



## Research Article

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## Evaluation of practice of self-medication among medical students in a teaching hospital

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### Abstract

**Objective:** Self-medication is common among medical students, this may lead to irrational usage of drugs. The objective of this study was to evaluate prevalence of self-medication among medical undergraduate students. **Methods:** It was a descriptive cross-sectional questionnaire based study conducted among undergraduate medical students of Srinivas Institute of Medical Sciences and Research Centre, Mukka, Mangalore. Data was analysed using SPSS version 16 and presented as percentages. **Results:** The prevalence of self-medication was 95.37% (227) out of 238 students in the last one year. The usual indications for self-medication were fever followed by common cold; analgesics and antipyretics were commonly used class of drugs. A significant number of students 62.2% opined self-medication as acceptable practice. **Conclusion:** The present study shows practice of self-medication found to be high among medical students may be due to their exposure on knowledge of drugs and diseases. Hence there is a need to create awareness among students regarding ill-effects of self-medication practice.

**Keywords:** Self-medication, Medical students, Questionnaire.

### INTRODUCTION

Self-medication is the use of drugs with therapeutic intent without professional advice or prescription. In other words, it means use of medicines by people on their own initiative<sup>[1]</sup>. Self-medication thus forms an integral part of self-care, which can be defined as primary public health resource in the health care system. It includes use of drugs, non-pharmacological approaches, social support in illness, and first aid in day to day life<sup>[2]</sup>. It involves use of medicinal products by the consumer to treat self-recognized disorders, symptoms, recurrent diseases or minor health problems<sup>[3]</sup>. Self-medication when not based on authentic medical information can lead to irrational drug usage, wastage of resources, increased chances of microbial resistance to antibiotics leading to serious health hazards such as adverse drug reactions and prolonged morbidity<sup>[4]</sup>. Drugs commonly used as self-medication include analgesics, antacids, antibiotics, antitussives, multi-vitamin supplements, etc<sup>[5]</sup>.

Self-medication in India is a concern and needs to be addressed appropriately<sup>[3]</sup>. Earlier studies have reported, self-medication practice is common among medical students on account of easy access to drugs, information from text books and or senior friends. Previous studies have reported that a significant number of students were ignorant of adverse effects of medication that they consume and suggested to others<sup>[6]</sup>. Self-medication assumes significance among medical students as they are future medical practitioners; having a potential role in counselling patients on advantages and disadvantages of self-medication. Medical students differ from general population as they are exposed to the knowledge of diseases and drugs<sup>[7]</sup>.

### MATERIALS AND METHODS

This cross-sectional study was conducted on a sample of randomly selected undergraduate medical students of Srinivas Institute of Medical Sciences and Research Centre, Mukka, Mangalore. Data was collected using a semi-structured questionnaire. First year MBBS students were excluded from the study as they lack pharmacological knowledge about drugs. The study was initiated after obtaining approval from the Institutional Ethics Committee (IEC). A total of 238 students were included in our study, between the age group of 18-25 years. The questionnaire had three parts: *part A* had questions on demographic characteristics, *part B* consisted of questions regarding frequency of self-medication

in that year and system of medicine taken, information pertaining to pattern of self-medication, its indications and drugs used, *part C* contained questions about attitude towards self-medication. The students who did not self-medicate were instructed to fill only part A and C. Students were briefed about the purpose of study, medical terms used in questionnaire, and written informed consent was obtained from those who participated in the study. The data obtained from completed questionnaires were analyzed using SPSS (Statistical Package for Social Sciences) version 16. The Study being descriptive, results obtained were expressed as percentage, frequency and mean  $\pm$  standard deviation (SD).

