



Description of the Knowledge Level on Seborrheic Dermatitis Among Medical Students at Universitas Sumatera Utara, Class of 2021 - 2023

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ABSTRACT

Background: Seborrheic Dermatitis (SD) is a chronic and recurrent inflammatory skin disease that commonly affects adolescents and adults, with a relatively high prevalence, particularly among immunocompromised individuals. SD has a multifactorial pathophysiology, involving *Malassezia spp.*, skin surface lipids, and immunological dysregulation. This condition can significantly impact patients' quality of life due to frequent relapses, causing symptoms such as itching and redness. Therefore, prompt treatment with various available topical therapies is crucial. **Objectives:** This study aims to assess the level of knowledge about SD among medical students at the Faculty of Medicine, Universitas Sumatera Utara, from the class of 2021 – 2023. **Methods:** This is a descriptive study using a cross-sectional design, employing a questionnaire distributed via Google Forms and QR codes to students from the specified batches. The sampling technique used was simple random sampling. **Results:** The results showed that most students had a moderate level of knowledge about SD (50%). A total of 150 respondents (57.7%) had a sufficient understanding of SD treatment options. The majority of respondents were female students, with 176 responses. The age group of 17 to 20 years dominated the sample, accounting for approximately 46.2%. The highest number of respondents came from the 2021 cohort (67.3%). **Conclusion:** This study concludes that medical students at Universitas Sumatera Utara have a moderate level of knowledge regarding SD and its treatment options. These findings highlight the importance of further education and awareness to enhance students' understanding of the condition.

Keyword: level of knowledge, seborrheic dermatitis, treatment selection

ABSTRAK

Latar Belakang: Dermatitis seboroik (DS) adalah penyakit inflamasi kulit kronis dan rekuren yang sering terjadi pada remaja dan dewasa, dengan prevalensi yang cukup tinggi, terutama pada individu dengan kondisi imunokompromais. DS memiliki patofisiologi multifaktorial, yang meliputi *Malassezia spp.*, lipid permukaan kulit, dan disregulasi imunologis. Penyakit ini dapat memengaruhi kualitas hidup penderitanya karena gejala yang sering kambuh, seperti gatal dan kemerahan. Oleh karena itu, pengobatan segera dengan berbagai pilihan terapi topikal yang tersedia sangat penting. **Tujuan:** Studi ini bertujuan untuk mengetahui gambaran tingkat pengetahuan tentang DS pada mahasiswa Fakultas Kedokteran Universitas Sumatera Utara angkatan 2021-2023. **Metode:** Penelitian ini bersifat deskriptif dengan desain potong lintang (*cross-sectional*), menggunakan kuesioner yang disebarluaskan melalui *Google Form* dan *QR Code* kepada mahasiswa/i Fakultas Kedokteran Universitas Sumatera Utara angkatan 2021-2023. Teknik pengambilan sampel menggunakan metode *simple random sampling*. **Hasil:** Hasil menunjukkan bahwa sebagian besar mahasiswa memiliki tingkat pengetahuan yang cukup mengenai DS (50%). Sebanyak 150 responden (57,7%) memiliki tingkat pengetahuan yang cukup terkait pemilihan pengobatan DS. Mayoritas responden adalah mahasiswi perempuan, dengan 176 respons. Kelompok usia 17 hingga 20 tahun mendominasi dengan persentase sekitar 46,2%.



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Responden terbanyak berasal dari angkatan 2021 (67,3%). **Kesimpulan:** Studi ini menyimpulkan bahwa mahasiswa Fakultas Kedokteran Universitas Sumatera Utara memiliki tingkat pengetahuan yang cukup mengenai DS dan pilihan pengobatannya. Temuan ini menekankan pentingnya peningkatan edukasi dan kesadaran untuk memperdalam pemahaman mahasiswa tentang kondisi ini. **Keyword:** dermatitis seboroik, pemilihan pengobatan, tingkat pengetahuan

