COMPARATIVE DESCRIPTIVE: LEVEL OF KNOWLEDGE AND ACNE SELF-MEDICATION PATTERNS BETWEEN HEALTH AND NON-HEALTH STUDENTS IN MEDAN CITY

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Abstract

Acne is a skin health problem caused by the excessive production of oil (sebum), which appears on the face, neck, chest, and back; if not treated properly, it will leave scars. The aim of this study is to compare descriptively the level of knowledge and patterns on self-medication acne between health and non-health students in Medan, Indonesia. This quantitative descriptive collected data through a survey via a Google form. The study's respondents were 206 students from 4 universities in Medan, North Sumatra, Indonesia. The sampling technique was probability sampling with Simple Random Sampling. The results of the present study show that the level of knowledge of self-medication for acne of health and non-health students was getting a score of 75.6% and 73.3%, respectively. The pattern of self-medication of health students tended to be better than non-health students because as many as 47.5% of health students did self-medication, while non-health students, 35.4% because they did not know the right way to care for their skin. The conclusion of this study is that the level of knowledge on acne self-medication in health and non-health students was almost similar, but on the pattern of self-medication, the health student was better than the non-health student.

Keywords: *Self-medication, Acne, Level of Knowledge, Student.*

I.   INTRODUCTION

Skin disease is a skin disorder caused by fungi, bacteria, parasites or viruses. Skin disease can attack all or part of the body and if not treated seriously can endanger the patient's health. Factors that can cause skin disorders that are often encountered include environmental factors, climate, residence, unhealthy lifestyles, allergies and others. Skin disease is a complaint that often occurs in areas that have less clean water sources and in areas where people do not understand the importance of a clean and healthy lifestyle. Skin disease can affect anyone regardless of age. Skin disease is also included in the group of minor diseases so that it can be treated with self-medication. (Primadiamanti et al., 2021). Self-medication is defined as a person's effort to cure minor diseases experienced by self-medication using over-the-counter drugs, limited pharmaceutical drugs or mandatory pharmacy drugs (OWA) which are a group of drugs that can be purchased without a doctor's prescription (Sulistiyani et al., 2021).

Acne is a skin disorder associated with excessive oil production (sebum). In addition to disrupting appearance, acne is inseparable from the phenomenon of "acne shaming" which is often experienced by individuals with acne-prone skin so that it can cause various mental health problems, ranging from mild to serious. (Salwa Ahla Amania et al., 2023). Acne is usually found in parts of the body with the most oil glands, namely the face, neck, upper chest, and back. This is a common condition that can happen to anyone. However, acne can leave scars (acne scars), which are scar tissue caused by imperfect acne healing. Acne or known as Acne Vulgaris is usually experienced in adolescence when hormonal changes occur so that more oil is produced (Aswad et al., 2019). The cause of acne is the presence of Cutibacterium acnes bacteria (formerly known as Propionibacterium acnes) during adolescence, which is influenced by normal levels of the hormone dehydroepiandrosterone (DHEA) in the body's circulation. Acne is a common skin disorder, characterized by the appearance of inflammatory and non-inflammatory lesions, primarily on the face, but can also occur on the upper arms, chest, and back (Sifatullah & Zulkarnain, 2021). Acne is caused by a combination of physiological and environmental factors, such as increased sebum production, hormonal or genetic factors, comedogenic cosmetics, harsh skin cleansing, or medications that trigger acne (Sergeeva et al., 2022).

According to a dermatologist from Erha, Dr. Purnama Sari (2019) in Indonesia acne cases is often found, with almost two million cases every year. Because Indonesia is a tropical and hot area like Makassar, it causes oily faces. Acne has several types, namely blackheads, whitehead, papules, postulas, nodules, cystic and has its own levels each ranging from mild to severe acne. Acne suffered by Indonesians usually occurs in early adolescence and late adolescence. This occurs because of hormonal changes at puberty (Melisa et al., 2022).

