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Knowledge and practice of medical students about acne-Cross section study

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Abstract
Background: Acne is a multi-factorial condition, commonly seen in adolescents all over the world. The knowledge about these pathogenic mechanisms is properly good among the medical students compared to the other people. However, there still exist some misconceptions concerning acne treatment as peers, family, and society likewise influence students' concepts.
Objectives: To explore medical students' knowledge and practice about acne.
Methodology: A cross-sectional study was carried out among a convenient sample of students from the College of Medicine/Al-Mustansiriyah University from the 2nd to 5th grade over the period from the first of February to the end of March 2022. Self-answered questionnaire was applied to describe the knowledge and practice of students about acne.
Results: The total number of students enrolled in the study was 410, 359(87.5%) of them had a good level of knowledge. The highest rates (89%, 93.8%) of good knowledge was observed among male students and 4th-grade students respectively. Either sex or grade shows significant influence on level of knowledge.
Among the studied group, 209 (50.9%) students had acne, 95(45.5%) were females and 114(54.5%) were males, more over 46.6% of acne cases had a moderate form of disease.
The practice of self-treatment was common among students (48.8%); all students suffering from acne used face washing with skin cleaner as self-treatment.
The most common source of information reported by students was searching on the net (81.9%).
Conclusion: Although the students had a good level of knowledge about acne, their practice was inadequate.

Keywords: Knowledge, practice, medical students, acne

Introduction
Acne vulgaris is one of the most common dermatological diseases that affect younger human beings. The etiology of pimple vulgaris is due to genetic elements besides environmental and psychological stressors [1]. Studies have publicized that 85% of adolescents between the ages of twelve and twenty-four years have acne, and while it's most typical in teenagers, acne is more common in males than females in adolescence, yet the incidence is higher in girls throughout adulthood [2].
The majority of medical students are adolescents who are the most likely to have acne. According to the results of nine studies the prevalence of acne vulgaris in medical students ranged from 34.38% to 97.9%. Many factors are attributed to the risk of acne among medical students including stress, gender differences, and lifestyle. Moreover, self-image, lower confidence, embarrassment, depression, anxiety, social withdrawal, and impaired social behaviors were identified by many studies as the negative psychological and social influences of acne on medical students [3].
Self-medication is an area of concern in the dermatology field, as there is a lot of over-the-counter (OTC) skin care products available in pharmacies and centers encouraged to the public, in addition to, herbal or traditional medicines, or other products such as dietary supplements for this practice, patients may choose to use self-medication for their acne without seeing a dermatologist [4].
Medical students often gain information on the pharmacology and treatment of skin diseases from their textbooks, senior medical colleagues, and students. Moreover, medications from pharmaceutical sales agents are accessible to physicians influencing medical students to self-treat their acne [5].

Despite the fact acne is a very common problem; there are some incorrect beliefs about this condition not only among the general population but even among medical students [6]. The shortage of awareness, knowledge, and good practices concerning acne needs to be addressed, including among medical students, who may themselves have acne, and some may, in later years, care for patients with the disease. The current study was undertaken to consider the knowledge, and practice of medical students about acne.

Subjects and method

Cross-sectional study, with analytical elements, carried out among students of the College of Medicine, Al Mustansiriyah University over a period of two months during February and March 2022.

The students from the second to the fifth academic year of the college were considered for the study population. Data were collected via a self -administered questionnaire.

Data collectors were the 4th year medical students as part of their training in community medicine, they were given one day of training before the actual work about the aim of the study, procedures and collection techniques going through the questionnaires question by question, handiness of converse with and way of collecting the data by the study supervisors.

Applicable clarification relating to the purpose, the objectives of the study, and the procedure of filling out the questionnaire were provided to the participants by the study team. Each of the members who decided to join in the study was given a print copy of the questionnaire.

The questionnaire form comprised three sections

The first section covers the student profile (sex and college grade).

The second section includes (17) questions to assess the knowledge of the students about different aspects of acne. A score of one was awarded to each correct answer, while zero was assigned in the case of a wrong answer. The knowledge score ranges from (0 -17). Students who achieved 8 and above score were classified as good knowledge, while those who achieved 7 and below score were classified as poor knowledge.

