

## Self-medication practice among second M.B.B.S medical students

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### Abstract

**Introduction:** Self-medication is a widely prevalent practice in India. It assumes a special significance among medical students as they are the future medical practitioners.

**Aim:** To assess the pattern of self-medication practice among 2<sup>nd</sup> MBBS undergraduate medical students.

**Settings and Design:** GMERS medical college, sola, Ahmadabad, India.

**Materials and Methods:** A questionnaire-based study was conducted among the 2<sup>nd</sup> M.B.B.S medical students.

**Results:** Out of 103 students of the 2<sup>nd</sup> M.B.B.S, all consented for the study and filled in the supplied questionnaire. 3 incomplete questionnaires were excluded and the remaining 100 analysed. It was found that 32% (32) respondents practiced self-medication. The principal morbidities for seeking self-medication included fever as reported by 53% (17) students followed by cough and common cold 50% (16) students, headache 37.5% (12) students, and pain abdomen due to heartburn/ peptic ulcer 21.88% (7) students. Drugs/ drug groups commonly used for self-medication included analgesics, antipyretics 71.88% (23), antihistamines 31.25% (10), antibiotics 28.13% (9), followed by antiulcer agents 9.38% (3), cough suppressant 6.25% (2), and multivitamins 6.25% (2) and herbal preparation 18.75% (6). Among reasons for seeking self-medication 15.63% students felt that they were having confidence in self-medication while 25% (8) preferred as it is time-saving. About 78.13% (25) students cited non seriousness of illness as the primary reason while 12.5% (4) preferred to get quick relief.

**Conclusion:** Present study shows that self-medication is fairly prevalent among students of the 2<sup>nd</sup> M.B.B.S. In this situation, faculties should create awareness and educate their students regarding advantages and disadvantages of self-medication.

**Keywords:** Medical students, self-medication, study

### Introduction

Self-medication is widely practiced worldwide and often considered as a component of self-care. [5] However, unlike other components of self-care, self-medication has the potential to do good as well as cause harm since it involves the use

of drugs. The World Health Organization (WHO) has appropriately pointed out that responsible self-medication can help prevent and treat diseases that do not require medical consultation and provides a cheaper alternative for treating common illnesses. [13] The practice of self-medication must be

based on authentic medical information otherwise irrational use of drugs can cause wastage of resources, increased resistance of pathogens, and can lead to serious health hazards such as adverse drug reaction and prolonged morbidity. [5] In developing countries like India, self-medication is a common practice as it provides a low-cost alternative for people who cannot afford the high cost of clinical service and also as many drugs are dispensed over the counter without prescription from a registered medical practitioner [6].

Self-medication assumes a special significance among the medical students as they are the future medical practitioners and have a potential role in counselling the patients about the advantages and disadvantages of self-medication. Medical students also differ from the general population because they are well-exposed to the knowledge about diseases and drugs. A literature search was conducted and the search revealed that few studies have been conducted to ascertain the self-medication practice among medical students. [7], [14], [4], [9], [10], [8], [12], [2]. In these studies, the prevalence of self-medication practice was found to vary among medical students of different countries. Headache, common cold and cough, fever, abdominal pain have been mentioned as the primary morbidities for seeking self-medication. The drugs predominantly used included analgesics, antibiotics, antipyretics, antacids etc. The reasons for seeking self-medication as mentioned in the majority of the literature are mild nature of illness, prior experience of treating similar illness, economic considerations. However, since the majority of these studies were conducted outside India, [7],[14],[9],[10],[8],[2] the pattern of self-medication among medical students of India remained mostly unexplored.

Present study was conducted with the aim to assess the pattern of self-medication practice among 2<sup>nd</sup> M.B.B.S undergraduate medical students.

## Materials and methods

This was a questionnaire-based study. A self-developed; questionnaire consisting of both open-ended and close-ended items was used. The study population comprised 2<sup>nd</sup> M.B.B.S medical students of the GMERS Medical College, Sola. Total of 103 students studying in 2<sup>nd</sup> M.B.B.S participated in the study.

All 2<sup>nd</sup> M.B.B.S students who were willing to participate in the study were enrolled. A briefing was given about the nature of the study, and the purpose of the study was explained to the students. No permission was required from the ethics committee of the institution for conducting the study. Informed consent was obtained from every student before filling the questionnaire.

After obtaining informed consent, they were asked to fill up a printed, semi-structured questionnaire. The questionnaire contained questions regarding personal information, whether the student sought self-medication in the preceding last six months, illness for which the medication was used, drug/ drug group used by them and the reason for not consulting a healthcare professional. For the purpose of the study, certain operational terms were defined. Self-medication was defined as the use of medicine for self-treatment without consulting a healthcare professional. A healthcare professional was defined as a person:

- 1) Who has obtained a bachelor of medicine and bachelor of surgery (MBBS) degree in allopathic medicine and registered with Medical Council of India/ State Medical Council or
- 2) Possessing Bachelor of Homoeopathic Medicine and Surgery [BHMS degree] (for homeopathic practitioners) or
- 3) Possessing Bachelor of Ayurveda Medicine and Surgery [BAMS degree] (for Ayurveda practitioners).

