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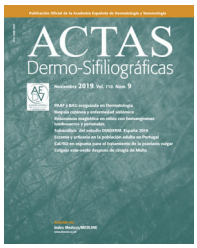

CASE AND RESEARCH LETTER

[Translated article] Cross-Sectional Study on the Self-Treatment of Skin Lesions by Medical Students

Estudio transversal sobre autotratamiento de lesiones cutáneas en estudiantes del grado en Medicina

To the Editor,

The practice of self-medication has experienced an increase in recent decades, with its prevalence ranging between 46% and 53.3%.[1] Greater knowledge and easy access to drugs make health care personnel and medical students a particularly susceptible group for self-medication, with the potential associated risks (adverse reactions, interactions with other drugs, masking of the actual disease if diagnosis is incorrect, or posing a public health problem due to increased antibiotic resistance).[2] There are few studies on self-treatment in dermatology[3,4] with even fewer analyzing this practice in health science students.[5–9] The main objective of this study was to determine the prevalence of self-treatment of skin lesions in medical students. Then, it sought to determine whether academic year impacted the prevalence of self-medication.

We conducted a cross-sectional descriptive study based on the responses given to an anonymous survey, conducted among medical students at *Universidad de Santiago de Compostela* (A Coruña, Spain). Sociodemographic data and information on the performance of self-treatment and the characteristics of this practice were collected.

The survey was completed by 420 students (74.3% women, mean age 22.2 years). A total of 81% had self-treated for any disease on some occasion, and 51.7% had done so to treat skin lesions (Table 1).

The characteristics of self-treatment for dermatological diseases are shown in Table 2. The most used route of administration was topical (99.5%), with corticosteroids standing out (39.4%), followed by antibiotics (32.4%) and antifungals (15.3%). The oral route was used by 7.8% of respondents, with antihistamines being the most represented drugs (35.3%), followed by antibiotics (11.8%) and corticosteroids (11.8%). Acne was the disease that most frequently motivated self-medication (37.8%), followed by atopic (23.5%) and contact dermatitis (16.1%). Most students used self-medication for lesions located in visible areas (71.9%), initiated self-treatment within the first month of lesion onset (39.5%), and almost two-thirds maintained it until resolution (60.3%). Most students read the package leaflet before starting treatment. The motivations that prompted self-medication were advice from a non-dermatologist physician (23.5%) or a pharmacist (21.7%), or the use of surplus previously used treatments (23.0%). The minority percentage (15.7%) chose the drug by their own decision. Of this last group, 91.2% based their decision on previous knowledge about their disease. A total of 41.5% of students who self-treated would advise another person on what treatment to apply if they had a condition similar to theirs.

A higher prevalence of self-medication for skin lesions was observed in higher (4–6th) vs lower courses (57.4 vs. 43.3%; $p = 0.004$). The mean age was significantly higher in students who self-treated ($p < 0.05$ for self-medication for any reason and for dermatological lesions).

Although the published data on self-treatment for dermatological diseases are scarce, it is a common practice. A systematic review that analyzed 6 cross-sectional studies focused on self-treatment for different dermatoses in the general population observed that prevalence went from 6% up to 67.7%.[3]

Focusing on medical students, self-medication is even more frequent. Studies that provide data on this population group (Supplementary data), observed prevalences of self-treatment for any disease between 7.32% and 100%, with 50% of the studies being >75%, which is consistent with our results (81%). In the field of self-treatment for skin lesions, studies focus on self-treatment of acne, whose prevalence went from 50.4% up to 77.4% (Table 3).[5–9] As in the present study, 2 of these studies found that as the academic year increased, so did this rate.[8,9] The mild nature of the disease was the main reason that prompted self-treatment in medical students with acne.[5,6,8,9]

Of note, many medical students feel confident in their pharmacological knowledge, which favors self-medication and the recommendation of treatment to a third party. In

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Table 1 Sociodemographic characteristics of the study participants.