According to previous research by the Indonesian Cosmetic Dermatology Study Group (PERDOSKI) in 2017, Acne ranks third in terms of the number of visitors to the Department of Dermatology and Venereology in hospitals and skin clinics in Indonesia. The highest prevalence occurs at the age of 14-17 years, with a percentage of around 83-85% in women and around 95-100% in men at the age of 16-19 years (Yusuf et al., 2020). According to another study conducted by the Global Burden of Disease (GBD) study, approximately 85% of young adults aged 12-25 years experiences acne. Research in Germany found that 64% of individuals aged 20-29 years and 43% of individuals aged 30-39 years suffer from acne. In India, this disease is known to most often attack more than 80% of the world's population at some point in life and 85% of adolescents in developed countries. The prevalence of acne in Southeast Asia ranges from 40-80% of cases, and according to records from Indonesian cosmetic dermatology, there has been a significant increase, namely 60% of acne sufferers in 2006, 80% in 2007, and reaching 90% in 2009 (Sibero et al., 2019). Based on the above, the researcher feels it is important to conduct a study on "Comparison of Knowledge and Self-Medication Patterns for Acne between Health and Non-Health Students in Medan, Indonesia".

II.   METHOD

This study is a type of descriptive quantitative research that will describe how the knowledge and patterns of acne self-medication in students at various universities in Medan City. This study was conducted using a survey method which is one of the quantitative research methods used to obtain current and past data (Wahyudi, 2022). Data collection was carried out using a questionnaire via Google form.This study was conducted on students at four universities located in Medan City, North Sumatra, Indonesia. Including the Universitas Sumatera Utara (USU), Universitas Negeri Medan (UNIMED), Universitas Islam Negeri Sumatera Utara (UINSU), and Universitas Muhammadiyah Sumatera Utara (UMSU). The study was conducted in October-November 2024. The populations in the study were all students of the USU, UNIMED, UINSU, and UMSU with an age range of 17-24 years. The

sampling technique used was probability sampling with the Simple Random Sampling. Initially, data was collected from all students of USU, UNIMED, UINSU, and UMSU, then a link was distributed to them to be respondents and fill out the questionnaire. A total of 206 students were willing to be respondents, with 54 students from USU, 50 students from UNIMED, 72 students from UINSU, and 30 students from UMSU.The main instrument used in this study was a questionnaire that had been validated by experts via Google form by considering the effectiveness and efficiency of data collection in various universities in Medan City, Indonesia. The questionnaire contains 21 questions consisting of 14 questions describing knowledge related to acne self-medication and 7 questions describing self-medication actions for acne. The data obtained are presented descriptively.

RESULT

Based on the data that has been collected, the following results are:

Table 1. Characteristics of Respondents Based on University and Age

No.	University	Man		Woman
	USU	8	(3.9%)	46 (22.3%)
	UINSU	5	(2.4%)	67 (32.5%)
	UNIMED	12	(5.8%)	38 (18.5%)
	UMSU	9	(4.4%)	21 (10.2%)
Total		34	(16.5%)	172 (83.5%)
No.	Age	Man		Woman
	17-20	32	(15.5%)	164 (79.6%)
	21-24	2	(1%)	8 (3.9%)
Total		34	(16.5%)	172 (83.5%)

Based on Table I, out of a total of 206 respondents, USU students consist of 3.9% males and 22.3% females; UINSU students consist of 2.4% males and 32.5% females; respondents from UNIMED consist of 5.8% males and 18.5% females; while respondents from UMSU consist of 4.4% males and 10.2% females. According to age, respondents aged 17-20 years are 15.5% male and 79.6% female. For respondents aged 21-24 years, respondents are 1% male and 3.9% female.

Table 2. Characteristics of Respondents Based on Major

No.	University	Health Major		Non-Health Major	
	USU	19	(9.2%)	35	(17%)
	UINSU	44	(21.3%)	28	(13.6%)
	UNIMED	13	(6.3%)	37	(18%)
	UMSU	6	(3%)	24	(11.6%)
Total		82 (39.8%)		124 (60.2%)	

Table 2 shows that out of 206 respondents, non-health students dominate with a total of 124 people consisting of USU students totaling 35 (17%), UINSU 28 (13.6%), UNIMED 37 (18%), and UMSU 24 (11.6%). Meanwhile, health students totaling 82 (44.2%) with USU students totaling 19 (9.2%), UINSU 44 (21.3%), UNIMED 13 (6.3%), and UMSU 6 (3%).

