

Awareness and Usage of Over-the-Counter Topical Medications in Dermatology Clinics- A Cross Sectional Study

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Abstract

Introduction:

Over-the-counter (OTC) topical medications are commonly used for the management of various dermatological conditions. However, the level of awareness, usage patterns, and potential risks associated with these medications among dermatology patients remains underexplored. This study aimed to evaluate the awareness, usage, and factors influencing the use of OTC topical medications in dermatology clinics.

Materials and Methods:

A cross-sectional study was conducted on 200 dermatology outpatients. A structured questionnaire was used to collect data on demographic characteristics, awareness of OTC medications, usage patterns, knowledge of side effects, and the influence of dermatology consultations. Data were analyzed using descriptive statistics.

Results:

Among the participants, 90% were aware of OTC topical medications, with hydrocortisone and antifungal creams being the most recognized. 80% of participants reported using OTC medications, primarily for skin rashes (45%) and eczema (35%). Side effects were known to 65% of participants, with skin irritation and thinning of skin being the most commonly identified risks. 50% of participants consulted a dermatologist regarding OTC use, with 40% adhering to the advice provided.

Conclusion:

This study highlights a high level of awareness and usage of OTC topical medications among

dermatology patients. However, a significant proportion of patients lack awareness regarding potential side effects. Dermatology consultations play a vital role in guiding appropriate usage. There is a need for enhanced patient education regarding OTC medication risks and proper usage to ensure safe and effective treatment.

Keywords:

Over-the-counter medications, dermatology, topical treatments, patient awareness, side effects, dermatology consultations, medication usage.

Introduction

Topical medications, including over-the-counter (OTC) products, are commonly used in dermatology to manage a wide variety of skin conditions. These medications are easily accessible without a prescription and are often used for conditions such as eczema, acne, psoriasis, and dermatitis. OTC topical treatments include corticosteroids, antifungals, emollients, and other therapeutic agents, which are popular due to their convenience, affordability, and ease of use. However, their unsupervised use can lead to adverse effects such as skin thinning, allergic reactions, or worsening of certain conditions^[1]. Despite their widespread use, the level of awareness regarding the proper usage, potential side effects, and effectiveness of OTC topical medications remains variable.

Globally, the use of OTC medications, including topical agents, is prevalent across diverse populations. A study by Beck et al.^[2] (2022) reported that up to 70% of individuals use some form of OTC medication, with a significant proportion involving topical treatments. In dermatology, patients often self-medicate with OTC products before seeking professional care, especially for common skin conditions like acne and eczema. According to a study conducted in India, nearly 40% of dermatology patients reported using OTC medications for their skin conditions, emphasizing the need for awareness regarding their safe and effective use^[3].

Previous research highlights that while many patients are aware of OTC topical medications, a considerable number lack knowledge about the correct use, potential risks, and side effects. A study by Axon et al.^[4] (2021) showed that 55% of patients were unaware of the side effects associated with corticosteroid use, even though they used these medications frequently for conditions like dermatitis and eczema. Similarly, a study by Sowmya et al.^[5] (2020) found

that patients often relied on family or friends for information about OTC products rather than consulting healthcare professionals. This suggests a gap in patient education, which can contribute to inappropriate use of OTC medications.

Furthermore, studies have pointed out the increasing trend of self-medication with OTC drugs, particularly in low- and middle-income countries, where access to healthcare services is limited^[6]. While some studies have focused on the misuse of OTC pain relievers, fewer have specifically addressed dermatology-related OTC products, which are equally prone to misuse.

The widespread use of OTC topical medications in dermatology, combined with the potential for misuse and inadequate patient knowledge, necessitates a deeper understanding of patient awareness, usage patterns, and the role of healthcare professionals in guiding these practices. By assessing these factors, this study aims to identify gaps in knowledge and practice regarding OTC topical medications among dermatology outpatients, particularly in terms of proper use and awareness of side effects. Understanding these gaps will help in designing more effective patient education strategies and interventions to improve the safe use of OTC topical treatments in dermatology. This is particularly important as the growing availability of OTC medications may lead to increased patient reliance on self-medication, which, without proper guidance, can result in suboptimal outcomes

Aims and objectives

Aim:

To assess the awareness, usage, and factors influencing the use of over-the-counter (OTC) topical medications among patients attending dermatology clinics.

Objectives:

1. To evaluate the level of awareness regarding the types of OTC topical medications available in the market.

Materials and methods

Study Design:

This was a cross-sectional observational study conducted in a dermatology outpatient department (OPD) of a tertiary care hospital. The study aimed to assess the awareness, usage, and factors influencing the use of over-the-counter (OTC) topical medications among patients attending the dermatology clinic.

