

ORIGINAL RESEARCH

Impact of studying pharmacology on self medication: A cross sectional study

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ABSTRACT

Background: Self medication is extensively prevalent and practiced among students perceiving careers in medical or health care and studying pharmacology might further influence this practice. **Objectives:** To determine the knowledge, attitude and practice of self medication among Phase II MBBS batch 2022 and batch 2023 medical students and to compare the impact of studying pharmacology on self medication among them. **Methods:** A cross-sectional, comparative, questionnaire-based study was conducted among Phase II MBBS students of batch 2022 and batch 2023 of Adesh Medical College & Hospital, Haryana. The data was analyzed and the results were expressed as frequency and percentages. **Results:** Out of 150 responders of Phase II MBBS batch 2022, 56 [37.33%] of 58 male and 86 [57.33%] of 92 female and out of 138 responders of Phase II MBBS batch 2023, 52 [37.68%] of 59 male and 76 [56.07%] of 79 female has taken self medication in last 3 months. Among students of Phase II MBBS batch 2022, 113 [79.57%] had knowledge about adverse drug reactions, 105 [73.94 %] had knowledge about storage of drugs, 121 [85.21 %] had knowledge about generic and brand names, 78 [54.92 %] had knowledge about rational use of antibiotics and 60 [42.25 %] had knowledge about use of drugs in emergency. Among students of Phase II MBBS batch 2023, 21 [16.40%] had knowledge about adverse drug reactions, 48 [37.50 %] had knowledge about storage of drugs, 79 [61.71 %] had knowledge about generic and brand names, 14 [10.93 %] had knowledge about rational use of antibiotics and 15 [11.71 %] had knowledge about use of drugs in emergency. **Conclusion:** The present study showed the positive impact of studying pharmacology on knowledge, attitude and practice of self medication among medical students.

Keywords: Self medication, Pharmacology, Medical students.

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INTRODUCTION

Self medication is used globally. It is an important aspect of contemporary world. In India, herbal medicines are used as self medication in day to day life. Both modern as well as traditional (ayurvedic or homeopathic) medicines are a part of self medication. It has advantages as well as disadvantages. Self medication can lead to fund wastage, drug resistance, adverse drug reactions, drug-drug interactions and drug dependence. [1,2,3]

It can readily relieve acute medical problems, can save the time spent in waiting to see a doctor, may be economical and can even save live in acute conditions. Self medication with responsibility can be proven beneficial for the population. [4,5] Medical students are more expose to knowledge of medicines and diseases than universal population. Hence, self medication is very commonly seen among medical students.

The present study was undertaken to determine the knowledge, attitude and practice of self medication among Phase II MBBS [batch 2022 and batch 2023] medical students of Adesh Medical College & Hospital and to compare the impact of studying pharmacology on self medication among them.

MATERIAL & METHODS

A cross-sectional, comparative, questionnaire-based, descriptive study was conducted among Phase II MBBS students of batch 2022 and batch 2023 of Adesh Medical College & Hospital, Shahbad, Haryana, in the department of pharmacology from September 2024 to October 2024.

This study was done among Phase II MBBS batch 2023 students, who are new to pharmacology and have little clinical exposure and Phase II MBBS batch 2022, which had completed pharmacology curriculum and have adequate knowledge of drugs & diseases, to

assess the impact of studying pharmacology on self medication.

Sample size

A total of 300 students, 150 each from batch 2022 and batch 2023 were involved in the study.

Data collection

A self designed, pre validated questionnaire consists of both open ended and closed ended item was used. A brief explanation was given about the objectives of the study and the procedure of completing the questionnaire. Informed written consent was obtained from each participant of this study. Consenting participants anonymously completed the questionnaire in the classroom. Total 60 minutes were given to students to complete the questionnaire.

Ethical approval

The present study was reviewed and approved by Institutional ethical committee.

Statistical analysis

This study was descriptive and results were summarized as frequency and percentages.

RESULTS

A total of 300 students, 150 each in batch 2022 and batch 2023 Phase II MBBS were enrolled. After

giving informed written consent, they completed the written questionnaire. Only completed questionnaires were analyzed and rest was excluded. Out of 300 Phase II MBBS students 150 in batch 2022 and 138 in batch 2023 students completed the study.