## RESULTS

Two hundred thirty eight medical undergraduate students were participated in this questionnaire study; 159 (66.8 %) were females and 79 (33.2%) males. There was a predominance of female participation in our study group with female to male ratio of 2.01:1. Among the 238 students, 143 (60.1%), 55 (23.1%) and 40 (16.8%) were studying in second, third and fourth year respectively. Among those, 227 (95.37%) students practiced self-medication. The current age of students varied from 19 to 22 years with mean age of  $20.48 \pm 1.01$  years. The commonly used system of medicine for self-medication was allopathic 204 (85.7%), followed by ayurvedic 18 (7.6%), homeopathic 4 (1.7%) and unani 1 (0.4%). All details pertaining to pattern of self-medication, its indications and drugs used are depicted in Figure 1-5. In our study group, 163 (68.5%) were ignorant and 64 (26.9%) aware of adverse effects of drugs they used for self-medication. The attitude of students towards self-medication practice was 148 (62.2%), 58 (24.4%) and 32 (13.4%) as acceptable, good and unacceptable respectively.

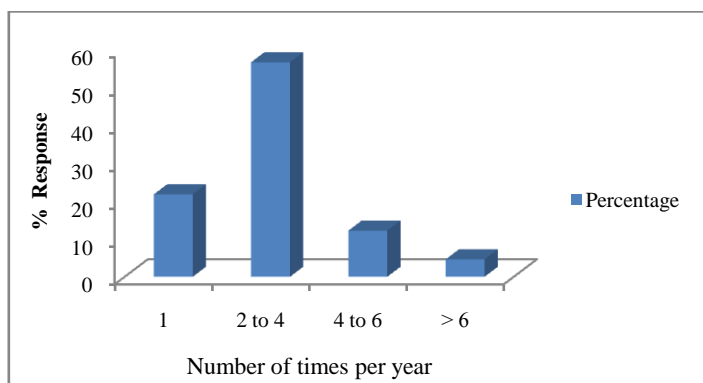


Figure 1: Frequency of self-medication in past one year (n=227)

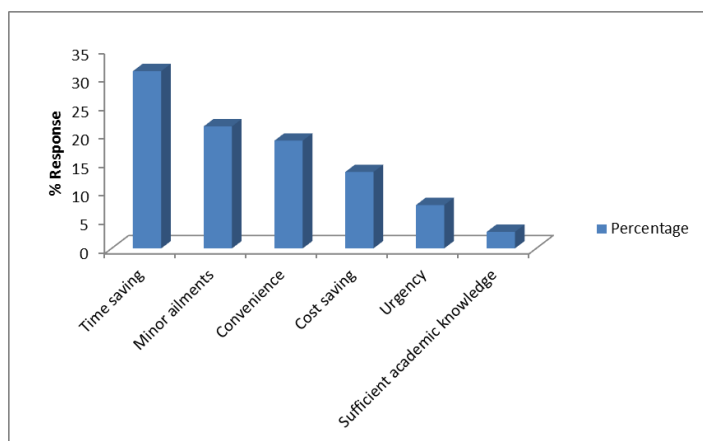


Figure 2: Reasons for self-medication (n=227)

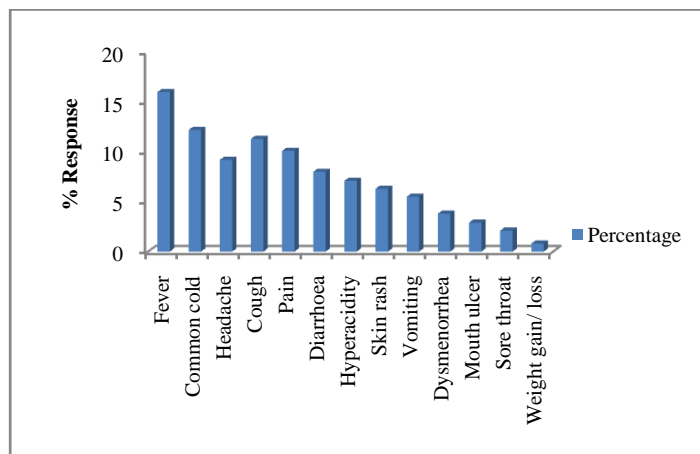


Figure 3: Indication(s) for self-medication (n=227)

