.

The relation between facial cleansing habbits with acne vulgaris cases

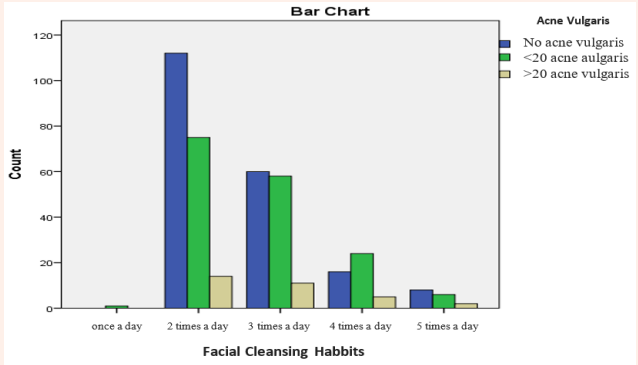

Figure 2: Diagrams of Facial Cleansing Habits in Relation to the Acne Vulgaris Cases.

Based on Figure 2, known that the respondents who do the clean their faces twice a day tend not to have acne problems. Because of the scale used is numeric, therefore the analysis done by methods of test Kolmogorov Smirnov.

The test results of normality to the data in the above is the data is not distributed normally, then further analysis of the data will be carried out using methods mann whitney.

Table 8: Mann-Whitney Test.

Test Statistics[a]	
	Facial Wash Frequency
Mann-Whitney U	16,878,000
Wilcoxon W	36,184,000
Z	-2,283
Asymp. Sig. (2-tailed)	0.022
a. Variable Grouping: Akne_Vulgaris	

At the time of analysis of the Mann Whitney test method, value of p or Asymp. Sig. (2-tailed) = 0.022. Where the p value < 0.05 so it can be concluded that there is a significant relationship between the frequency of facial cleansing with the incidence of acne vulgaris. Based on the results of the study, it was found that respondents who suffer from acne vulgaris with the frequency of cleansing the face are linearly related where the more often the face is cleaned the lower the incidence of acne vulgaris, which cleans the face more than 3 times per day the incidence of acne vulgaris is only 2% .17 The above research has the results that same with this research.

In this study proves the relationship between the frequency of washing your face with the incidence of acne vulgaris. This is directly proportional to the theory that the more regularly a person cleans the face, the lower the incidence of acne vulgaris, because cleaning the face routinely can reduce excess oil and remove dead skin cells, dirt, and dust on facial skin.24 Besides cleaning the face can minimize inflammation in acne vulgaris, reduce duct obstruction and reduce the colonization of *P.acnes* bacteria.25 From the results of this study, it can be concluded that washing the face can prevent acne vulgaris.

The relation between face washing habit after using cosmetics with acne vulgaris cases

Table 9: The relation between face washing habit after using cosmetics with acne vulgaris cases.

Face Washing Habits	Acne Vulgaris Incident						Total		P.
	No AV		<20 AV		>20 AV				
	n	%	n	%	n	%	n	%	
Not	3	0.80%	4	1%	0	0%	7	1.80%	0.59
Yes	193	49.20%	160	40.80%	32	8.20%	385	98.20%	
Total	196	50%	164	41.80%	32	8.20%	392	100%	

Based on table 9, known that respondents who clean their faces after using cosmetics tend not to have acne vulgaris problems. At the time of analysis using the chi square test method, the value of p = 0.590 was obtained. Where the p value> 0.05 so it can be concluded that there is no significant relationship between cleaning the face after using cosmetics with acne vulgaris.

Research by Kusuma GFP, from a total of 85 female respondents who suffered acne vulgaris and regularly cleaned their faces after using cosmetics as many as 58 respondents (62.8%), while the remaining 27 respondents (31.8%) sometimes did not clean their faces after finishing using cosmetics and there are no respondents who have never cleaned their face after using cosmetics [9]. This study and the above research have in common because although respondents diligently clean their faces after using cosmetics, acne vulgaris still appears on their faces. That is because the appearance of acne vulgaris is caused by several factors, both internal and external factors. Although there are some people who because of one factor can immediately arise acne vulgaris. Cosmetics can cause acne vulgaris if they contain inhegenic ingredients [10]. The habit of using cosmetics frequently, plus sensitive facial skin and our skin that is not suitable for cosmetic ingredients can increase the risk of acne vulgaris, even though we routinely clean the face [11-20].

Cleaning the face after using cosmetics will remove the remnants of cosmetics on the face, but that does not mean that after cleaning all cosmetics on the face will quickly disappear. All depends on the type of facial cleanser used. As strong as what type of facial cleanser is able to lift the remnants of cosmetics, dust and dirt that still clings to the face [21-29].

Conclusion

From the results of research conducted by researchers it can be concluded that there is a significant relationship between the frequency of cleaning the face of female college students with the incidence of acne vulgaris. Inversely proportional to the ratio of cleaning the face after using cosmetics with acne vulgaris events that have no relationship between variables.

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