Original Article

Evaluation of Knowledge, Attitude and Practice of Self-Medication Among MBBS Students of Tertiary Care Hospital - A Prospective, Questionnaire Based Study

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ABSTRACT

Self-medication is defined as intake of any type of drugs for treating oneself without professional advice to relieve an illness or an entity. Self-medication is an issue with serious global implications particularly in the developing nation like India where many of the drugs are available and sold as OTC medication. This study was aimed to evaluate the knowledge, attitudes and behaviour of self-medication by the near coming physicians as they are future of the medicine.

Objectives: To study the knowledge, attitude and practice of self-medication among MBBS students from first year to final year using questionnaire.

Methods: This was a cross-sectional study was carried out among under graduate MBBS students of Government Medical College, Nagpur during the period of June 2023 to October 2023. A structured knowledge, attitude and practice questionnaire of 5 questions each was developed, validated statistically and after obtaining informed consent were enrolled into the study through Google forms.

Results: Total 160 students responded through Google forms. The 5 students were excluded due to incomplete information. The 155 students enrolled. Out of 155 respondents 66 (42.6%) reported self-medication within one year of recall period. Most common conditions/symptoms for self-medication were fever (90.3%), headache (79.4%), upper respiratory tract infections (77.4%) respectively.

Conclusion: Self-medication is quiet prevalent amongst medical students. The pattern of self-medication practice changes with time and advancement of knowledge. Additional research on self-medication is mandated should be taught regarding benefits and address implication of self-medication.

Keywords: Self-medication, MBBS students, Prescription, KAP study.

INTRODUCTION

World Health Organization (WHO) defines self-medication as *"use of pharmaceutical or medicinal products by the consumer to treat self-recognized disorders or symptoms, the intermittent or continued use of a medication previously prescribed by a physician for chronic or recurring disease or symptom, or the use of medication recommended by lay sources or health workers not entitled to prescribe medicine"* [1]

The advantages of self-medication that people perceive include cheap cost, ease, and self-reliance. Potential hazards include making a mistaken diagnosis, delaying or forgoing seeking medical guidance, running the risk of negative side effects, developing resistant bacteria, and making a mistaken prescription.[1]

The burden of self-medication with antibiotics is higher in developing countries than in developed countries[2]

The reasons for self-medication, differences among medical students in using different types of self-medication reasons for seeking professional help and student's view about safety of self-medication are different among medical students. Students are highly influenced by the media and the internet, where self-medication behaviour is promoted[3]

The increasing advertisement of pharmaceuticals increases concerns of incorrect self-diagnosis, drug interaction, and use of other drugs for the original indication[4]

Antibiotic self-medication causes excessive antibiotic exposure to humans and is one of the documented factors responsible for development of the currently rapidly rising public health crisis, the resistance to antibiotics [5-13]

The adverse effects of self-medication include incorrect self-diagnosis, delays in seeking medical advice when needed, infrequent but severe adverse reactions, dangerous drug interactions, incorrect manner of administration, incorrect dosage, incorrect choice of therapy, masking of a severe disease and a risk of dependence and abuse[14]

Pharmacists or unlicensed medical practitioners are frequently consulted in some countries; however, the patient's condition may deteriorate because these treatments are typically symptomatic and do not involve a clinical examination or history-taking. Numerous medications, such as analgesics for headaches and other

mild painful conditions, can be regularly taken without a doctor's approval. Overuse of antibiotics can result in resistant organisms, gastritis and peptic ulcers in the long term, and other problems.

There is a lack of literature on the prevalence and their attitude of self-medication among MBBS students in central India. Hence the present study was conducted to assess the knowledge, attitude and practice of self-medication among the undergraduate students of tertiary care teaching hospital.

METHODS

A cross-sectional study was conducted among 155 MBBS Students in tertiary care teaching hospital, GMC, Nagpur from July 2023 to October 2023 in Government Medical College, Nagpur.

The study was conducted using pre-validated questionnaire. A questionnaire was specifically developed for the study. A structured knowledge, attitude and practice questionnaire of 5 questions before the start of the study. A pilot study was conducted for the validation of question. The questionnaire was circulated among 5 faculty members and their responses were sought. The necessary modification was done for validation.

