Comparative Study: Knowledge and Patterns of Acne Self-Medication between Male and Female Undergraduate Public Health Students

Wahyudi*, Abdillah Putra Mahesa, Adinda Lydia Putri, Adinda Naila Apsari Dalimunthe, Debby Widitya, Safira Afifah

Faculty of Public Health, Universitas Islam Negeri Sumatera Utara, Medan, Indonesia

ABSTRACT

Acne is a common skin condition that occurs when your hair follicles become plugged with oil and dead skin cells, this can cause whiteheads, blackheads, or pimples. This condition is often experienced by students so self-medication is necessary. This study aims to compare the level of knowledge and acne self-medication patterns between male and female undergraduate public health students. This study uses a quantitative descriptive method by distributing questionnaires to respondents via Google Forms. Respondents in this study were 93 (33 male students and 60 female) public health students of Universitas Islam Negeri Sumatera Utara, Medan, Indonesia. The sampling technique used simple random sampling. The results showed that the level of knowledge of female students (77%) was higher than that of male students (33%). For self-medication patterns, the results showed that female students (73%) were higher than that of male students (30%). This study concludes that the level of knowledge and self-medication patterns of female students are better than male students.

Keywords: Acne, Knowledge, Self-medication, Students

INTRODUCTION

Acne vulgaris is a condition in which the pores become clogged and cause pus pockets to become inflamed. The exact cause and pathogenesis of A. vulgaris are still unclear (Sifatullah & Zulkarnain., 2021). Acne vulgaris, or acne, is a common skin condition that often affects teenagers. Acne is one of the many types of skin diseases, generally considered a physiological condition because it is rare for someone never to experience this condition throughout their life (Apriliayani, 2019).

Acne vulgaris is the most common disease among adolescents. Often, acne appears throughout adolescence, often between the ages of 12 and 15 years, and reaches its peak severity between the ages of 17 and 21 (Tilla et al., 2019).

The main factors causing acne are increased production of sebum or oil glands in the skin, keratinocyte shedding, and bacterial growth in the pilosebaceous ducts naturally contained in normal skin. One of the bacteria that causes acne is Propionibacterium acnes. P. acnes is a Gram-positive bacteria that is part of the normal flora found on the skin and can cause opportunistic infections that produce lipase as a contributor to acne formation (Liling et al., 2020).

Several drugs can be used to treat acne based on the severity of the condition. Mild acne treatment can be treated with topical therapy with benzoyl peroxide and topical retinoids ; moderate acne can be treated with topical treatment and combined with oral antibiotic therapy ; the use of antibiotics is not recommended as monotherapy to avoid the risk of resistance, for the treatment of acne with severe severity can be treated with topical therapy with benzoyl peroxide combined with topical retinoids and oral treatment with antibiotics (Hazel et al., 2019). Acne prevention can be done by maintaining facial skin cleanliness by washing your face twice a day with facial soap or cleanser and using exfoliating agents and pore packs to remove blackheads (Lestari et al., 2021).

Self-medication is the behavior of taking medication by oneself based on a diagnosis of the symptoms of the disease that occurs. Self-medication is part of "self-care", which is an effort to maintain health or prevent and treat disease. (Sitindaon, 2020). In its practical application, errors in self-medication can arise as a result of limited public access to knowledge about the proper use of drugs (Sulistiyani et al., 2021). A person's level of knowledge can influence their decision-making process in terms of drug use. Knowledge is the result of obtaining information through perception, which occurs when someone experiences a specific event

(Izza, 2021). One group of people who often self-medicate is adolescents. The group included in the adolescent age group is students (Saputra et al., 2021). Adolescents use self-medication as an alternative treatment to treat acne (Ameliani et al., 2019).