The third section included questions inquiring about acne among the students, practices adopted by students including the medicines they were using, and the reasons for self-medication. As well as the sources of information about acne, and self-treatment.

Ethical approval and consent to participate: The researchers give out the required permission for the study from the Family and Community Medicine Department, College of Medicine / Al Mustansiriyah University. Participation in the study was voluntary. Filling out the questionnaire by the student was considered as approved to enroll in the study. The respondents were asked not to mention their names to preserve anonymity and encourage participation and provoke truthful answers.

Statistical analysis: Data entered and analyzed by Microsoft Excel. Data was presented in simple measures of frequency and percentage. The chi-square test was used to evaluate the association between the study variables (sex and grade) with the level of knowledge. A p-value of less than 0.05 was considered statistically significant.

Results

There were 410 students enrolled in the present study, 237(57.8%) were females and 151(36.8%) were from 2nd grade. Table-1.

Table 1: Distribution of the study group according to sex and grade

Socio demographic	No.	%
Sex		
Male	173	42.1
Female	237	57.8
Grade		
2	151	36.8
3	97	23.6
4	97	23.6
5	65	15. 8
Total	410	100%

Figure -1 illustrated that 359(87.5%) of students enrolled in the study had good knowledge level.

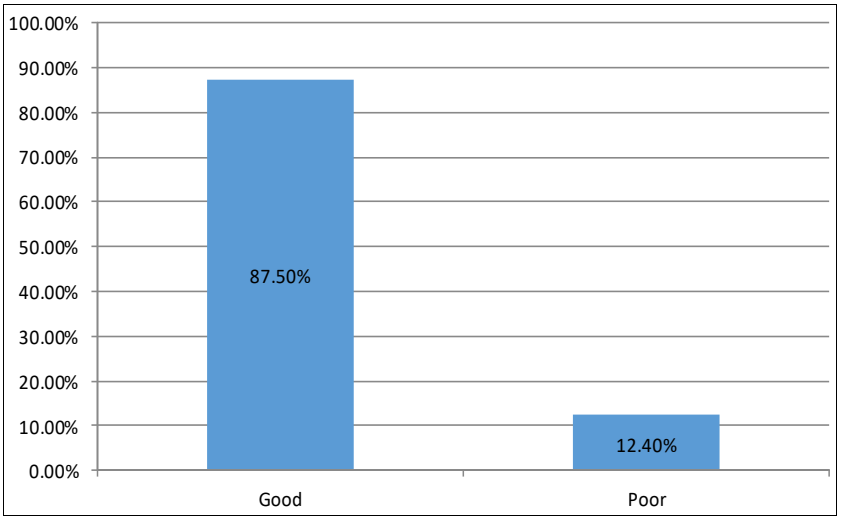

Fig 1: The distribution of study group according to level of knowledge

The result in table-2 demonstrated that the highest rate of good level of knowledge (89%) was observed among male students. Yet, no statistical significant association was observed between level of knowledge and sex of students (*p*-value.445214.).

Table 2: The distribution of study group according to level of knowledge and sex

Sex	Level of knowledge	
	Good knowledge	Poor knowledge
Male	154 (89.0%)	19(10.9%)
Female	205 (86.4%)	32(13.5%)
Total	359 (87.5%)	51(12.4%)

Table-3 illuminates the relation between knowledge level and grade. The results found that the uppermost rate of good knowledge (93.8%) identified among 4th grade students. The result failed to show significant statistical association between the grade and level of knowledge (*p*-value.135956).

Table 3: The distribution of study group according to level of knowledge and grade

Grade	Level of knowledge	
	Good	Poor
2nd	128(84.7%)	23(15.2%)
3rd	82(84.5%)	15(15.4%)
4th	91(93.8%)	6(6.1)%
5th	58(89.2%)	7(10.7)%
Total	359(87.5%)	51(12.4%)

Figure-2 displays the rate of acne among students, as 209(50.9%) of them has acne.

