Assessment of knowledge, attitude and practices regarding self-medication for acne among medical students

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Abstract

Background: Acne is one of the most common skin conditions worldwide. Self-medication for acne is a fairly common practice among medical students. The objective of our study was to identify the prevalence of self-medication and to assess its knowledge, attitude, and practices among medical students.

Materials and methods: This descriptive cross-sectional study was conducted at our college, from June 2023 to July 2023 Mangalore, Karnataka. The participants were briefed about the nature of the study, and a pretested questionnaire was administered to them. The data collection was carried out using a social medial platform. The Statistical Package for Social Sciences (SPSS) version 26.0 was used to analyse the data.

Results: The prevalence of acne was found to be 86.4% (432 out of 500) in our study with male preponderance. The practice of self-medication was significantly higher in students having acne lesions on the face (58%). The most common source of information was reported to be acquaintances (43.4%). Most of the students had knowledge of the dosage of drugs (70%) and precautions for their use (65%). Sixty three percent of the students were of the opinion that self-medication is part of self-care. Most of the students read the expiration date on the drug label (88.6%).

Conclusion: Acne is a highly prevalent condition among medical students and the practice of self-medication among acne sufferers is high. The knowledge of students regarding self-medication of acne was not adequate.

Keywords: Acne, Self-medication, Medical students

Introduction

Acne is one of the most common skin conditions worldwide. Self-medication for acne is a fairly common

practice among medical students. The objective of our study was to identify the prevalence of self-medication and to assess its knowledge, attitude, and practices among medical students. Acne is one of the most common skin conditions affecting teenagers of both sexes worldwide [2]. It is an inflammatory condition that results from an underlying pathology involving sebaceous glands of the skin. There are different morphological types of pimples or acne such as whiteheads, blackheads, cysts, nodules, and pustules [3]. Untreated acne may lead to scarring. The face is one of the most common sites for acne lesions, which results in considerable distress to the patient, usually out of proportion to the disease severity. The psychological and social impacts of acne have been the driving forces behind intensive efforts to find a suitable cure even for mild cases [4]. Self-medication is defined by the World Health Organization (WHO) as the "use of medicinal products by the consumer to treat self-recognized disorders or symptoms or the intermittent or continued use of medication prescribed by a physician for chronic or recurring diseases or symptoms." Self-medication is a fairly common practice among medical students due to a variety of factors such as ease of availability, exposure of medical settings, and pharmacological knowledge [4]. Even though the WHO advocates self-medication for the treatment of minor ailments, it does caution against its pitfalls such as adverse side effects and the emerging resistance among pathogens [5].

Methods

This cross-sectional study will be conducted at tertiary care teaching of Mangalore, Karnataka. Written informed consent will be taken from the participants. The participants will be briefed about the nature of the study, and a pretested questionnaire will be administered to them. This descriptive cross-sectional study will be conducted at Srinivas Medical College, from August 2023 to September 2023. Students of all the medical years studying in our college were included in the study. The data collection will be carried out using a social medial platform. For the purpose of data collection, Google forms will be used, and an electronic link will be generated and sent to the targeted participants; for this purpose, the snowball technique will be used, where one participant refers to another participant. The data collection will be followed by the convenience sampling method. Students will be asked to fill a semi-structured questionnaire. Incompletely filled questionnaires will be excluded from the final results. Most of the questions were taken from a study by Karamata et al (1). The questionnaire had two parts; the first consisted of a demographic portion and questions about the site of acne, the pattern of self-medication, and the source of information. The second part of the questionnaire comprised questions regarding knowledge, attitude, and practices of self-medication. Knowledge will be assessed by six questions, including knowledge about dose, mechanism of action, precautions for use, complications, side effects, and contraindications of the drugs being used. The sections of attitude and practices had four and three questions, respectively. The results were reported as frequencies and percentages.

Sample Size

A total of 550 university students of different streams will be recruited for the study. According to prior estimates, the prevalence rate of acne among medical students was 55% [20]. The total sample size came to be three hundred and eighty (n = 380) using the following equation (6)

$n = z2 \times p \times q/d2$

where n is the minimum sample size, z is the constant (1.96), p is the prevalence of acne among medical students, (0.55), q is $(1 - p)$, Z is the standard normal deviation of 1.96 corresponding to the 95% confidence interval, and d is the desired degree of accuracy.