Research conducted by Mahesa (2021) on PSPD UIN Malang students, found that 80 respondents had a dominant degree of acne vulgaris severity in the mild category of 55.1%. During the initial survey conducted on students of Akper Pemkab Ngawi, the results obtained from 10 people were seven people who experienced mild acne vulgaris with the habit of washing their faces frequently and having poor sleep quality, there were three people with the habit of rarely washing their faces and having poor sleep quality there were three people. In contrast, one person had the habit of rarely washing their faces and having good sleep quality. Three people did not experience acne vulgaris, had the habit of washing their faces frequently, and had poor sleep quality ; there were two people while one person had the habit of washing their faces frequently and had good sleep quality (Mahendraswari et al., 2023).

Method

This quantitative descriptive study describes the knowledge and self-medication patterns of students of the Faculty of Public Health, UIN North Sumatra. Data were collected by distributing online questionnaires via Google Forms. This study was conducted at the State Islamic University of North Sumatra. This study was conducted in October 2024.

The research data is presented descriptively to compare the knowledge between male and female students about acne and acne self-medication patterns.

This study is a descriptive study with an instrument in the form of a questionnaire conducted by interview. The sampling technique was carried out by simple random sampling. This survey was attended by 93 students with an age range of 17-22 years. Respondents were students of the Faculty of Public Health, UIN North Sumatra.

The first instrument in the study was a questionnaire using a Google form considering effectiveness and efficiency. The questionnaire contained 20 questions that described the knowledge and patterns of self-medication for acne. The description of respondents' knowledge and patterns of acne use and self-medication patterns were then analyzed based on the percentage of respondents who answered questions with knowledge between male and female students.

Results

1.1 Respondent Characteristics

The characteristics of respondents in this study can be seen in the diagram below:
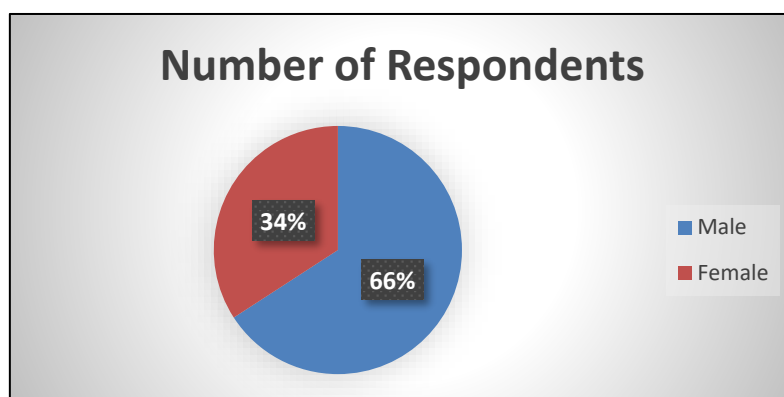

Figure 1. Number of Respondents of FKM UINSU Students

The diagram above shows that the respondents consisted of 93 FKM UIN Sumatera Utara students, 33 male students (34%) and 60 female students (66%). The data above also shows that the respondents in this study were primarily female students.

The following are the results of a study showing the level of knowledge of acne and self-medication patterns in male and female FKM UIN North Sumatra students.
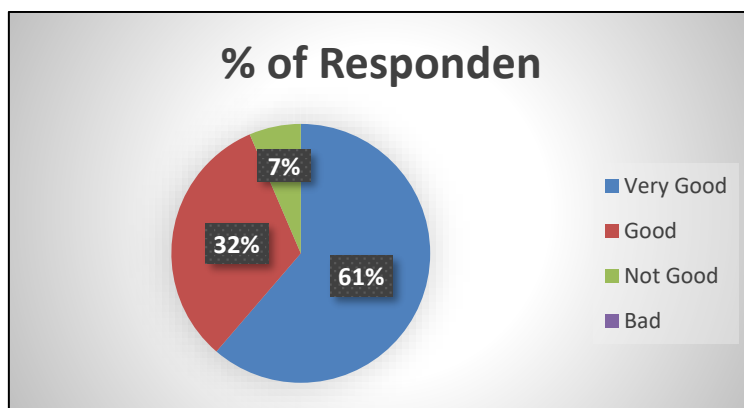
Figure 2. Level of Knowledge about Acne of FKM UINSU Students

The diagram above shows the level of knowledge about acne among FKM UIN North Sumatra students, with the Very Good category of 57 people (61%), the Good category of 30 people (32%), and the Less Good category of 6 people (7%).

