The Effect Of Family Support On Stress Level In Muhammadiyah High School 1 Malang Students With Acne Vulgaris

Dwi Nurwulan Pravitasari[1*], Anung Putri Illahika[2], Dian Yuliartha lestari[3], Febriana Nur Layli[4], Siska Fitriana[5]

[1]**Department of Dermatology & Venereology, Faculty of Medicine, University of Muhammadiyah Malang**
[2]**Department of Anatomy, Faculty of Medicine, University of Muhammadiyah Malang**
[3]**Department of Pathological Anatomy, Faculty of Medicine, University of Muhammadiyah Malang**

*Email : vitha_sabrinaviancha@umm.ac.id

ABSTRACT

Adolescence is a stage that has relatively not reached maturity both emotionally and mentally so that in achieving good development, it is necessary to have positive support in life from the family. Stress that occurs identified as one of the triggering factors for acne vulgaris. To determine the effect of family support on stress levels in Muhammadiyah High School 1 Malang students with acne vulgaris complaints. This research an analytic observational study with a cross-sectional approach. Sampling by purposive sampling and a sample of 52 respondents. Analyzed with Spearman correlation followed by ordinal regression analysis. The results of the ordinal regression test of the effect of family support on stress levels showed a value of $p = 0.000$ ($p<0.05$), which means that there is an effect of family support on the stress level of students who have acne vulgaris complaints, with the magnitude of the OR being exp $(3.323) = 27.743$. The magnitude of the influence of family support in predicting the stress level of students with acne vulgaris complaints is 46.7% There is an effect of family support on stress levels in students of Muhammadiyah High School 1 Malang with acne vulgaris complaints.

Keywords : Acne vulgaris, Family support, Stress.

INTRODUCTION

Stress is something that every human being will always face as a result of the interaction process between humans and the surrounding environment, which is the reaction of one's body and mind to something that causes changes in balance (Miller CA, 2012; (Shahmohammadi, 2011). Stress represents a normal life phenomenon, necessary and unavoidable, which can cause temporary discomfort, as well as long-term consequences (Hamid Afshar, et al., 2015). School is a stressor, one of which is in the academic field, which can be seen in all aspects, both at home and at school, and friendship (Deb, et al., 2015).

Adolescence is a stage where rapid changes occur and are full of difficult challenges to deal with, which have relatively not reached maturity both mentally and emotionally (Laka, et al., 2017).

In conditions where you have to face psychological and social pressures, you will certainly be more susceptible to stressful events in the process of development. To achieve good development, adolescents need guidance from various parties and need positive support in daily life from their own families, namely parents (Fatmawati, 2016). Psychological stress has also been identified as one of the factors that cause acne and even worsen acne conditions (Ratnasari & Indira, 2017).

METHODE

This research is observational analytic research using quantitative type with a cross-sectional research design. The sample of this study were students of Muhammadiyah High School 1Malang who met the research subject. The sampling technique in this study is to use the purposive sampling method with a sample of 52 students. The data collection method was carried out in two ways: through primary data and secondary data. Primary data was obtained directly from respondents using the PSS 10 questionnaire measuring instrument regarding family support through Google Form, which was distributed to students, while secondary data was sent photos of faces with acne vulgaris on the WhatsApp application. Data analysis for univariate data in the form of frequency distribution because the research data is categorical scale, for bivariate analysis using Spearman correlation test, and for multivariate analysis using ordinal regression analysis because the dependent variable category is more than 2 and ordinal scale.

RESULTS AND DISCUSSION

Univariate

The univariate analysis describes respondents' characteristics in students who have acne vulgaris complaints in the frequency distribution table. The characteristics observed were gender and age.

Based on the information obtained in table 1, it is known that the students of Muhammadiyah High School 1 Malang with mild, moderate, and severe degrees of acne vulgaris are more dominantly experienced by female students than boys. At the age of 16 years and over, students tend to have more acne vulgaris.

Table1. Frequency Distribution of Respondents with Acne vulgaris by Age and Sex

Characteristic		Acne Vulgaris Degree		
		Mild (n=19)	Moderate (n=18)	Severe (n=15)
Sex	Male	7 (36.8%)	7 (38.9%)	7 (46.7%)
	Female	12 (63.2%)	11 (61.1%)	8 (53.3%)
Age	15 years	1 (5.3%)	2 (11.1%)	2 (13.3%)
	16 years	6 (31.6%)	5 (27.8%)	6 (40.0%)
	17 years	12 (63.2%)	6 (33.3%)	5 (33.3%)
	18 years	0 (0%)	5 (27.8%)	2 (13.3%)

Based on the results of research analysis, it was stated that the age of adolescents who participated in this study had an age range of 15-18 years, where these results were following research conducted by Muzdalifah and Adi (2016), which stated that in Indonesia, the prevalence of acne sufferers was 80-85% occurs in adolescents with the peak incidence at 15-18 years(Muzdalifah and Adi2016, Ayudianti 2014).The results of this study are in line with previous research, which says thatthe highest incidence occurs at the age of boys aged 16-19 years and girls 14-17 years (Sibero et al.2019). The gender in this study was the majority of women, namely as many as 31 respondents; this is in line with previous research, which said that the incidence of women was higher than men. This was because the levels of androgen hormones in women did not decrease drastically because these androgens came from a fat mechanism of change, especially cholesterol Anandita et al. (2017), Manarisip et al. (2015).