Out of 150 students of phase II MBBS batch 2022; 58 were males and 92 were females. Out of 138 of Phase II MBBS batch 2023; 59 were males and 79 were females.

The mean age of Phase II MBBS batch 2022 students was 21 ± 1 years and the mean age of Phase II MBBS batch 2023 students was 20 ± 1 years.

Practice

Out of 150 responders of Phase II MBBS batch 2022, 56 [37.33%] of 58 male and 86 [57.33%] of 92 female and out of 138 responders of Phase II MBBS batch 2023, 52 [37.68%] of 59 male and 76 [56.07%] of 79 female has taken self medication in last 3 months.

Total 142 [94.66%] out of 150 students of Phase II MBBS batch 2022 practice self medication those were exposed to pharmacology teaching and 128 [92.75%] out of 138 students of Phase II MBBS batch 2023 practice self medication those were not exposed to pharmacology teaching.

Total 20 and 4 adverse drug reactions were experienced by Phase II MBBS batch 2022 and Phase II MBBS batch 2023 students respectively.

Reasons for self medication (more than one option)	Phase II MBBS Batch 2022 (%)	Phase II MBBS Batch 2023 (%)
To save money	31 [21.83]	16 [12.5]
To save time	58 [40.84]	43 [33.59]
Quick relief	70 [49.29]	56 [43.75]
Minor illness	114 [80.28]	92 [71.87]
Had similar illness before	101 [71.12]	78 [60.93]
To avoid crowd	25 [17.6]	15 [11.71]
Ease and convenience	79 [55.63]	52 [40.62]

The commonest reasons found for self medication among both the groups were minor illness, had similar illness before and to get quick relief (Table 1). Source of information for self medication is given in (Table 2). 44.36 % batch 2022 MBBS students said internet and textbooks was their choice. Majority of students

of both groups used previous prescription for self medication. The commonest indication for self medication was common cold and fever followed by headache and body ache (Table 3). The commonly used drugs were analgesics and antipyretics (Figure 1).

Source of information	Phase II MBBS Batch 2022 (%)	Phase II MBBS Batch 2023 (%)
Internet	63 [44.36]	36 [28.12]
Drug apps	9 [6.33]	4 [3.12]
Text book/ Journal	89 [62.67]	15 [11.71]
Friend advice	34 [23.94]	28 [21.87]
Previous doctor prescription	39 [27.46]	112 [87.5]

Indications	Phase II MBBS Batch 2022 (%)	Phase II MBBS Batch 2023 (%)
Headache	132 [92.95]	93 [72.65]
Fever	135 [95.07]	111 [86.71]
Cough & common cold	126 [88.73]	106 [82.81]
Heart burn	20 [14.08]	15 [11.71]
Allergy	42 [29.57]	32 [25.0]
Body pain	81 [57.04]	65 [50.78]
Tooth pain	12 [8.45]	12 [9.37]
Acne	34 [23.94]	28 [21.87]
Menstrual problems	16 [11.26]	25 [19.53]
Insomnia	6 [4.25]	5 [3.9]

Knowledge

The present study has proved that Phase II MBBS batch 2022 students had more knowledge about self medication as compare to Phase II MBBS batch 2023 (Table 4).