Table 1 Level of Acne Knowledge in Male Students of FKM UINSU

Level of Knowledge	Amount	Percent(%)
Very Good (81-100)	11	33
Good (61-80)	18	55
Not Good (41-60)	4	12
Bad (< 41)	0	0
Total	**33**	**100**

Tabel 1 shows that the level of knowledge about acne in male students in the Very Good category is 11 people (33%), the Good category is 18 people (55%), and the Less Good category is 4 people (12%).

Table 2 Level of Acne Knowledge in Female Students of FKM UINSU

Level of Knowledge	Amount	Percent(%)
Very Good (81-100)	46	77
Good (61-80)	12	20
Not Good (41-60)	2	3
Bad (< 41)	0	0
Total	**60**	**100**

Based on Table 2, it can be seen that the level of knowledge about acne in female students with the Very Good category is 46 people (77%), the Good category is 12 people (20%), and the Less Good category is two people (3%).

Table 3. Acne Self-Medication Patterns in Male Students of FKM UINSU

Self-medication Pattern	Amount	Percent(%)
Very Good (81-100)	10	30
Good (61-80)	17	52
Not Good (41-60)	3	9
Bad (< 41)	3	9
Total	**33**	**100**

Table 3 shows that the self-medication pattern in male students with the Very Good category is 10 people (30%), the Good category is 17 people (52%), the Less Good category is 3 people (9%), and the Bad category is 3 people (9%).

Table 4. Acne Self-Medication Patterns in Female Students of FKM UINSU

Self-medication Pattern	Amount	Percent(%)
Very Good (81-100)	44	73
Good (61-80)	11	18
Not Good (41-60)	4	7
Bad (< 41)	1	2
Total	**60**	**100**

Table 4 shows that the self-medication pattern in female students with the Very Good category is 44 people (73%), the Good category is 11 people (18%), the Less Good category is 4 people (7%), and the Bad category is 1 person (2%).
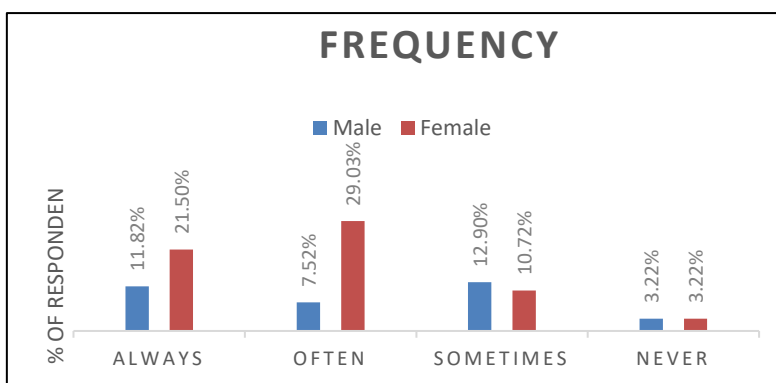