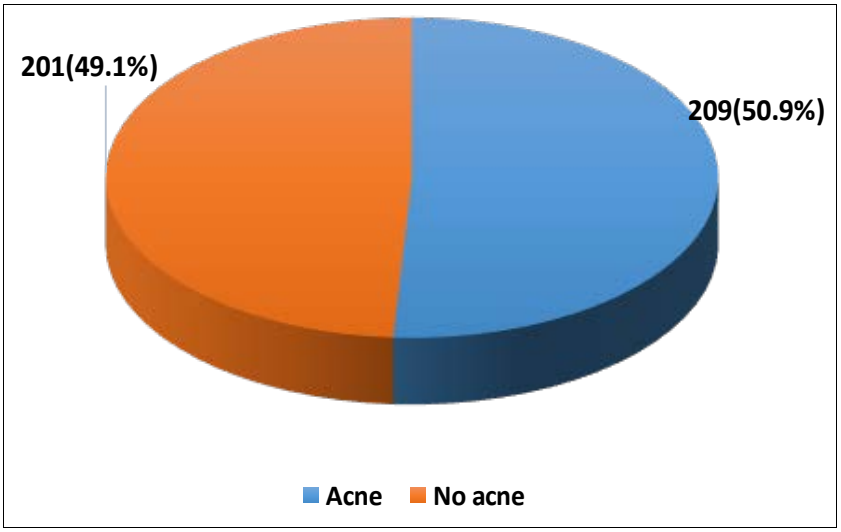

Fig 2: The rate of acne among study group

Among 209 cases of acne, more than half of them (54.5%) were males.Figure-3.

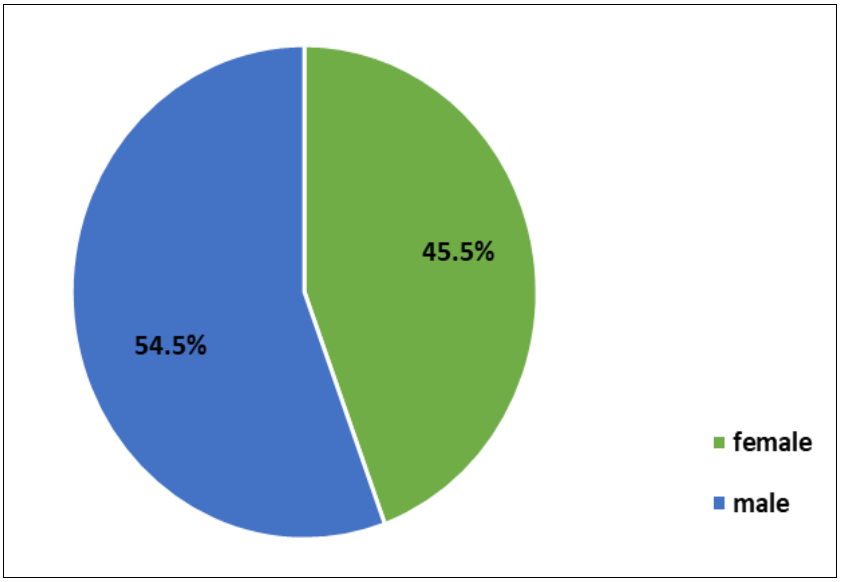

Fig 3: The distribution of acne cases according to sex

The result reveled that, (47%) of acne cases had moderate form of acne according to their description.Figure-4