1. Introduction

Seborrheic Dermatitis (SD) is a chronic and recurrent inflammatory skin condition that commonly affects young adults and children. In adolescents and adults, the clinical manifestations of SD can vary, ranging from mild scalp scaling to yellowish-white patches in areas with abundant sebaceous glands, such as the scalp, face, and body. In infants, SD appears as yellowish, scaly patches on the scalp, known as "cradle cap." The prevalence of SD in the general population ranges from 1% to 3%, while in immunocompromised individuals, it can reach 34% to 83%. Globally, the prevalence of SD is estimated to be 1-5%, with the highest prevalence in Indonesia at 26.5%.^{[1],[2],[3]}

The pathophysiology of SD is multifactorial, involving interactions between skin flora, particularly *Malassezia spp.*, skin surface lipids, and individual susceptibility, all of which play key roles in disease development. SD can significantly impact the quality of life of those affected, especially due to frequent relapses causing symptoms such as itching and redness. Therefore, appropriate treatment is essential to alleviate symptoms, prevent recurrence, and improve skin condition. The treatment aims to eliminate symptoms, minimize itching and redness, and restore normal skin condition.^{[4],[5],[6],[7]}

Several treatment options for SD include the use of antifungals, keratolytics, antipruritics, and anti-inflammatory agents such as topical corticosteroids and calcineurin inhibitors. Ketoconazole 1-2%, ciclopirox 1%, and hydrocortisone 1% have been proven effective in treating SD on both the scalp and non-scalp areas. Shampoos containing active ingredients such as pine tar or coal tar (antipruritic/keratolytic), salicylic acid (keratolytic), and tea tree oil may also help relieve symptoms. For long-term management, antifungal shampoos with active ingredients like ciclopirox 1% or ketoconazole 2% can be used. Rotational therapy is often more effective and can reduce side effects compared to long-term monotherapy.^{[8],[9],[10]}

2. Method

The type of research used is a descriptive study with a cross-sectional design, in which a questionnaire was distributed to students from the 2021–2023 cohorts at the Faculty of Medicine, Universitas Sumatera Utara. The study was conducted from September 2024 to October 2024. The research location was selected at the Faculty of Medicine, Universitas Sumatera Utara, located at Jl. Dr. Mansyur No.5, Padang Bulan, Medan Baru District, Medan City, North Sumatra. The sample used in this study consisted of an accessible population that met the sampling criteria. In this study, the researchers established several inclusion, exclusion, and dropout criteria for the research sample.

This study established inclusion, exclusion, and dropout criteria, alongside a structured questionnaire-based approach for data collection to ensure the accuracy and reliability of the collected data.

The inclusion criteria of this study includes:

- a. Actively enrolled in the Faculty of Medicine, Universitas Sumatera Utara, from the 2021–2023 cohorts.
- b. Willing to participate and complete the research questionnaire.

The exclusion criteria of this study includes:

- a. Students from the 2021–2023 cohorts of the Faculty of Medicine, Universitas Sumatera Utara, who are on academic leave.
- b. Students from the 2021–2023 cohorts of the Faculty of Medicine, Universitas Sumatera Utara, who have Seborrheic Dermatitis (SD).

The dropout criteria for this study involves:

- Respondents who do not complete the questionnaire in full

The type of data used in this study is primary data. Primary data refers to information obtained directly from the original source, in this case, students from the 2021–2023 cohorts of the Faculty of Medicine, Universitas Sumatera Utara.

The data collection method employed in this study is a questionnaire, which serves as the primary data collection tool. The questionnaire was distributed to respondents via a Google Form link and a QR code containing the same Google Form link.

A questionnaire is a data collection method or research tool used to study an issue of significant societal importance. Data collection is carried out by distributing or sending a questionnaire containing questions to a selected sample, which is answered in writing to obtain responses, information, or self-reported answers from the respondents.

3. Results

The study on the level of knowledge regarding Seborrheic Dermatitis (SD) among medical students at Universitas Sumatera Utara was conducted from September 9, 2024, to October 18, 2024. A total of 260 responses met the inclusion and exclusion criteria. The demographic distribution of respondents is as follows:

Table 1. Demographic Distribution of Respondents

Characteristics		n	%
Gender	Males	84	32,3
	Female	176	67,7
Batch	2021	120	46,2
	2022	75	28,8
	2023	65	25
Age group	17-20	175	67,3
	21-25	85	32,7

The results show that most respondents were female (67.7%), with the majority belonging to the 2021 batch (46.2%) and aged between 17-20 years (67.3%).