Figure 3. Frequency of Skincare Use by FKM UINSU Students

The bar chart above shows the frequency level of skincare use in male and female students of FKM UINSU. In the "always" category, the percentage of male students (11.82%) is lower than female students (21.05%). In the "often" category, the percentage of female students (29.03%) is higher than male students (7.52%). In the "sometimes" category, the percentage of male students (12.90%) is higher than female students (10.72%). In the "never" category, male and female students have the same percentage (3.22%).
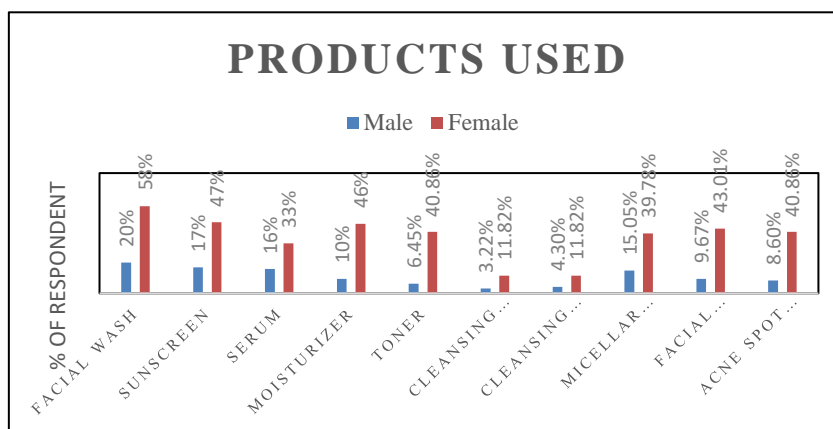

Figure 4. Products Used by FKM UINSU Students

The bar chart above shows the types of skincare used by FKM UINSU students. The products most widely used by women are facial wash (58%), followed by sunscreen (47%), moisturizer (46%), and toner (41%). Meanwhile, the use of facial wash products by men is also the highest (20%), followed by sunscreen (17%) and micellar water (15%). Other products such as serums, facial masks, acne spot gel, cleansing oil, and cleansing balm are also more dominant among women, although the percentage varies. Overall, the data shows that women are more likely to use various types of skincare products than men, with the dominant use of facial wash and sunscreen in both groups.

Discussion

The results of the respondent's answers showed that female students had better knowledge about acne than male students. As many as 77% of the 60 female students were able to answer the questionnaire very well, while only 33% of the 33 male students were able to answer the questionnaire correctly. This is in line with research conducted by (Putra et al., 2023) that the majority of respondents' knowledge was in a suitable category, namely 101 people, 26 of whom were male and 75 of whom were female, followed by respondents who were the sufficient knowledge category, namely 16 people, 10 of whom were male and 6 of whom were female. In the poor knowledge category, namely five people, 5 of whom were male and there were no respondents who had inadequate knowledge.

The results of the study also showed that female students had a better pattern of self-medication for acne than male students. As many as 73% of the 60 female students had a perfect pattern in dealing with acne, while only 30% of the 33 male students who filled out the questionnaire had a perfect pattern in dealing with acne. This is relevant to previous research conducted by (Simanjuntak et al., 2021), where health respondents had the largest distribution of values at the good behavior level, and for non-health students, the most extensive distribution of values was at the pretty good behavior level.

In product use, most male and female students use facial wash to treat acne. Facial wash functions to cleanse the skin from dirt so that it can prevent acne growth on the face. Another product widely used by FKM UINSU students is sunscreen. Sunscreen protects the skin from exposure to UV rays produced by sunlight.

Most of female students use skincare more often to treat acne than male students. As many as 29.03% of female students answered "often" in the frequency of skincare use, while 12.90% of male students answered "sometimes" in using skincare. This shows that female students have better awareness of caring for their faces by using skincare. This is in line with research conducted by (Al-Muzaki et al., 2024), where the data of male respondents mostly have skincare usage behavior in the sufficient category; this is different from female respondents who have more skincare usage behavior in the excellent category. This can happen because women tend to have a higher and better awareness of using skincare than men. After all, women are generally inseparable from the demands to appear attractive.

Conclusion

The level of knowledge of female students is better than male students, with a ratio of (77%) for female students and (33%) for male students. For self-medication patterns, male students are lower than female students with a ratio of (30%) for male students and (73%) for female students. This shows that female students have better knowledge and self-medication patterns for acne than male students.