Results

The data were presented in the form of frequencies and percentages. The Statistical Package for Social Sciences (SPSS) version 26.0 (IBM Corp., Armonk, NY, USA) was used to analyze the data. The Chi-square test was used for categorical variables analysis. A p-value of ≤0.05 indicated statistical significance. The study required the participation of 380 students, but we approached 550 students to avoid sample bias and there were 50 students excluded, due to mismatching of the inclusion criteria.Overall, included responses in this study are 500, giving a response rate of 91.6%

Characteristics of Study Subjects

A total of 500 students who successfully filled in the questionnaire were enrolled in the study. A total of 64% (320 of 550) were females, and 36% (180 of 500) were males. The majority of the students were in the first year of their Bachelor's degree course (27%), followed by final-year students (25%). The prevalence of acne in our study group was found to be 86.4% (432 of 500). Table 1 provides the detailed socio-demographic information on enrolled students in health sciences.

Table: 1

Variables	Frequency	Percentage
Gender		
Male	320	64%
Female	180	36%

Development of Acne		
No	432	86.4%
Yes	168	23.6%
Education Level		
First Year	135	27%
Second Year	95	19%
Third Year	50	10%
Fourth Year	60	12%
Fifth Year	35	7%
Final Year	125	25%

Characteristics of Acne Patients

The prevalence of acne was found to be 86.4% (432 out of 500). A total of 285 female and 147 male students suffered from acne. (Table 1) Female students had a significantly higher prevalence of acne compared to male students (66% vs. 34%, respectively, p = 0.023). Nevertheless, no significant association of age, educational level, and the stream were found with the presence of acne among university students.

Site of Acne

Table 2 and figure: 2 show the locations of acne lesions. About 15 (3.5%) students did not mention the location of their acne lesions. The acne was found predominantly on the face in 58.4% of students. The second predominant location was "face and back" in 19.5% of students.

Table: 2

Site	Frequency (n)	Percentages (%)
Back	13	2.5
Chest	26	5
Check and back	26	5

Site	Frequency (n)	Percentages (%)
Face	290	58
Face and back	98	19.5
Face and chest	26	5
Face, chest, and back	5	1
Missing	16	4

Figure: 1

site of lesion
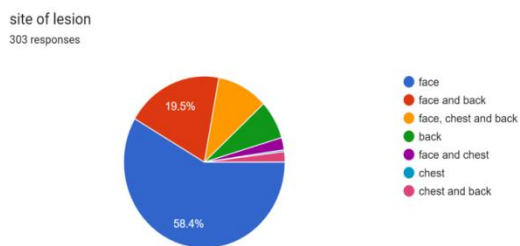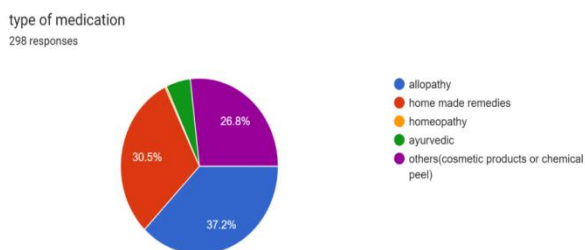303 responses


Figure: 2

type of medication
298 responses

Type of Medication for Acne

A total of 56.4% (244 of 432) students have previously used self-medications for acne without a prescription. The most frequently used drugs used were allopathy (37.2%), followed by homemade remedies as shown in Table 3 and figure: 3

Table: 3

Type of medication for Acne	Frequency (n)	Percentages (%)
Allopathy	185	37.2
Homemade remedies	153	30.5
Homeopathy	23	4.5
Ayurvedic	5	1
Others	134	26.8

Figure: 3

type of medication
298 responses
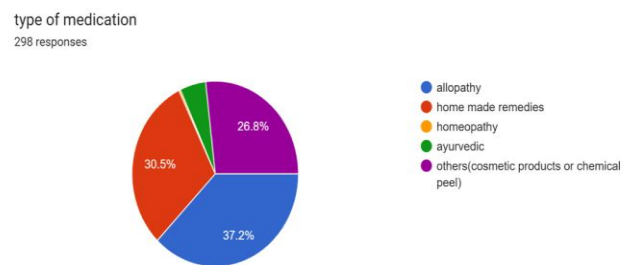
Female students (n = 181, 63.5%) were significantly more likely to self-medicate higher than male students (n = 63, 42.9%, p ≤ 0.001).