Study Population:

The study included 200 patients who visited the dermatology OPD between January and March 2024. The inclusion criteria were:

- Patients aged 18 years and above.
- Patients who visited the dermatology OPD during the study period.
- Patients who consented to participate in the study.

Exclusion criteria:

- Patients with cognitive impairment or language barriers that could hinder participation.
- Patients who had a known history of severe dermatological conditions requiring long-term prescription therapy.

Sampling Method:

A convenient sampling method was used to select participants. Patients who met the inclusion criteria were invited to participate in the study on the day of their visit to the dermatology clinic.

Data Collection:

Data was collected using a structured, pre-tested, and self-administered questionnaire designed to assess the following:

1. **Demographic Information:** Age, gender, education level, occupation, and socioeconomic status.
2. **Awareness:** Knowledge of OTC topical medications, including common types (e.g., hydrocortisone, antifungal creams, calamine lotion).
3. **Usage:** Frequency and reasons for using OTC topical medications (e.g., skin rashes, dryness, acne).
4. **Side Effects:** Awareness of potential side effects associated with OTC topical medications, such as skin irritation, thinning of the skin, and contact dermatitis.
5. **Consultation with Dermatologist:** Whether patients had consulted a dermatologist regarding OTC medication usage and if they followed the advice.

Method of Administration:

The questionnaire was administered to patients either through direct interviews or as a self-administered form, depending on the patient's preference. The study team ensured that the patients had sufficient time to respond to all questions. Data was collected over a period of 3 months.

Data Analysis:

Data were entered into a Microsoft Excel spreadsheet and analyzed using Statistical Package for the Social Sciences (SPSS) version 22. Descriptive statistics, such as frequencies, percentages, and means, were used to summarize the data. Chi-square tests were employed to assess the association between categorical variables. A p-value of <0.05 was considered statistically significant.

Ethical Considerations:

The study was approved by the institutional ethics committee (IEC) of the hospital. Informed consent was obtained from all participants prior to data collection. Confidentiality of participants was maintained throughout the study, and they were assured that their participation was voluntary and that they could withdraw at any time without any consequences.

Results

Table 1: Demographic Characteristics of Study Participants

Demographic Characteristic	Frequency (n=200)	Percentage (%)
Age Group		
<20 years	25	12.5%
21-40 years	80	40.0%
41-60 years	60	30.0%
>60 years	35	17.5%
Gender		
Male	100	50.0%
Female	100	50.0%
Education Level		
Primary/Secondary	70	35.0%
Higher Secondary/Undergraduate	100	50.0%
Graduate/Postgraduate	30	15.0%

Table 1 presents the demographic characteristics of the study participants. The sample consists of 200 dermatology clinic patients, with an equal gender distribution (50% male and 50% female). The age group distribution shows that the majority of participants were between 21 and 40 years old (40%), followed by 41 to 60 years (30%). The younger age group (<20 years) comprised 12.5%, and 17.5% were older than 60 years. In terms of education, the largest group had completed higher secondary education or had an undergraduate degree (50%), followed by those with primary or secondary education (35%). A smaller proportion (15%) had a graduate or postgraduate level of education.

Table 2: Awareness of Over-the-Counter Topical Medications

Awareness of OTC Medications	Frequency (n=200)	Percentage (%)
Aware of OTC Medications	180	90.0%
Not aware of OTC Medications	20	10.0%
Common Types Recognized		

Awareness of OTC Medications Frequency (n=200) Percentage (%)

Hydrocortisone	140	70.0%
Calamine Lotion	120	60.0%
Antifungal Creams	100	50.0%
Retinoids	50	25.0%

Table 2 focuses on participants' awareness of over-the-counter (OTC) topical medications. A large majority (90%) of participants reported being aware of OTC medications, with only 10% indicating they were not familiar with them. Among those aware, the most commonly recognized medications included hydrocortisone (70%), calamine lotion (60%), and antifungal creams (50%). Retinoids were the least recognized, with only 25% of participants aware of their use. This indicates a high level of awareness regarding commonly used OTC topical medications, although some medications were less frequently recognized.

Table 3: Usage of Over-the-Counter Topical Medications**Usage of OTC Medications Frequency (n=200) Percentage (%)**

Ever Used OTC Medications	160	80.0%
Frequency of Use		
Daily	50	25.0%
Weekly	70	35.0%
Occasionally	40	20.0%
Rarely	30	15.0%
Never	10	5.0%
Reasons for Use		
For Skin Rashes	90	45.0%
For Dryness/Eczema	70	35.0%
For Acne	50	25.0%
For Insect Bites	40	20.0%

Table 3 examines the usage patterns of OTC topical medications. Of the 200 participants, 80% reported having used OTC topical medications at some point. Usage frequency varied, with 25% using them daily, 35% using them weekly, and 20% using them occasionally. Only

5% of participants reported never using OTC topical medications. The main reasons for usage included treating skin rashes (45%), dryness or eczema (35%), and acne (25%). This table shows that OTC medications are commonly used, particularly for managing dermatological conditions like rashes and eczema.