Level of Knowledge of Acne Self-Medication

Table 3. Distribution Frequency Knowledge Respondents

Table 2. Respondents Knowledge Level of Acne Self-Medication

Students	Very good (81-100)	Good (61-80)	Not Bad (41-60)	Bad (<40)		Total
Health	62 (75.6%)	16 (19.5%)	4 (4.9%)	0	(0%)	82 (100%)
Non-Health	91 (73.3%)	22 (17.8%)	7 (5.7%)	4	(3.2%)	124 (100%)

Based on the results survey the show that respondent own category very good knowledge as much as 73.3% of non-health and 75.6% of student health. This is show that level knowledge student health more tall compared to non-health students about knowledge acne. Value with category good there is as much as 19.5% of student health and as much as 17.8% of non-health students. Value with category not enough good there is as much as 4.9% of student health and 5.7% of non-health students. Meanwhile, the value with category bad there is as much as 3.2% of non-health and 0% in health students.

Efforts that can be made done for increase knowledge student about acne is education health via social media with make informative content about acne on platform such as Instagram, Tiktok, Youtube, etc.

Self-medication Efforts

Survey results on effort self-medication acne seen in several picture following:
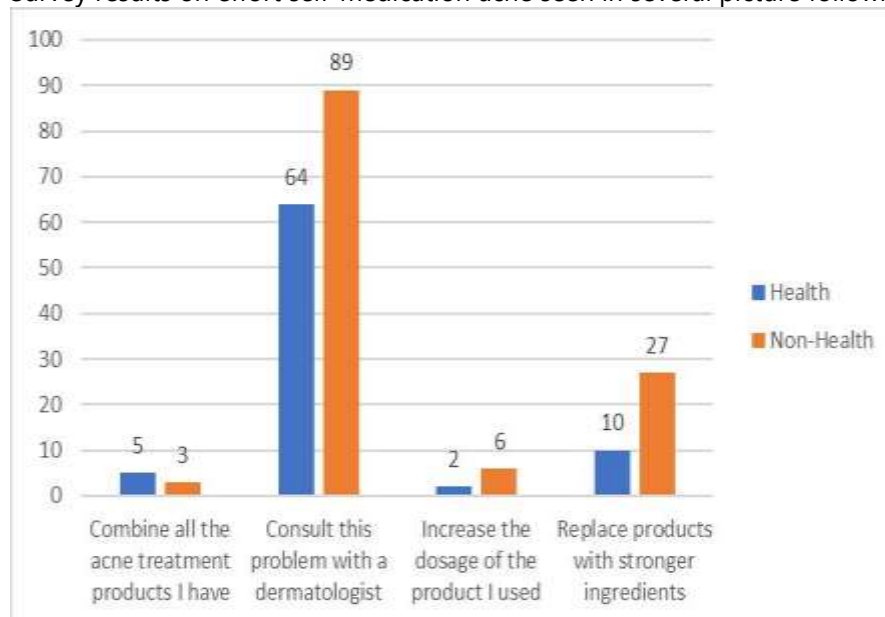

Figure 1. What do you do if acne doesn't get better after a few weeks?

The image above shows respondent answer about what to do if acne no get better after a few weeks. Can be seen that a total of 64 health and 89 non-health students choose to consult acne problem to dermatologist. A total of 10 health and 27 non-health students choose to replace product with stronger ingredients. Meanwhile, 5 health and 3 non-health students choose to combine all acne treatment products they had. And 2 health and 6 non-health students increased the dosage of the product they used when acne no get better after a few weeks.
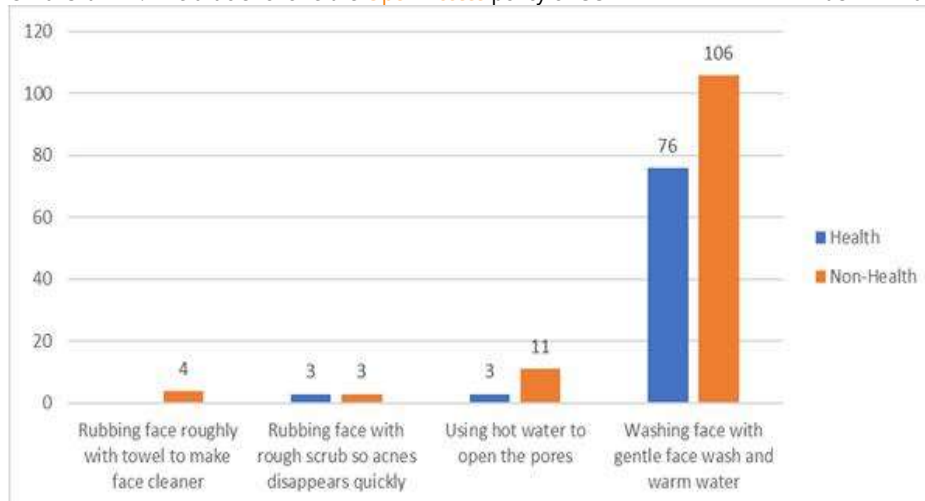
Figure 2. How to washing face properly when you have acne?