REFERENCES:

1. Al-Muzaki, HL, Jatmiko, SW, & Purwanti, S. (2024). The Relationship between Knowledge Level and Skincare Use Behavior with Acne Vulgaris Gradation in Medical Faculty Students, Islamic University of Malang. Journal of Community Medicine, 12(1).
2. Ameliani, H., Suwendar, S., & Yuniarni, U. (2019). Survey of Knowledge Overview and Self-Medication Patterns for Acne in Students of FMIPA, Bandung Islamic University. Pharmacy Proceedings, 305-312.
3. Apriliyani, I., Pratiwi, RI, & Purwantiningrum, H. (2019). The Relationship between Knowledge Level and Self-Medication for Acne in Adolescents in Pedagangan Village, Dukuhwaru District. Tegal: Harapan Tegal Polytechnic. Apriliyani, I., Pratiwi, RI, & Purwantiningrum, H. (2019). The Relationship between Knowledge Level and Self-Medication for Acne in Adolescents in Pedagangan Village, Dukuhwaru District. Tegal: Harapan Tegal Polytechnic.
4. Hazel et al (2019). Acne Management Guidelines by the Dermatology Society of Singapore.
5. Hidayah, N., Prawoto, E., & Mahendraswari, W. (2023). The Relationship between Face Washing and Sleep Quality with the Incidence of Acne Vulgaris in Students of the Ngawi Regency Government Nursing Academy. E-Journal Cakra Medika, 10(1), 71-76.
6. Izza, TN (2021). Evaluation Of The Relationship Between Knowledge And Actions Of UMS Faculty Of Pharmacy Students On Self-Medication Of Acne Vulgaris In 2021 (Doctoral dissertation, Universitas Muhammadiyah Surakarta).
7. Lestari, RT, Gifanda, LZ, Kurniasari, EL, Harwiningrum, RP, Kelana, API, Fauziyah, K., & Priyandani, Y. (2021). Student behavior related to how to deal with acne. Journal of Community Pharmacy, 8(1), 15.
8. Liling, VV, Lengkey, YK, Sambou, CN, & Palandi, RR (2020). Antibacterial Activity Test of Ethanol Extract of Carica papaya L. Papaya Fruit Peel Against Acne-Causing Bacteria Propionibacterium acnes. Tropical Biopharmaceuticals (The Tropical Journal of Biopharmaceutical), 3(1), 112-121.
9. Putra, MA, Afriyeni, H., & Dillasamola, D. (2023). Relationship between Knowledge Level and Attitude of Students Towards Acne Vulgaris. Journal of Pharmaceutical Science and Health, 1(1), 16-37.

10. Saputra, PB, Rizkifani, S., & Nurmainah, N. Study of the Level of Knowledge and Self-Medication Behavior for Cough in Health Students. Journal of Pharmacy Students, Faculty of Medicine, UNTAN, 5(1).

11. Sifatullah, N., & Zulkarnain, Z. (2021, November). Acne (Acne vulgaris): Review of infectious skin diseases. In Proceedings of the National Seminar on Biology (Vol. 7, No. 1, pp. 19-23).

12. Simanjuntak, M., Prabowo, WC, & Ramadhan, AM (2021, December). Level of Knowledge and Behavior of Self-medication in Mulawarman University Students: Knowledge and Behavior of Swamedication in Mulawarman University Students. In Proceeding of Mulawarman Pharmaceuticals Conferences (Vol. 14, pp. 129-137).

13. Sitindaon, LA (2020). Self-medication behavior. Sandi Husada Scientific Journal of Health, 9(2), 787-791.

14. Sulistiyani, S., Muthoharoh, A., & Ningrum, WA (2021, November). Treatment Patterns, Knowledge, and Self-Medication Behavior of Acne Vulgaris Among Adolescents in Pekalongan Regency in 2021. In Proceedings of the National Health Seminar (Vol. 1, pp. 174-181).

15. Tilla, A., Erisyawanti, D., & Azrida, R. (2020). The relationship between the level of knowledge and attitudes of adolescents at SMA Muhammadiyah 02 Medan with the incidence of acne vulgaris. Simantek Scientific Journal, 4(4), 103-108.