Table 2. Knowledge Level Regarding SSD

Knowledge Level	Batch (n[%])			Total
	2021	2022	2023	
Good	64 [53,3%]	27 [36%]	11 [16,9%]	39, 2%
Moderate	50 [41,7%]	37 [49,3%]	43 [66,2%]	50 %
Poor	6 [5%]	11 [14,7%]	11 [16,9%]	10, 8%

Most students (50%) had a moderate level of knowledge regarding SD. About 39.2% had good knowledge, while 10.8% had poor knowledge. Among the 2021 batch, 53.3% had good knowledge, compared to 36% in the 2022 batch and only 16.9% in the 2023 batch.

Table 3. Knowledge Level in Selecting SD Treatment

Knowledge Level	Batch (n[%])			Total
	2021	2022	2023	
Good	43 [35,8%]	19 [25,3%]	3 [4,6%]	25%
Moderate	68 [56,7%]	44 [58,7%]	38 [58,5%]	57,7%
Poor	9 [7,5%]	12 [16%]	24 [36,9%]	17, 3%

The majority of students (57.7%) had moderate knowledge regarding SD treatment selection. Only 25% demonstrated good knowledge, while 17.3% had poor knowledge. The 2023 batch had the highest percentage of poor knowledge (36.9%) and the lowest percentage of good knowledge (4.6%).

In the 2021 batch, 56.7% of students had a moderate level of knowledge, 35.8% had a good level of knowledge, and 7.5% had a low level of knowledge. In the 2022 batch, 58.7% of students had a moderate level of knowledge, 25.3% had a good level of knowledge, and 16% had a low level of knowledge. Meanwhile, in the 2023 batch, 58.5% of students had a moderate level of knowledge, 4.6% had a good level of knowledge, and 36.9% had a low level of knowledge, indicating that the 2023 batch had the highest percentage of low knowledge and the lowest percentage of good knowledge.

4. Discussion

This study found that most medical students had a moderate level of knowledge regarding SD (50%), with 39.2% having good knowledge and 10.8% having poor knowledge. These findings are consistent with a study conducted among medical students at FK Sullia, India, where the majority also had moderate knowledge. However, this contrasts with findings from SMK Negeri 10 Medan, where students demonstrated a higher level of knowledge. Educational background and study duration may influence students' knowledge, with senior students (2021 batch) showing better understanding due to more in-depth exposure to SD-related topics. Additionally, interest and curiosity play a role in shaping students' comprehension.^{[11],[12],[13]}

The majority of students (57.7%) had moderate knowledge of SD treatment options, while 25% had good knowledge and 17.3% had poor knowledge. Factors influencing this knowledge level include educational background, access to information, and the learning environment. The 2021 batch had the highest percentage of good knowledge (35.8%), likely due to longer exposure to medical education and access to reliable sources. Higher education levels provide better comprehension of SD treatment options and improve information accessibility.^[14]

The lower knowledge level among the 2023 batch may be attributed to their lack of exposure to SD topics in the Dermatology and Medical Science (DMS) Block, which is taught in the fourth semester. Individual factors such as lack of motivation, limited independent study, and shallow understanding of SD treatments may also contribute to this knowledge gap. The 2023 batch, being in their third semester, had less exposure to relevant topics. Furthermore, environmental, socio-cultural factors, and personal interest play significant roles in enhancing or limiting students' knowledge on the subject.^[15]

5. Conclusion

From this study, it can be concluded that the majority of medical students at Universitas Sumatera Utara from the 2021–2023 classes have a moderate level of knowledge in selecting topical treatments for seborrheic dermatitis (SD), with only a small proportion having either good or low knowledge. Factors such as education level, access to information, and the learning environment influence students' knowledge levels, with the 2021 cohort demonstrating better knowledge due to receiving more structured and comprehensive education on SD

treatment. The 2023 batch, which has not yet received the DMS Block material, tends to have lower knowledge levels, possibly due to a lack of motivation, focus on the material, or interest in independent learning. Both internal and external factors, such as learning interest, curiosity, and access to relevant information, also play a role in shaping students' knowledge.

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