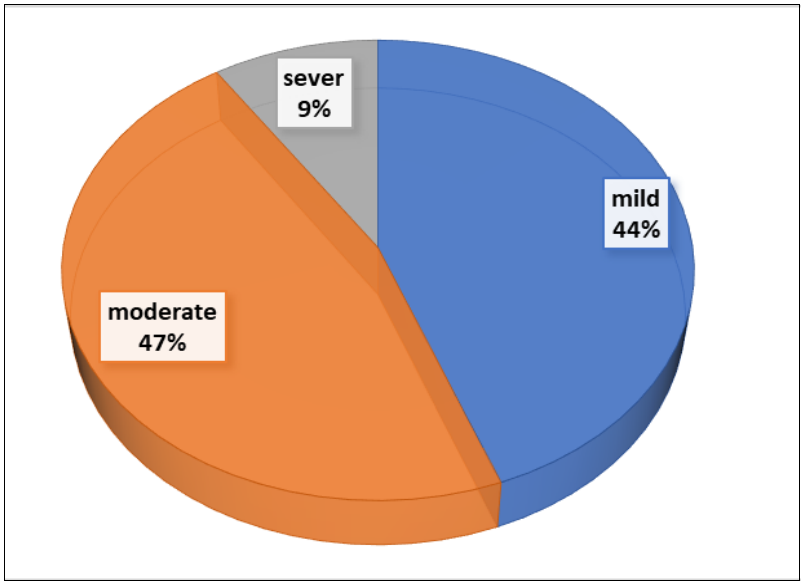

Fig 4: The acne cases according to severity

111(53.1%) of students with acne declare that this problem bother them a little, and 30% bother them all the time as shown in figure-5

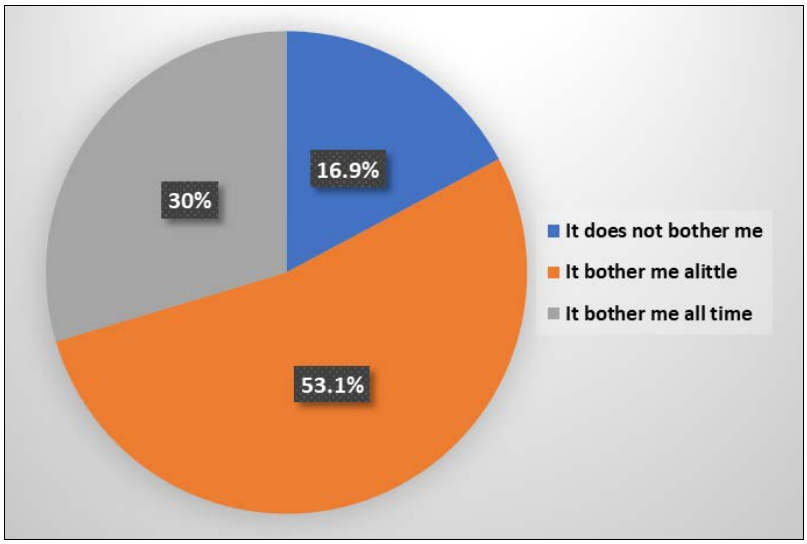

Fig 5: The distribution of students with acne according to their complains

Table-4 demonstrates the practice of cases concerning acne, nearly half of them (48.8%) relay on self-treatment.

Table 4: The practice of students for acne treatment

Practice	Number	%
Consult doctor	50	23.9
Do nothing	37	17.7
Put traditional medicine	20	9.5
Self-treatment	102	48.8

*some of the respondents gave more than one option

Out of 102 students who stated that they depend on self -treatment for acne, mildness of the condition was the main reason for such practice according to (41.2%) of them. Figure-6.

Table 5: The methods applied for self- treatment for acne

Method for Self-Treatment	No.	%
Face washing with skin cleaners	102	100
Medicated soap	68	66.6
Retinoid A cream	39	38.2
Cortisone cream	16	15.6
Others	11	10.7