## Statistical Analysis:

The returned questionnaires were checked for completeness of data. The data obtained

from the completed questionnaires were analysed in the computer by using MS Excel program. The study was descriptive and data were summarized as counts and percentages. Some of the questions had multiple options to choose from; therefore the sum total of percentages is not always 100%

**Results**

On the day when the questionnaire was administered, 103 students were present. All the students responded to the questionnaire, of whom 45.63% (47) were males and 54.37% (56) were females. Their mean age in years was 18.72 (range from 18 to 20 years). Out of 103 students, 100 students successfully completed the questionnaire. 3 incomplete questionnaires were excluded and the remaining 100 analysed. 32% (32) students reported having practiced self-medication during the preceding 6 month with 34.38% (11) males and 65.63% (21) females. It was found that the practice of self-medication was more prevalent among females than males.

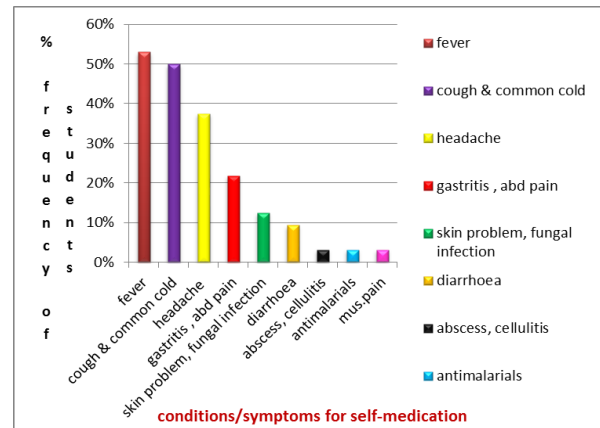
It was found that fever 53% (17) was the predominant morbidity for which students practiced self-medication. Other causes of morbidity prompting the students to practice self-medication included cough and common cold 50% (16), headache 37.5%(12), pain in the abdomen due to heartburn/ G.I discomfort/menstrual pain 21.88%(7), diarrhoea 9.38% (3), abscess/cellulitis 3.13%(1), muscle pain 3.13%(1) & prophylaxis of malaria 3.13%(1). (Figure 1)

Drugs or drug groups commonly used for self-medication included analgesics / antipyretics (71.88%), antihistamines (31.25%) followed by antibiotics (28.13%), antiulcer agents (9.37%); cough & cold preparations (34.38%), multivitamins (6.25%), and antifungal (3.13%). Over the counter drugs was the most common category of drugs used by all the students. The most commonly used drug for self-medication was paracetamol 19%.Herbal

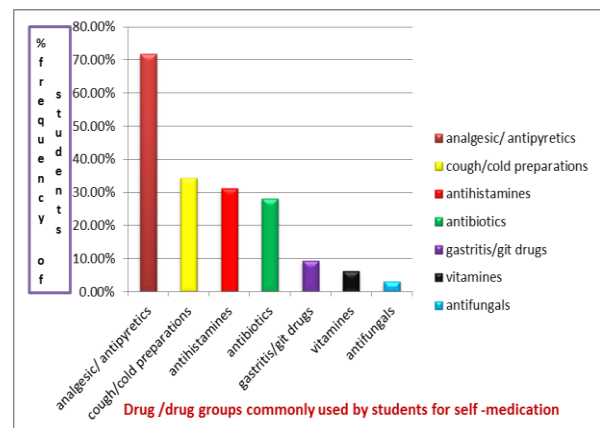
and Ayurveda drugs were also used as self-medication (18.75%). (Figure 2)

56.3% students follow the instructions written on package insert and label.

Among the reasons given for practicing self-medication, 78.13% respondents felt that their illness was mild (non-serious) while 25% preferred self-medication as it is time-saving. About 15.63% students reported confidence in self-medication while 12.5% preferred because of quick relief & 9.38% preferred as they feel it convenient.(Table 1) The important sources of information for self-medication were parents 40.63% (13), medical shops 28.13% (9), old prescription 25% (8), prior experience 25% (8) books 15.63% (5) , friends 12.5% (4), internet 6.25% (2) and others 3.13% (1). (Table 2)



**Figure 1: Conditions/Symptoms for which self-medication prescribed.**



**Figure 2: Drug/Drug groups commonly used by students for self-medication.**

**Table 1: Reasons for favouring self-medication.**

Reason	No. (%) of respondents
Time saving	8 (25%)
Economical	0(0%)
Confidence in self- medication	5 (15.63%)
Non serious illness	25(78.13%)
Quick relief	4 (12.5%)
Convenient	3 (9.38%)
Others	0 (0%)

**Table 2: Sources of information for self-medication.**

Source	No. (%) of respondents
Old prescription	8 (25%)
Parents	13 (40.62%)
Friends	4 (12.5%)
Television	0
Medical shops	9 (28.13%)
Books	5 (15.63%)
Internet	2 (6.25%)
Prior experience	8 (25%)
Any other	1 (3.13%)

## Discussion

Studies on self-medication have reported various prevalence figures, ranging from 26.2% [11] to as high as 92% [1].