The students of MBBS were enrolled into the study after obtaining informed consent through. The prevalidated questionnaire was circulated amongst MBBS students through Google forms.

The data was analysed and interpreted in term of descriptive statistics (frequency, percentage, mean and median etc). The findings of the study are presented in tables and charts. The collected data was analysed using SPSS (Statistical Packages for Social Sciences) version 11.5. Responses were noted in performa. Incomplete filled forms were rejected.

RESULTS

Demographic details

The prevalence of self-medication was found to be 42.6%. The 155 subjects, returned the questionnaire. Of them, 69(44.5%) were females and 86(55.5%) were males.

Table 1: Demographic details

Sex (Male: Female)	1.45:1
Age (Mean±SD)	20.3±1.92
1st year	48
2nd year	42
3rd year	11

Table 2: Questions

Questions	Yes	No
Do you Practice Self Medication	42.6	57.4
Self-Medication is safe and not cause any health hazards	12.3	87.7
Aware of the drug interactions and adverse effects	38.3	61.7

About 12.3 % students agree that self-medication is safe and do not cause any health hazards. Only 38.3 % were aware of the drug interactions and adverse effects. (Table 2)

Table 3 The students were inquired regarding various reason for self-medication. Results are summarized as follows:

Reasons	Percent of students
Quick Relief	53.9
Illness too trivial for consultation	33.8
Time saving	49.4
Cost effectiveness	44.2
Crowd in OPD	16.9
Ease and convenience	44.2

Of all the respondents, the (53.9%) stated that they self-medicated because of quick relief, 44.2% stated cost effectiveness and ease of convenience and (49.4%) did it because they thought it was time-saving (Table-3).
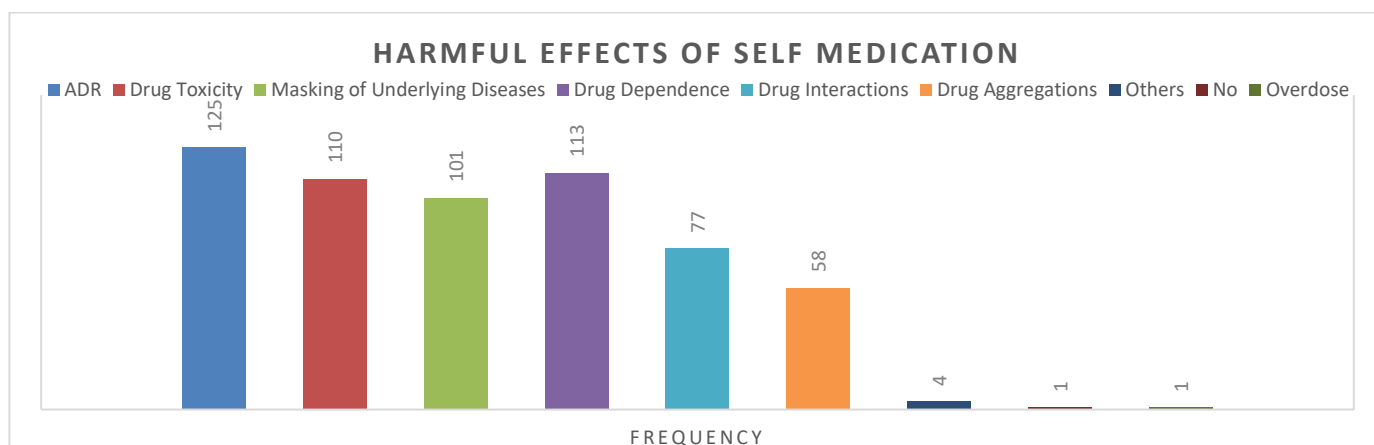
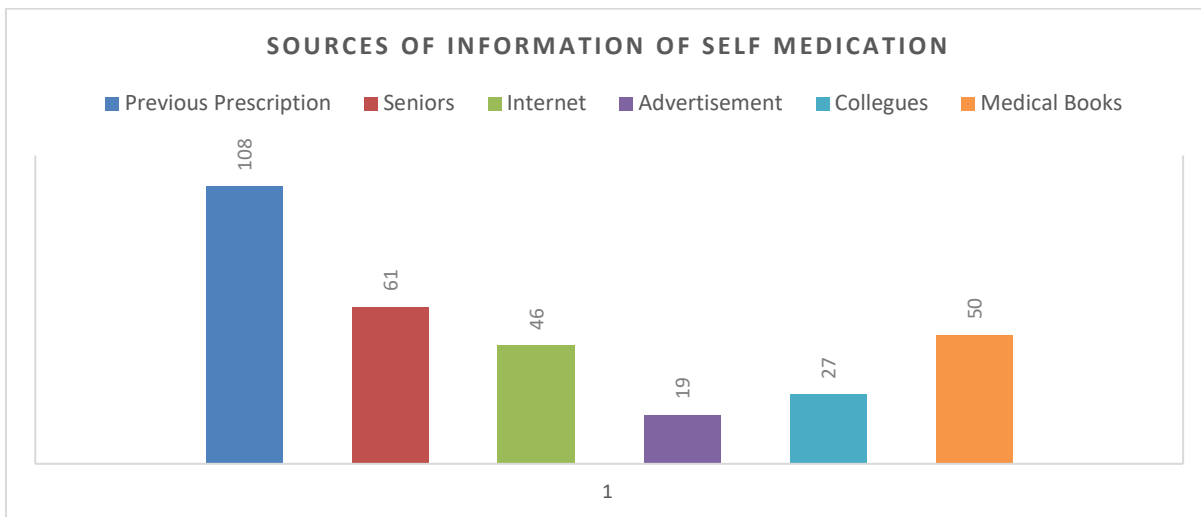**Figure 1:** Harmful Effects of Self Medication