Characteristics of all study participants ($n = 420$)		
Sex		
Male		108 (25.7%)
Female		312 (74.3%)
Age (mean ± SD. years)		22.2 ± 3.0
Academic year		
1.°		49 (11.7%)
2.°		47 (11.2%)
3.°		75 (17.9%)
4.°		40 (9.5%)
5.°		86 (20.5%)
6.°		123 (29.3%)
Characteristics of the students who self-medicated		
	Characteristics of students who self-treated for any illness ($n = 340$)	Characteristics of students who self-treated for dermatological conditions ($n = 217$)
Sex		
Male	86 (25.3%)	55 (25.3%)
Female	254 (74.7%)	162 (74.7%)
Age (mean ± SD, years)	22.3 ± 3.1	22.6 ± 3.1
Academic year		
1st	37 (10.9%)	18 (83%)
2nd	36 (10.6%)	22 (10.1%)
3rd	60 (17.6%)	34 (15.7%)
4th	33 (9.7%)	24 (11.1%)
5th	72 (21.2%)	50 (23.0%)
6th	102 (30.0%)	69 (31.8%)

SD, standard deviation.

Table 2 Characteristics of self-treatment for dermatological diseases.

Time between self-treatment and survey ($n = 215$)	<6 months	84 (39.1%)
	6 months/1 year	46 (21.4%)
	1 year/2 years	41 (19.1%)
	>2 years	44 (20.5%)
Route of administration ($n = 217$)[a]	Topical	216 (99.5%)
	Oral	17 (7.8%)
	Other	1 (0.5%)
	Total responses	234
	Topical (216)	
Drug: pharmacological group[a]	Antibiotic	70 (32.4%)
	Antihistamine	18 (8.3%)
	Corticosteroid	85 (39.4%)
	Retinoid	20 (9.3%)
	Corticosteroid and antifungal	4 (1.9%)
	Corticosteroid and antibiotic	16 (7.4%)
	Others	5 (2.31%)
	Did not remember	29 (13.4%)
	Total responses	280
	Oral (17)	
		Students who resorted to each one of the pharmacological groups

Table 2 (*Continued*)

Drug	Antifungal	1 (5.9%)
	Antibiotic	2 (11.8%)
	Antihistamine	8 (47.1%)
	Corticosteroid	2 (11.8%)
	Others	0 (0%)
	Did not remember	6 (3.5%)
	Total responses	19
Type of dermatosis ($n = 217$)[a]	Acne	82 (37.8%)
	Psoriasis	12 (5.5%)
	Atopic dermatitis	51 (23.5%)
	Contact dermatitis	35 (16.1%)
	Seborrheic dermatitis	16 (7.4%)
	Other eczema	14 (6.5%)
	Urticaria	7 (3.2%)
	Fungal infection	28 (12.9%)
	Bacterial infection	12 (5.5%)
	Parasitic infection	1 (0.5%)
	Wart	6 (2.7%)
	Insect bite/sting	33 (15.2%)
	Burn	19 (8.7%)
	Unknown diagnosis	12 (5.5%)
	Total responses	328
Affected body areas ($n = 217$)[a]	Visible areas (face and hands)	156 (71.9%)
	V of neckline, forearms, legs	51 (23.5%)
	Usually covered areas	58 (26.7%)
	Total responses	265
Time of lesion progression at start of self-medication ($n = 215$)	<1 month	85 (39.5%)
	1 month/3 months	43 (20%)
	3 months/6 months	14 (6.5%)
	6 months/1 year	16 (7.4%)
	>1 year	57 (26.5%)
Duration of self-medication ($n = 217$)	Until lesion resolution	131 (60.3%)
	According to previous prescription	62 (28.6%)
	Until package completion	9 (4.2%)
	Other	15 (6.9%)
Reading leaflet and expiry date before treatment ($n = 217$)	Administration instructions	167 (77%)
	Contraindications	147 (67.7%)
	Side effects	141 (65%)
	Expiry date	183 (84.3%)
Motivations for self-medication ($n = 217$)	Advice from non-dermatologist doctor	51 (23.5%)
	Advice from pharmacist	47 (21.7%)
	Advice from non-health care acquaintance	35 (16.1%)
	Surplus of previously used drug	50 (23.0%)
	By own decision	34 (15.7%)
Information sources for students deciding treatment themselves ($n = 34$)[a]	Knowledge of disease/treatment (formation/past consult)	31 (91.2%)
	Acquired during training	21 (70%)
	Past dermatologist consult	9 (30%)
	Medical books/literature	14 (41.2%)
	Internet (non-medical)	2 (5.9%)
	TV advertising	1 (3.9%)
	Total responses	48