*some of the respondents gave more than one option

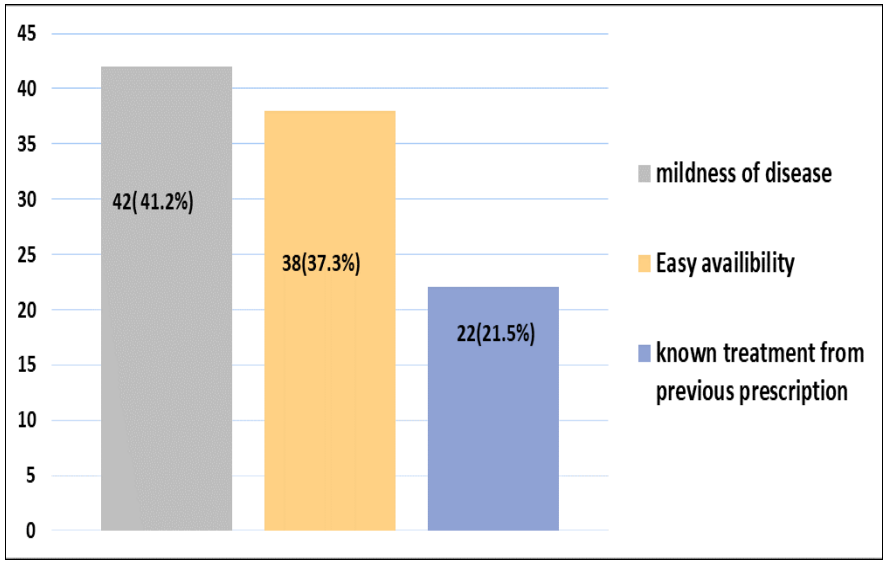

Fig 6: The reasons for self- treatment

Face washing with skin cleaner was used by all students suffering from acne as part of self- treatment, followed by using medicated soap (66.6) according to results in table -5.
Students demanded to address the source of their information regarding acne. The result in table-6 shows that (81.9% and 53.1%) of the students gain their information from search on line and physicians respectively.

Table 6: The source of information about acne

Source of information	No.	%
Search on line	336	81.9
Physicians	218	53.1
Social media	198	48.2
Family member	104	25.3
Friends	101	24.6
College lecture	122	29.7
Other	61	14.8

*Some of the students gave more than one response.

Discussion

Acne is never to be considered a disease. Rather it is a condition involving a complex interplay between excess sebum secretions. The knowledge about these pathogenic mechanisms is good among medical students compared to normal people. Nevertheless, there still exist some misconceptions concerning acne as peers, family, and society also influence students' ideas. It is imperative to know these students' knowledge about acne as they are going to educate the public about the do's and don'ts to drive away their misconceptions [7].
The results obtained from this study revealed that the majority of students had a good level of knowledge about acne. This finding was in keeping with the result reached by a previous study carried out in India, as 72% of students had good knowledge about the causes and aggravating factors of acne [8].
The present study showed that a higher rate of good knowledge was reported among male students, this finding was in contrary to results from previous studies from India [8] and Saudi Arabia [9] where females have a better level of knowledge than males.
The current study showed that the rate of a good level of knowledge about acne was higher among the 4th and 5th-grade students in comparison with 2nd and 3rd-year students. Comparable findings were also reached by a study from Saudi Arabia [9]. This view is attributed to the fact that theoretical knowledge about acne among medical students is relatively limited before they start their clinical training. In addition, it is assumed that the dermatology course in the 5th year had extended the knowledge of students about acne vulgaris [10, 11].
The results showed that (50.9%) of students self-reported acne. However other studies reported different rates of acne among medical students, studies from Palestine and Saudi Arabia reported that the prevalence of acne among medical students was (80.9% and 55%) respectively [5, 9].
The inconsistency in results between the present study and the previously mentioned studies could be ascribed to that; Acne is a chronic inflammatory disease, and its prevalence varies in adolescents and adults among different countries and ethnic groups. Moreover, the current study is self-reported, but other studies are based on clinical exams of the students for acne.
The result found that acne was more common among male students, this result was contradicted by previous studies from Palestine [5] and Iraq [12] which stated that acne was more prevalent among female medical students.
The current study demonstrates that 53% of the students suffering from acne said that acne bothers them a little; this was supported by the finding of a study from Lebanon [13]. The possible explanation can be attributed to that, only 9% of students with acne in the current study described their condition as severe form.
Self-medication for acne is a common practice among medical students. According to the study findings, (48.8%) of the students suffering from acne practiced self-treatment. This was by studies from Pakistan [14, 15] and India [16] reported that (47.6%, 50.4%&59.2%) of medical students practice self-medication for acne. These findings owed to a variety of influences such as ease of availability, exposure to medical settings, and pharmacological knowledge [17].
According to a study from Pakistan [18], mildness of disease and easy accessibility were the most common reasons for self-medication, comparable findings were also reached by the current study.
The present study found that the majority (81.9%) of the respondents gained information about acne and self-

treatment from searching on the net. This was analogous to studies from Saudi Arabia [11, 19], which concluded that medical students considered searching the Internet as their main source of finding information about acne and self-treatment. Though the advantageous use of the Internet cannot be denied, medical students in particular should be disheartened from depending on the Internet for medical help and ought to be encouraged to search for knowledge from dependable sources such as published medical works and skilled tutors [19].

Conclusion

A good level of knowledge about acne, but inadequate practice.

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