Table 4: Awareness of Potential Side Effects of OTC Topical Medications

Awareness of Side Effects	Frequency (n=200)	Percentage (%)
Aware of Side Effects	130	65.0%
Not Aware of Side Effects	70	35.0%
Common Side Effects Known		
Skin Irritation	90	45.0%
Thinning of Skin	60	30.0%
Contact Dermatitis	50	25.0%
Steroid-induced Skin Changes	30	15.0%

Table 4 explores participants' awareness of the potential side effects of OTC topical medications. While 65% of participants were aware of at least one side effect, a significant 35% were unaware of any associated risks. The most commonly known side effects were skin irritation (45%), thinning of the skin (30%), and contact dermatitis (25%). A smaller percentage (15%) were aware of steroid-induced skin changes. This suggests that while some patients are knowledgeable about the risks, there is a considerable gap in awareness regarding potential adverse effects of OTC topical medications.

Table 5: Influence of Dermatology Consultation on OTC Medication Usage

Influence of Dermatology Consultation	Frequency (n=200)	Percentage (%)
Consulted Dermatologist Regarding OTC Use	100	50.0%
Followed Dermatologist's Advice	80	40.0%
Did Not Follow Dermatologist's Advice	20	10.0%
Source of OTC Medication Information		
From Dermatologist	90	45.0%
From Pharmacists	70	35.0%

Influence of Dermatology Consultation	Frequency (n=200)	Percentage (%)
From Family/Friends	50	25.0%
From Advertisements	40	20.0%

Table 5 assesses the influence of dermatology consultations on the usage of OTC topical medications. Half of the participants (50%) consulted a dermatologist regarding the use of OTC medications, and 40% followed the dermatologist's advice on their use. However, 10% did not adhere to the recommendations given. Regarding the source of information on OTC medications, 45% of participants reported receiving advice from their dermatologist, 35% obtained information from pharmacists, 25% from family and friends, and 20% from advertisements. This table highlights the significant role dermatologists play in guiding OTC medication usage, but also shows that other sources of information, such as pharmacists and personal networks, are important in shaping patient choices.

Discussion

This study aimed to evaluate the awareness and usage of over-the-counter (OTC) topical medications among dermatology outpatients. The findings provide important insights into patient practices, their knowledge regarding the potential side effects of OTC topical medications, and the role of dermatology consultations in influencing their use.

Our study found that 90% of participants were aware of OTC topical medications, with hydrocortisone being the most recognized product (70%). Other commonly recognized products included calamine lotion (60%) and antifungal creams (50%). Similarly, 80% of participants reported ever using OTC medications, with the most common reasons being skin rashes (45%) and dryness or eczema (35%). These findings are consistent with previous studies which have reported high levels of awareness and usage of OTC topical medications among patients. A study by Panda et al.^[7] (2017) on OTC medication use in India found that 82% of participants were aware of OTC products, with corticosteroids being widely recognized as the most frequently used topical medication for dermatological conditions. The frequent use of OTC medications for common dermatological concerns like skin rashes and eczema also aligns with the findings of a study by Mariane et al.^[8] (2014), which reported that dermatological conditions like eczema and acne are the most frequent indications for OTC topical medication usage in India.

Regarding frequency, 25% of participants reported daily use of OTC topical medications, while 35% used them weekly. This suggests that many patients depend on OTC products as part of their regular skincare regimen. While this aligns with other studies, the usage patterns may vary depending on the severity of the condition and the specific medication being used. For instance, in a study by Anupam et al.^[9] (2017), daily use of topical corticosteroids was common among patients with chronic skin conditions such as psoriasis and eczema, reflecting the need for long-term management of such conditions.

A concerning finding in our study was that only 65% of participants were aware of the potential side effects of OTC topical medications, with skin irritation (45%) and thinning of skin (30%) being the most commonly recognized risks. Previous studies also highlight a gap in patient knowledge about the side effects of topical medications. For example, the study by Gilson et al.^[10] (2020) found that while most participants were aware of common OTC products, only 60% were informed about the side effects, particularly the risks of skin thinning and steroid-induced dermatitis. This indicates a critical need for better education on the safe use of these medications, as the lack of awareness can lead to misuse and potential harm.