Based on Figure 2. above as many as 76 health and 106 non-health students washing their face with gentle face wash and warm water. A total of 3 health and 11 non-health students choose using hot water to open the pores. Meanwhile, each of health and non-health students totaling 3 students choose rub face with a rough scrub so that acne disappears quickly. And as many as 4 non-health students to rubbing face roughly with towel to make it cleaner.
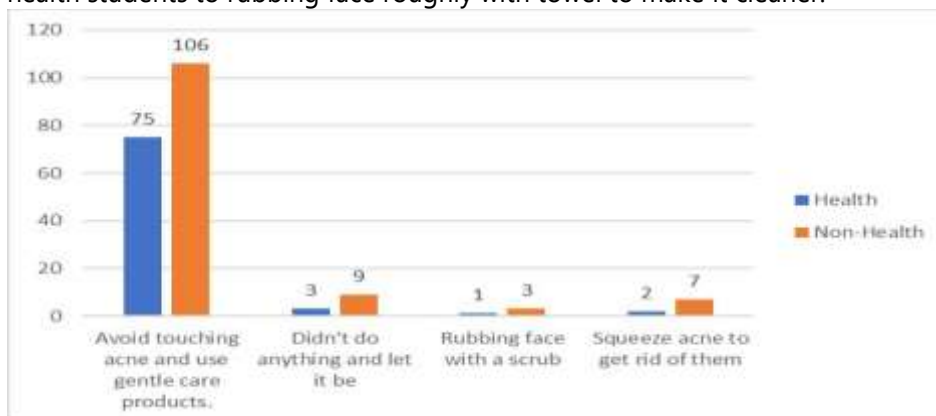

Figure 3. What do you do if acne inflamed?

Based on Figure 3. above as many as 75 health and 106 non-health students choose to avoid touching acne and use gentle care product. A total of 3 health and 9 non-health students answered that they didn't do anything and let it be. As many as 2 health and 7 non-health students choosing squeeze the acne. And there 1 health and 3 non-health students choose rub face with scrub when acne inflamed.
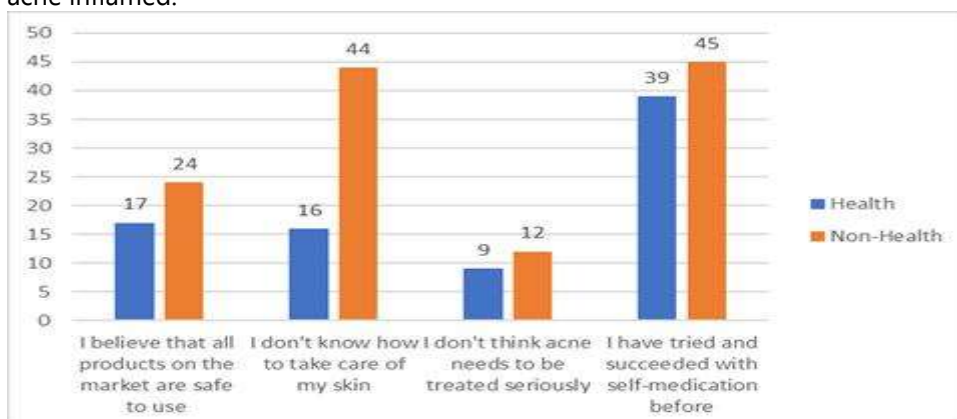
Figure 4. What your reasons for self-medicating acne?

Figure 4. shows that there are 39 health and 45 non-health students answered that they have tried and succeeded with self-medication before. As many as 16 health and 44 non-health students answered they do self-medication because they do not know how to take care of their skin. Meanwhile, there are 18 health and 23 non-health students who answered they believe that all products on the market are safe to use. As many as 9 health and 12 non-health students answered they feel that acne does not need to be treated seriously. Based on the survey results, 60 health and 87 non-health students have used products to treat acne. Meanwhile, 22 health and 37 non-health students have never used products to treat acne.