Bivariate

Data Distribution of Family Support

The data distribution of family support on Muhammadiyah High School 1 Malang students with acne vulgaris can be seen in Table 2.Based on the information obtained in table 2, it is known that 19 students of Muhammadiyah High School 1 Malang with mild acne vulgaris degrees all have good family support. Then, of the 18 students with moderate acne vulgaris, most had good family support; namely, 12 students (66.7%) and 6 other students (33.3%) had poor family support. Meanwhile, out of 15 students with severe acne vulgaris, all of them had poor family support.

Table 2. Frequency Distribution of Respondents' Family Support with Acne Vulgaris

Family Support	Acne Vulgaris Degree		
	Mild (n=19)	Moderate (n=18)	Severe (n=15)
Good	19 (100%)	12 (66.7%)	0 (0%)
Poor	0 (0%)	6 (33.3%)	15 100%)

Mild acne vulgaris had good family support, and severe acne vulgaris all had poor family support. The results of this study are in line with previous research, which says that parenting provided by parents has a positive impact that is associated with reduced levels of psychosocial stress and better self-regulation in adolescents so that they can cope with stressful situations better, which is highly correlated with a decrease in the degree of depression. acne vulgaris (Maya, et al., 2018), Zari and alrahman (2017). The results showed that the degree of acne vulgaris was mild; the majority had mild stress levels; this is in line with previous studies where stress conditions and emotional disturbances can cause acne exacerbations. This exacerbation is caused by increased production of androgen hormones from the adrenal glands and sebum, even fatty acids in sebum increase (Gautama & Nadeak, 2013).

Data Distribution of Stress Level

The data distribution of stress level on Muhammadiyah High School 1 Malang students with acne vulgaris can be seen in Table 3.

Based on the information obtained in table 3, it is known that the 19 students of Muhammadiyah High School 1 Malang with mild acne vulgaris, the majority had mild (68.4%) and moderate (31.6%) stress levels, but none had severe stress levels. In 18 students with a moderate degree of acne vulgaris, the majority had moderate (44.4%) and severe (33.3%). Meanwhile, most of them had severe stress levels of the 15 students with severe acne vulgaris degrees(80%).

Table 3 Frequency Distribution of Respondents' Stress Levels with Complaints of Acne Vulgaris

Stress Level	Acne Vulgaris Degree		
	Mild (n=19)	Moderate (n=18)	Severe (n=15)
Mild	13 (68.4%)	4 (22.2%)	2 (13.3%)
Moderate	6 (31.6%)	8 (44.4%)	1 (6.7%)
Severe	0 (0%)	6 (33.3%)	12 (80%)

Based on the literature, acne is caused by multifactorial, one of which is stress. Under stress conditions, there will be an increase in androgen hormones which can stimulate the

sebaceous glands of the skin, causing an increase in sebum production which triggers acne (Ratnasari & Indira, 2017). The role of androgens can increase the inflammatory response of macrophages and neutrophils; as a result, androgens can increase the activity of the sebaceous glands and inflammation, which is one of the pathophysiologies of the formation and development of acne (Lai, et al., 2013).

Relationship of Family Support to Stress Levels of Muhammadiyah High School 1 Malang Students with Acne Vulgaris

The relationship of family support to the stress level of Muhammadiyah High School 1 Malang students with acne vulgaris was analyzed using Spearman correlation with the following results:

Table 4. Spearman Correlation Test Relationship of Family Support to Stress Levels of Muhammadiyah High School 1 Malang Students with Acne Vulgaris

Family Support	Stress Level						p-value
	Mild		Moderate		Severe		
	f	%	F	%	f	%	
Good	17	89.5%	12	80.0%	2	11.1%	p = 0,000
Poor	2	10.5 %	3	20.0%	16	88.9%	r = 0.667
Total	19	100.0%	15	100.0%	18	100.0%	

Based on the cross-tabulation of the relationship between family support and stress levels of Muhammadiyah High School 1 Malang students with acne vulgaris complaints, it is known that there are 17 respondents out of 19 respondents with mild stress levels who are influenced by good family support (89.5%). Then from 15 respondents with moderate stress levels, as many as 12 respondents were influenced by good family support (80%). Meanwhile, of 18 respondents with severe stress levels, 16 respondents were influenced by poor family support (88.9%). The correlation results indicated a significant relationship between family support and stress levels (p = 0.000 < 0.05) with a positive correlation coefficient (r = 0.667) which is included in the strong category.