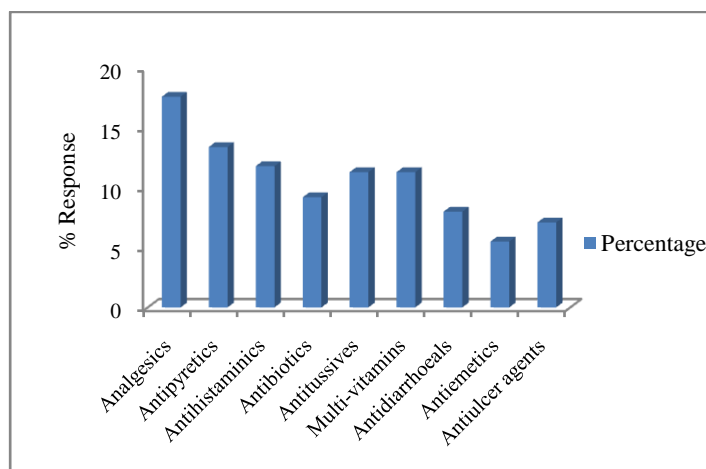


Figure 4: Drug groups used for self-medication (n=227)

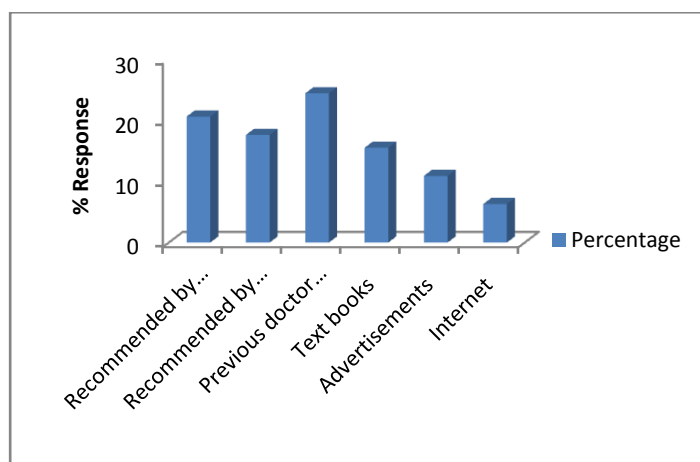


Figure 5: Source of drug information for self-medication (n=227)

## DISCUSSION

In this study, prevalence of self-medication practice among 238 medical undergraduate students was 95.37%. This indicates self-medication is widely practiced by medical students due to their academic knowledge and exposure to drugs. Previous studies conducted among medical students also showed high prevalence of self-medication practice [6-9]. In this study majority of students 85.7% followed allopathic system of medicine; previous studies conducted in Karnataka also showed similar observations [10].

The common factor influencing self-medication practice in this study was 'time saving' (31.1%), which was similar to the observation found in Ahmedabad study<sup>[11]</sup>. Previous doctor prescription (24.4%) for same ailments was found to be the common source of information for selection of drug for self-medication. This observation was similar to studies conducted in Mangalore, Uttar Pradesh and Tamil Nadu<sup>[8,12,13]</sup>, however studies conducted in India and Ethiopia showed 'text books' were common source of information for self-medication<sup>[6,14]</sup>.

In our study, most of the students were ignorant and only 26.9 % aware of the adverse effects of drugs taken for self-medication. Hence, it is essential to create awareness among students regarding inappropriate usage of drugs, their harmful effects and drug interactions.

In the present study, fever was the common indication found for self-medication. Similar finding was observed in earlier studies conducted in Ethiopia and India<sup>[14,8]</sup>. Cold and cough were reported as common indications in studies conducted in West Bengal and South India<sup>[7,6]</sup>. Analgesics followed by antipyretics were the two groups of drugs used by majority of students in our study. Similar results were seen in studies conducted by Iran, Mozambique, Pakistan and Egypt<sup>[15-18]</sup>. The majority of students (62.2%) opined self-medication as an acceptable practice.

The limitations of our questionnaire study were small sample size and based on self-reported data about self-medication from past one year. This study results cannot be generalized as it was conducted in a medical college; hence there is a need to conduct multi-centric studies to understand the various factors influencing self-medication.

## CONCLUSION

In conclusion, self-medication is practiced widely among medical students. Stringent regulations should be made to prevent dispensing medicines without a prescription. There is also a need to create awareness and educate students regarding hazards of self-medication practice.

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