Then, regarding product information and its contents, 32 health and 54 non-health students learned from health articles and the product's official website. As many as 12 health and 11 non-health students learned the information based on personal experience without additional references. Then, 28 health and 43 non-health students got information about product contents from influencers or advertisements on social media. Meanwhile, 10 health and non-health students got the information from recommendations from friends or family. Regarding the question of how respondents know how to use acne self-medication product, both health and non-health students know how to use it through the instructions listed on the product packaging. A total of 27 health and 45 non-health students know how to use the product through recommendations from other users on social media. Meanwhile, those who know information on instructions for use through information from friends or family are 8 health and 14 non -health students. And those through articles or blogs on the internet are 4 health and 12 non-health students.

III.   DISCUSSION

Based on the characteristics of the respondents, the majority of respondents were female (83.5%) and male (16.5%). The number of female respondents who dominated indicated that women did more self-medication than men. Women did self-medication more often than men. Generally, women paid more attention to the cost than the effectiveness of the drugs used and considered prevention and treatment using drugs to be more effective than men (SAPITRI et al., 2021). This is in line with a study (Atul D. Mohankar et al., 2024) stating that acne that attacks adults, especially women, is a common condition, with a prevalence of 0.74%. This study found hormonal imbalances, including increased testosterone and thyroid disorders, affecting 30% of patients, highlighting the need for endocrinological examination in this case.

Acne self-medication knowledge in health and non-health students in Medan City can be concluded that health and non-health students have self-medication knowledge that is not much different, with an average of health students getting a score of 75.6% and non-health students with a score of 73.3%. This is in accordance with research (Nurwanti, 2023), that knowledge is influenced by various factors, including education, occupation, age, interests, experience, environment, and culture. However, only education was considered in this study. The results showed that the majority of respondents had very good knowledge due to their education. Many students think that acne is caused by consuming too much spicy food. This is not in line with research (Sergeeva et al., 2022) which states that acne is caused by a combination of physiological and environmental factors, such as increased sebum production, hormonal or genetic factors, comedogenic cosmetics, harsh skin cleansing, or medications that trigger acne.

Acne problems on the face are also caused by personal hygiene and environmental hygiene. (Sifatullah & Zulkarnain, 2021) In this study, the majority of health and non-health students in Medan City realized that it is necessary to wash their face gently and use warm water when acne is inflamed. The findings of a study by (Apsari et al., 2021) stated that more students behaved well regarding self-medication than those who did not. Both health and non-health students in Medan City had

good acne self-medication efforts. Most health students realized that it is very important not to touch the face when acne is inflamed. Most non-health students self-medicated because they did not know how to properly care for their skin, and some answered because they had previously succeeded when trying acne self-medication. Based on the survey results, 60 health and 87 non-health students have used products to treat acne. Meanwhile, 22 health and 37 non-health students have never used products to treat acne. The use of products to treat acne is also influenced by respondent preferences. Because, it can be seen from the survey that the majority of respondents, both health and non-health students, showed efforts to self-medicate acne by searching for information based on health articles and official product websites. In addition, the decision to use products to treat acne is also influenced by friends, family, even social media or advertisements on the internet. Based on the statement (Ramadani et al., 2022) that drug information can be obtained through advertisements, drug brochures, pharmacists, and also the environment or family.

IV.   CONCLUSION

Based on the research results, knowledge and the pattern of health and non-health students in several universities in Medan City are similar. Level of knowledge on acne self-medication is categorized as very good for 75.6% of health student respondents, and non-health students 73.3%. Most health students collect product information from health articles and websites (39.02%), and most non-health students collect information from social media. The present study highlights the importance of skin health education in improving understanding of self-medication, especially among non-health students.

REFERENCES

Apsari, D. P., Wibawa, I. G. N. M. S., & Maharjana, I. B. N. (2021). Hubungan Dukungan Keluarga dan Peran Tenaga Kefarmasian terhadap Kepatuhan Minum Obat Antihipertensi: Indonesia. Jurnal Ilmiah Medicamento, 7(1).