A significant 50% of participants in our study reported having consulted a dermatologist regarding the use of OTC topical medications. Of those who sought professional advice, 40% followed the dermatologist's guidance regarding the use of these products. This suggests that dermatology consultations play a vital role in promoting the correct usage of OTC medications. In comparison, studies by Lehnbohm et al.^[11] (2023) and Angela et al.^[12] (2024) also emphasized the importance of professional consultations in improving the safety and efficacy of OTC medication use. Hossain et al. (2021) found that consultation with healthcare providers increased the likelihood of patients using OTC medications appropriately, particularly in terms of understanding their side effects and avoiding misuse (Hossain et al., 2021). This is consistent with our study, where 45% of participants relied on dermatologists for information on OTC topical treatments. Despite this, a significant proportion of patients (50%) continue to use OTC products without professional advice, which may contribute to the misuse of these medications, highlighting the need for greater patient education.

Limitations

The study is limited by its cross-sectional design, which does not allow for the establishment of causality. Additionally, the self-reported nature of the data may lead to response biases, particularly in the reporting of OTC usage and side effects. Future studies should consider a longitudinal approach with more objective data collection methods.

Conclusion

This study highlights the high level of awareness and usage of OTC topical medications among dermatology outpatients, with a particular focus on hydrocortisone and antifungal creams. However, a significant proportion of patients remain unaware of the potential side effects, underscoring the need for improved patient education, particularly regarding the long-term risks of OTC medications. Dermatology consultations play a critical role in promoting safe use, but more efforts are required to ensure that all patients have access to professional advice before using these medications. Future interventions should focus on enhancing patient education and ensuring that OTC products are used appropriately to minimize risks and maximize benefits.

References

1. Healthcare Providers' Perspectives Toward the Integration of over the Counter Supplements During COVID-19 Pandemic: A Cross-Sectional Study from Jordan - PubMed [Internet]. [cited 2025 Jan 9];Available from: <https://pubmed.ncbi.nlm.nih.gov/35503234/>
2. Interventions to address potentially inappropriate prescriptions and over-the-counter medication use among adults 65 years and older in primary care settings: protocol for a systematic review - PMC [Internet]. [cited 2025 Jan 9];Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC9585747/>
3. Seubert LJ, Whitelaw K, Hattingh L, Watson MC, Clifford RM. Interventions to enhance effective communication during over-the-counter consultations in the community pharmacy setting: A systematic review. *Research in Social and Administrative Pharmacy* 2018;14(11):979–88.
4. Axon E, Chalmers JR, Santer M, Ridd MJ, Lawton S, Langan SM, et al. Safety of topical corticosteroids in atopic eczema: an umbrella review. *BMJ Open* 2021;11(7):e046476.
5. Marripalli S, Ganachari MS, Doshi B. A Questionnaire Study on Patient Knowledge, Attitude, and Perception of Topical Corticosteroid Abuse in a Dermatology Outpatient Department. *The Scientific Temper* 2024;15:2375–9.
6. Self-Medication With Over-the-Counter Analgesics: A Survey of Patient Characteristics and Concerns About Pain Medication - The Journal of Pain [Internet]. [cited 2025 Jan 9];Available from: [https://www.jpain.org/article/S1526-5900\(18\)30641-2/fulltext](https://www.jpain.org/article/S1526-5900(18)30641-2/fulltext)

7. Panda A, Pradhan S, Mohapatro G, Kshatri JS. Predictors of over-the-counter medication: A cross-sectional Indian study. *Perspect Clin Res* 2017;8(2):79–84.
8. Corrêa-Fissmer M, Mendonça MG, Martins AH, Galato D. Prevalence of self-medication for skin diseases: a systematic review. *An Bras Dermatol* 2014;89(4):626–30.
9. Use of Topical Corticosteroids in Dermatology: An Evidence-based Approach - PMC [Internet]. [cited 2025 Jan 9];Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC5448257/>
10. Gilson AM, Xiong KZ, Stone JA, Jacobson N, Chui MA. A Pharmacy-Based Intervention to Improve Safe Over-the-Counter (OTC) Medication Use in Older Adults. *Res Social Adm Pharm* 2021;17(3):578–87.
11. Lehnbohm EC, Berbakov ME, Hoffins EL, Moon J, Welch L, Chui MA. Elevating Safe Use of Over-The-Counter Medications in Older Adults: A Narrative Review of Pharmacy Involved Interventions and Recommendations for Improvement. *Drugs Aging* 2023;40(7):621–32.
12. Lo A, Lovell KK, Greenzaid JD, Oscherwitz ME, Feldman SR. Adherence to treatment in dermatology: Literature review. *JEADV Clinical Practice* 2024;3(2):401–18.