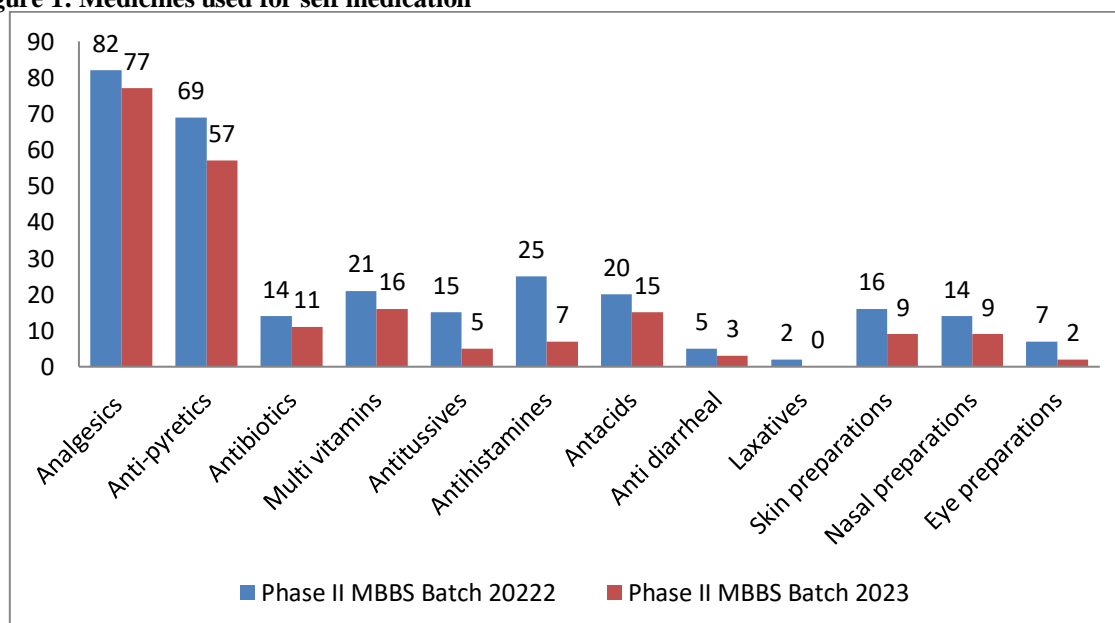
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Knowledge	Phase II MBBS Batch 2022 (%)	Phase II MBBS Batch 2023 (%)
Knowledge about adverse drug reactions	113 [79.57]	21 [16.40]
Knowledge about storage of drugs	105 [73.94]	48 [37.50]
Knowledge about generic and brand names	121 [85.21]	79 [61.71]
Knowledge about rational use of antibiotics	78 [54.92]	14 [10.93]
Knowledge about use of drugs in emergency	60 [42.25]	15 [11.71]

Figure 1: Medicines used for self medication



Attitude

79 [55.63 %] students of Phase II MBBS batch 2022 and 81 [63.28 %] students of Phase II MBBS batch

2023 believed that self medication is not safe. 97 [68.30 %] students of Phase II MBBS batch 2022 and 101 [78.90 %] students of Phase II MBBS batch 2023

answered that they will not share their prescription with someone who has similar symptoms.

DISCUSSION

A total of 270 medical students from Phase II MBBS batch 2022 and Phase II MBBS batch 2023 participated in the study. Phase II MBBS batch 2022 students had higher knowledge about adverse drug reactions, generic names, storage of drugs, rational use of antibiotics and emergency drugs than Phase II MBBS batch 2023.

They studied pharmacology for one year and completed the curriculum of pharmacology. They were well versed with knowledge of drugs and their usage. Hence studying pharmacology has positive impact on their knowledge to choose a drug for self medication.

Students of both the groups believed that self medication is not safe without proper knowledge of drugs and disease.

Prevalence of self medication was analyzed. Prevalence of self medication was 94.66 % of Phase II MBBS batch 2022 and 92.75 % among of Phase II MBBS batch 2023 students. Our results are similar to various studies that showed prevalence of self medication to be between 25.4 to 91 %.^[6,7,8,9] The common reasons for self medication among both the group were minor illness and quick relief. It was similar to studies done in Punjab where the commonest reason was quick relief and study done in west Bengal where minor illness was the reason for not going to a doctor.^[10,11]

The commonest indication for self medication for self medication was common cold and fever followed by headache and body ache. This was similar to another study done in Ethiopia where fever was the most common indication.^[6]

Analgesics and antipyretics were most commonly practiced as self medication in both the groups. Similar finding had been also observed by James, 2008.^[12]

In both the groups, selection of drugs was based on previous prescription for self medication. A similar observation was found in study done in Malaysia.^[13] Where as 62.67 % of Phase II MBBS batch 2022 students answered that textbooks and internet was the basis of their choice. This clearly shows the impact of studying pharmacology.

Adverse drug reactions were reported higher in Phase II MBBS batch 2022 students as they have higher knowledge about adverse effects. Hence in our study

we found studying pharmacology has positive impact on practice of self medication.

CONCLUSION

The present study showed the positive impact of studying pharmacology on knowledge, attitude and practice of self medication among medical students.

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