Based on the results of the Spearman correlation test, the correlation results obtained indicate a significant relationship between family support and stress levels (p = 0.000 < 0.05) with a positive correlation coefficient (r = 0.667) which is included in the strong category. According to Fatmawati (2016), adolescents who have not yet reached maturity, both mentally and emotionally and face psychological and social pressures, are certainly more susceptible to stress. In a study conducted by Maya et al. (2018), it was found that adolescents who had stress and received family-based care interventions had increased achievement and the ability to adapt to their stress. This is because family support in parenting that is given well by parents has a positive impact associated

with reduced levels of psychosocial stress and better self-regulation in adolescents to cope with stressful situations better (Maya, et al., 2018).). The results of this analysis are in line with the results of research conducted by Zari and al-Rahman (2017) that students with higher stress scores determined using the PSS questionnaire have a higher degree of severity as measured using the GAGS. Based on statistics, p <0.01 is obtained, so it can be concluded that increased stress correlates with an increase in acne degree (Zari and al-Rahman (2017). According to Wang et al. (2015), stress that a person is experiencing will be responded to by the hypothalamic-pituitary-adrenal (HPA) axis, which is the primary neuroendocrine system involved in the stress response by releasing adrenocorticotropic hormone (ACTH) and cortisol (Cor). . Increased ACTH activity in the bloodstream causes adrenal cortex activity. One of the hormones produced by the adrenal cortex is the androgen hormone, where excessive androgen hormones stimulate the skin sebaceous glands, causing an increase in sebum production (Wang, et al., (2015), Ratnasari& Indira, 2017). Androgens can increase the inflammatory response of macrophages and neutrophils; consequently, androgens can increase the activity of the sebaceous glands and inflammation that promotes the formation and development of acne (Lai, et al., 2013&wulandari,2015).

Multivariate

From the correlation between family support and stress levels of Muhammadiyah High School 1 Malang students with acne vulgaris complaints, it was concluded that there was a significant positive correlation with the strength of a strong relationship. The next analysis is a multivariate analysis to determine how much influence family support has on the stress level of students who experience acne vulgaris in the OR value. Ordinal regression analysis is used in this study because the dependent variable has an ordinal scale and has 3 categories. The results obtained are as follows:

Tabel 5. Multivariate Analysis

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[Stress level = 1.00]	-3.065	.687	19.887	1	.000	-4.412	-1.718
	[Stress level= 2.00]	-1.091	.501	4.748	1	.029	-2.072	-.110
Location	[Family Support =1]	-3.323	.730	20.729	1	.000	-4.753	-1.892

[Family Support =2]	0[a]	.	.	0	.	.	.

Link function: Logit.

a. This parameter is set to zero because it is redundant.

The obtained equation is:

Y_1 = Logit low stress compared to severe stress = -3.065- (-3.323 good support)

Y_2 = Logit low + moderate stress compared to severe stress = -1.091-(-3.323 good support)

The results of the Wald test on the effect of family support on stress levels showed p-value = 0.000 (p <0.05), which means that there is an effect of family support on the stress level of students who have acne vulgaris complaints. The magnitude of the OR is exp (3,323) = 27,743, which can be interpreted as the possibility of students who have good family support experience less stress by 27,743 times compared to students who have poor family support.

The magnitude of the influence of family support in predicting the stress level of students with acne vulgaris is 46.7% (Nagelkerke R Square).

Table 6. Pseudo R-Square

Cox and Snell	.414
Nagelkerke	.467
McFadden	.245

Link function: Logit.

The results of the Wald test on the effect of family support on stress levels showed p-value = 0.000 (p <0.05), which means that there is an effect of family support on the stress level of students who have acne vulgaris complaints. The magnitude of the OR is exp (3,323) = 27,743, which means the possibility of students who have good family support to experience less stress is 27,743 times compared to students who have bad family support. Following research by (Paususeke, et al., 2015) wherein his research says there is a relationship between family support and stress levels because the family is willing to accompany and give good attention where good family support can reduce stress levels (Paususeke, et al., 2015).

The results of this study are also supported by research conducted (Resyanta, 2020) which states that the higher the family social support, the higher the psychological, and vice versa, the lower the family social support, the lower the psychological, because from the results of the study the significance value is 0.000 where 0.000< 0.05 this means that there is a relationship between family social support and psychological so that the hypothesis proposed by the researcher that there is a positive relationship between family social support and psychological can be accepted. The emotional support given by the family to family members who are experiencing problems will create a good impression and relief in dealing with problems because they get help in solving the

problems they are facing. Indirectly, this treatment makes family members who have these problems feel cared for and motivated to rise from the problems they face (Resyanta, 2020).

CONCLUSION

Family support affects stress levels in Muhammadiyah High School 1 Malang students with acne vulgaris of 46.7%. With the incidence of the majority of mild acne vulgaris degrees and mild stress levels and received good support from the family, as many as 19 students. Recommendations For further research, it is necessary to conduct specific research on the factors that influence the stress of vocational students apart from family factors, it can be environmental factors, either the school environment or the home environment.

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