The present study indicates that self-medication is fairly prevalent (32%) in the undergraduate students of the institute. In studies conducted among first-year medical students in Bahrain (2006), [7] about 44.8% of students practiced self-medication while in Karachi, the percentage is 76% [14]. A study conducted among medical students in Karnataka revealed 53% students practicing self-medication [4]. In West Bengal, (Banerjee *et al.*, 2012) observed self-medication practice common in medical students. [3] Sontakke *et al.*, (2011) in Nagpur region of Maharashtra observed self-medication much more (74.71% to 77.98%) common in comparison to present

study findings. However, dearth of data regarding the incidence of self-medication practice in the Indian population creates difficulty in comparing the extent of self-medication among undergraduate students of the institute in the national perspective.

In present study it was found that the practice of self-medication was more prevalent among females than males (21% Vs 11%). This finding i.e. female preponderance in seeking self-medication was not considered in earlier studies conducted with a similar objective on medical students in India. However, in a study conducted to assess the gender difference in self-medication practices among university students in Slovenia (2011), the researchers failed to demonstrate any statistically significant difference between male (90.9%) and female (94.1%) students. [9]

In present study regarding the morbidities which prompted the medical students to practice self-medication, fever 53% (17) was most common followed by cough and common cold 50%(16), headache 37.5%(12), pain in the abdomen due to heartburn/ G.I discomfort/ menstrual pain 21.88%(7), diarrhoea 9.38% (3), abscess/cellulitis 3.13%(1) , muscle pain 3.13% (1) & prophylaxis of malaria 3.13% (1). In studies conducted among first-year medical students in Bahrain (2006), [7] headache was the most common one followed by cough/common cold, stomach-aches, and fever. Headache was also the most common morbidity among medical students seeking medication in the study conducted in Karachi. [14] In the study conducted in Ethiopia, [2] fever and headache were the most commonly reported symptoms for self-medication followed by cough and common cold.

The drugs which were frequently used for self-medication in present study were analgesics/antipyretics (71.88%), cough & cold preparations (34.38%), antihistamines (31.25%) followed by antibiotics (28.13%),

antiulcer agents (9.37%); multivitamins (6.25%), and antifungals (3.13%). The most commonly used drug for self-medication was paracetamol (19%).

In the study conducted in Karachi [14] analgesics were the most common followed by antipyretics and antibiotics; the study in Bahrain (2006) [7] also reported analgesics to be the most commonly used drug group with antibiotics contributing only 6% of the total share.

In the present study among the reasons which provoked students for self-medication, mild nature of illness was the most common one 78.13%. The fact that those with a mild illness practiced self-medication has got serious implications as many diseases may initially appear to be mild but misdiagnosis and wrong treatment may invite serious health hazards. While the findings of the study conducted in Bahrain (2006) [7], 45.5% of students preferred self-medication as it is time-saving and 25% preferred it due to minor nature of illness.

It is a common tendency among medical professionals to practice self-medication when they themselves feel sick. Though they can consult fellow physicians, they avoid it initially due to various reasons and mind set. This particular practice however has its pros and cons. While responsible self-medication is a convenient alternative to treat minor illness as well manage acute emergency, inappropriate self-medication results in deleterious results. The practice of self-medication gets incorporated in the medical professionals right from their undergraduate days. In this situation further multicentric studies with the objective of evaluating the knowledge, attitude, practices of self-medication involving a wider section of the medical students (both undergraduates and postgraduates) across different medical colleges in the country is urgently needed to estimate the magnitude of self-medication in the medical fraternity. The findings of such multicentre studies could dictate the need of incorporating responsible self-education as

an intrinsic component in medical curriculum.

The most important reason for higher trend of self-medication is easy availability of all categories of medicines- OTC, prescriptions only or even schedule X drugs (Narcotics) without prescription to consumers in India. As a result, high prevalence has been reported even in urban population. The situation is much more favourable for medical students. Other factors favouring self-medication are acquired knowledge of medicines, convenience and saving time due to no need of consulting a doctor.

### **Conclusion**

In the present study fairly good numbers of medical students are practicing self-medication. They are using analgesic, antipyretic and antihistamines to get relief from common conditions like fever and pain. Most of the students have better understanding about self-medication, although students need more training and education. Students should be educated for proper use of self-medication drugs from the beginning of their curricular activities.

### **Limitation**

1. The study was based on self-reported data about self-medication in the preceding six month thus prone to recall bias
2. Moreover, although the students were encouraged to complete the questionnaire independently, mutual influence between the students could not be entirely ruled out
3. The results of the study would have been more generalized if it could involve students of other semesters and other medical colleges

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**Conflict of interest:** None

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