[a] Multiple response question. Percentages are expressed according to the number of participants.

Table 3 Studies on self-treatment for skin lesions in medical students published in the literature.

Title	Country/author/study period	N°	Percentage of self-medication	Target population	Frequently used drugs
Knowledge, attitude and practices of medical students about self-medication for acne[6,a]	India/Talanikar et al./Study period not indicated	200	63.4% (90/142)	Women aged 18–24, 2nd to final year medical students, randomly selected	Route of administration not specified. Anti-acne drugs[b] (56%, 112/200): - Clindamycin (52%, 104/200) - Adapalene + benzoyl peroxide gel (13%, 26/200)
Self-medication for acne among Undergraduate Medical Students[5]	India/Karamata et al./Study period not indicated	582	59.3% (307/518)	2nd and final year medical students	Topical route: 76.9%, 236/307. Anti-acne drugs (69.7%, 214/307): - Antimicrobials (90.6%, 194/214): clindamycin (58.2%, 113/214)
A cross-sectional study of self-medication for acne among undergraduate medical students[7]	India/Raikar et al./November-December 2017	310	77.4% (240/310)	Medical students with acne	Most frequent topical route: (exact percentage not indicated). Anti-acne drugs[c] (70%): - Clindamycin[c] (40%) - Benzoyl peroxide[c] (30%)
Assessment of Knowledge, Attitude, and Practices Regarding Self-medication for Acne Among Medical Students[8]	Pakistan/Tameez-Ud-Din et al./January-June 2019	349	50.4% (123/244)	Medical students from all years	Topical: 59.3%, 73/123 Oral: 6.5%, 8/123 Topical and oral: 30.9%, 38/123. Anti-acne drugs (47.8%, 75/123)
Acne self-medication among pre-clinical and clinical years medical students[9]	Jeddah/Alajmi et al./June 2020	249	70.8% (126/178)	3rd, 4th, 5th, and 6th year medical students	Topical: 76%, 95/125 Oral: 7.2%, 9/125 Topical and oral: 16.8%, 21/125. Anti-acne drugs (65.6%, 82/125)

[a] This article shows data on the total sample and not in relation to those who self-treat.
[b] Data are provided on the overall study population—with and without acne—without indicating the exact number of drug groups used only among the population with acne.
[c] Whole numbers are not indicated.

the study population, 41.5% would make this recommendation, a figure that went from 26.7% up to 50% in studies on medical students with acne.[5,8] This data is concerning since diagnosis and treatment may not be correct, as there is no prior dermatological consultation.

The retrospective collection of information, the evaluation of students from a single School of Medicine, and the use of a non-validated questionnaire should be highlighted as limitations of this work.

In conclusion, in the evaluated medical student population, the prevalence of self-medication for skin lesions

was high, being significantly higher in students from higher courses. These findings highlight the need to increase training in medical students about the importance of adequate and rational use of dermatological drugs, instilling good practice in professional practice without trivializing the significance of a therapeutic recommendation. Similarly, greater control of dispensations without a prescription, along with the reduction in waiting lists that enable faster access to specialized consultation, would contribute to reducing self-treatment, since patient empowerment for self-control of their skin disease will make sense when there is an accurate diagnosis and therapeutic guidance from a dermatologist.

Conflicts of interest

None declared.

Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at doi:10.1016/j.ad.2025.03.023.

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