Aswad, H., Dangnga, M. S., & Hengky, H. K. (2019). Faktor Risiko Kejadian Penyakit Kulit Pada Nelaya Di Desa Teteaji Kecamatan Tellu Limpoe Kabupaten Sidenreng Rappang. Jurnal Ilmiah Manusia Dan Kesehatan, 2(3), 459–472.

Atul D. Mohankar, Saumita G. Biswal, Nisha M. Verma, & Kashifa Rafat. (2024). An observational study on clinico-hormonal profile of adult-onset acne in females. International Journal of Research in Dermatology, 10(4).

Melisa, M., LB, P. L., & Irawati, I. (2022). Sistem Pakar Pendiagnosa Jenis Jerawat pada Wajah berbasis Web menggunakan Metode Certainty Factor. Buletin Sistem Informasi Dan Teknologi Islam (BUSITI), 3(1), 79–85.

Nurwanti, R. (2023). Gambaran Pengetahuan Sikap dan Tindakan Swamedikasi Jerawat Pada Mahasiswa Farmasi Politeknik Baubau. Jurnal Promotif Preventif, 6(3), 438–444.

Primadiamanti, A., Erlisa, R., Artianti, T., Sarimanah, U., & Awalliyyah, W. D. (2021). Cerdas Memilih Obat Dalam Swamedikasi Penyakit Kulit Di Posyandu Melati Ii Puskesmas Tanjung Sari Natar Lampung Selatan. Jurnal Pengabdian Farmasi Malahayati (JPFM), 4(2).

Ramadani, S. R., Rumi, A., & Parumpu, F. A. (2022). Tingkat Pengetahuan Swamedikasi Jerawat Pada Mahasiswa Farmasi Fmipa Universitas Tadulako. Prepotif: Jurnal Kesehatan Masyarakat, 6(1), 478–485.

Salwa Ahla Amania, Sri Mulyono, & Sam Farisa Chaerul Haviana. (2023). KLASIFIKASI JENIS JERAWAT WAJAH MENGGUNAKAN ARSITEKTUR INCEPTION V3 [Thesis (Undergraduate), Universitas Islam Sultan Agung]. http://repository.unissula.ac.id/id/eprint/32041

SAPITRI, A., BUDI, A., & SUSIYARTI, S. (2021). Hubungan Antara Tingkat Pengetahuan

Dengan Tindakan Swamedikasi Jerawat Pada Remaja Desa Bulakpacing Kecamatan Dukuhwaru [Thesis (Diploma)]. Politeknik Harapan Bersama.

Sergeeva, N., Kui-Beda, O., Myandina, G., Strachuk, A., Korovyakova, E., Pashina, N., & Kuchuk, A. (2022). MAIN CAUSES OF ACNE IN WOMEN. Archiv Euromedica, 12(6).

Sibero, H. T., Sirajudin, A., Anggraini, D. I., Dokter, P., Kedokteran, F., Ilmu, B., Sakit, R., & Moeloek, A. (2019). Prevalensi dan Gambaran Epidemiologi Akne Vulgaris di Provinsi Lampung The Prevalence and Epidemiology of Acne Vulgaris in Lampung. 3.

Sifatullah, N., & Zulkarnain, Z. (2021). Jerawat (Acne vulgaris): Review penyakit infeksi pada kulit. Prosiding Seminar Nasional Biologi, 7(1), 19–23.

Sulistiyani, S., Muthoharoh, A., & Ningrum, W. A. (2021). Pola Pengobatan, Pengetahuan, Dan Perilaku Swamedikasi Acne Vulgaris Di Kalangan Remaja Kabupaten Pekalongan Tahun 2021. Prosiding Seminar Nasional Kesehatan, 1, 174–181.

Wahyudi, W. (2022). Gambaran Pengetahuan Dan Upaya Swamedikasi Mahasiswa Fakultas Kesehatan Masyarakat Uin Sumatera Utara Medan. Jurnal Penelitian Farmasi & Herbal, 5(1), 99–106.

Yusuf, V. A., Nurbaiti, N., & Permatasari, T. O. (2020). Hubungan Antara Tingkat Pengetahuan Pelajar Sekolah Menengah Atas Tentang Acne Vulgaris Pada Wajah Dengan Perilaku Pengobatannya. Tunas Medika Jurnal Kedokteran & Kesehatan, 6(2).