The majority of the students (36%) attributed "mildness of" as the reason for self-medication. As per the filled questionnaire, the other main reasons for self-medication were "mildness of disease" and "easy availability", respectively, as shown in Table: 4 and Figure: 4. The most common information resources were the acquaintances (43.4%), prescription issued to others (19%), and othersas shown in Table 5 and figure: 5
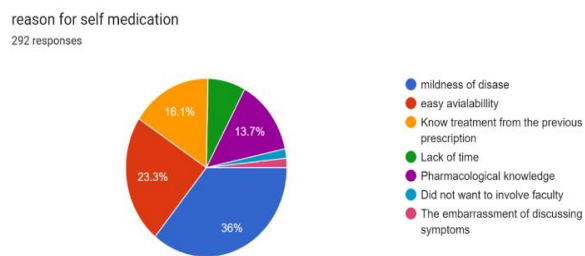
Figure: 4

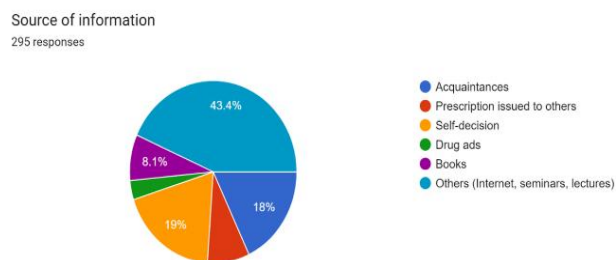reason for self medication
292 responses

Table: 4

| Reason for self-medication	Frequency (n)	Percentages (%)
Mildness of disease	180	36%
Easy availability	117	23.3%
Known treatment from the previous prescription	80	16.1%
Lack of time	55	15%
Pharmacological knowledge	50	13.7%
Did not want to involve faculty	15	4.6%
The embarrassment of discussing symptoms	3	5%

Table: 5

Source of Information	Frequency (n)	Percentages (%)
Acquaintances	215	43.4%
Prescription issued to others	95	19%
Self-decision	43	8.5%
Drug ads	15	3%
Books	42	8.1%
Others	90	18%

Figure: 5

Source of information
295 responses

This study assessed the knowledge of students about self-medication, which is presented in Table 6 and Figure: 6. More than half of the students knew the dosage of the drugs they were taking (70%). In total, 64% of students were well aware of the mode of action and adverse drug reactions of the drugs taken. About 65% of students knew the precautionary measures to be taken. In addition, about 66% of students were aware of the contraindications of over the counter. In total, 59% were aware of complications/side effects of medicines.

Table: 6

Knowledge of self-medication	yes (n) %	no (n)%
Dose of drug	350(70%)	150(30%)
Mechanism of action	320(64%)	180(36%)
Adverse effects	325(65%)	175(35%)
Precaution for use	326(65%)	174(35%)
Complications	328(66%)	172(34%)
contraindication	298(59%)	202(41%)

Figure: 6


Knowledge of self-medication
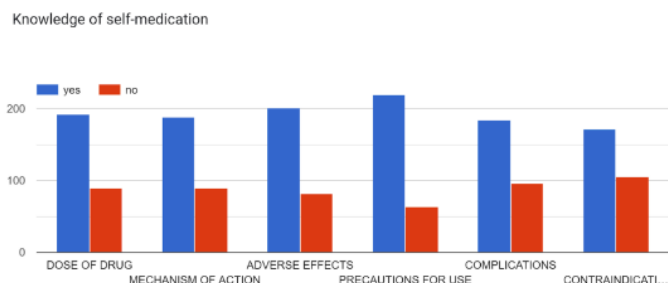
The attitude of students towards self-medication is shown in Table 7 and Figure: 7. Most of them supported self-medication a part of self-care, and the will not advise family or friends. Majority students also supported dermatologist consultation and follow up for acne.

Table: 7

| Attitude towards self-medication	Yes n (%)	No n (%)
Self-medication is part of self-care	350 (62.6%)	150 (36.6%)
Advise self-medication to friends/family	150(36%)	350(62%)
Is dermatologist's consultation important for acne?	325(89.4%)	175 (9.8%)
Is follow-up for acne important?	380 (90.2%)	120 (8.1%)

Figure: 7

Attitude towards self-medication
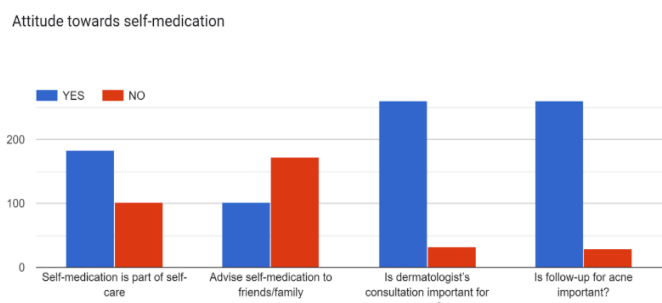
Majority has habit of reading drug instruction, expiration date and half of the students had easy availability of medications at home/hostel. Table: 8, Figure: 8

Table: 8

Practices regarding self-medication	Yes n (%)	No n (%)
Do you read instructions on the drug label?	388 (71.5%)	122 (27.6%)
Do you read the expiration date of the drug?	395 (88.6%)	105(9.8%)
Is the medication always available at home/hostel?	265(43.9%)	255 (54.5%)

Figure: 8

Practices regarding self-medication
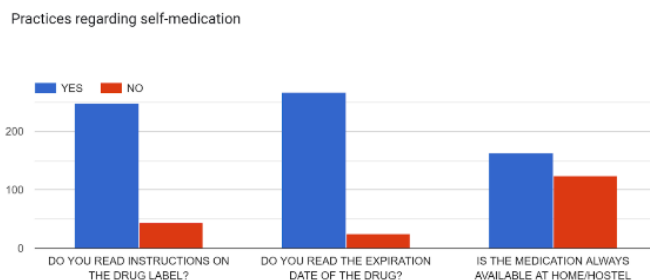
Discussions

Acne is a very common skin condition affecting teenagers and adolescents worldwide. The prevalence of acne in our setup was found to be 86.4%, which was consistent with the findings of Talanikar et al. [7].Comparably, a study conducted in Karachi showed a prevalence of 55.9% among the students [6]. Self-medication for acne is a fairly common practice among medical students. According to our findings, 50.4% of the students suffering from acne practiced self-medication, which was on par with the findings of Corey et al. [9]. Similarly, Karamata et al. reported self-medication in 59.2% of acne sufferers which was close to our findings [6]. According to Raiker et al., a higher number of medical students (77.4%) practiced self-

medication. The face was the most commonly involved site of acne in our study, with 68.9% of lesions involving this area of the body. Alanazi et al. also reported the presence of acne lesions on the face in the majority of secondary school students [10].

The most common reason for self-medication in our study was the mildness of the condition (36%), followed closely by easy availability (23%). The mild nature of the disease has been reported as the most common reason in many studies [6-7]. Acquaintances (seniors/friends/members of the family) were the most frequently cited source of information in our study (55.8%). Friends/seniors were also reported as the most common information source by Patil et al. [12]

Sixty-two percent of students in our study were of the opinion that self-medication is a component of selfcare, which was close to the findings of Karamata et al. [6]. Around 50% of the students had no reservations about recommending the medication to their friends and family, similar to the results of Raikar et al. [1]. According to our findings, 89.4% of the students thought that the dermatologist's consultation was important for the treatment of acne. A study by Zafar et al. also reported similar findings [13]. The knowledge of the pharmacological properties and the effects of drugs used was more than 50%, which is alarmingly low as a lack of adequate knowledge may lead to severe and undesirable side-effects. Most of the students in our study used allopathic medication (47.8%) while homemade preparations were used by 33.1% of students. This was consistent with the findings of Kumar et al. [14]. The majority of the students in our study read the instructions and the expiration date on the drug label. While this is an encouraging statistic and reflects the cautious mind-set of medical students regarding the use of medications, it does not address the problem of overuse of certain drugs, which may result in dangerous side-effects like drug resistance [15]. Self-medication is an emerging trend among medical students and effective measures are needed to curb the dangerous side-effects of self-medication [16].

There were some limitations to our study. Poor knowledge about the clinical definition of acne might have resulted in a slightly less than expected prevalence of acne and its self-medication. Some of the questionnaires had to be discarded due to inadequate responses.

Conclusions

Acne is a highly prevalent condition among the medical students and the practice of self-medication among acne sufferers is high. The mildness of disease was the most commonly cited reason for self-medication. The practice of self-medication and the visits to dermatologists were both more common in the students with lesions on the face. The knowledge and attitude of medical students regarding the self-medication of acne mandate improvement in the existing dermatology curriculum. Awareness of the properties, side-effects, and the appropriate dosing schedule of the drugs may help control the emerging epidemic of drug resistance.

Acknowledgements

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