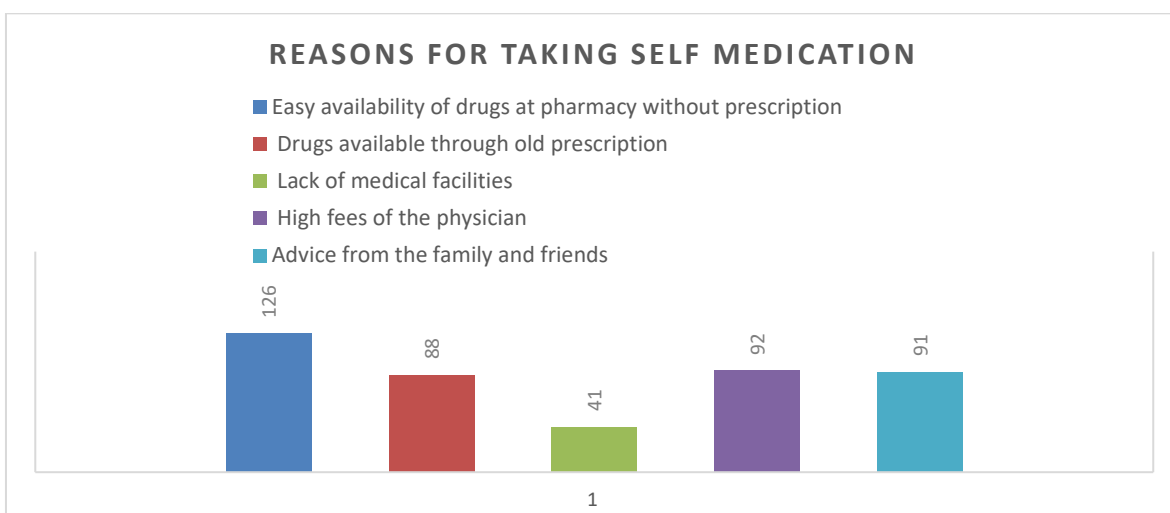**Figure 2**: Source of Information of Self medication

Figure 3: Reasons for taking Self medication

The most harmful effect as perceived by the respondents was drug dependence and risk of adverse drug reactions (ADRs) 113(72.9%) and 125 (80.6%) respectively. (Figure 1)

Table 4: Students practised self-medication

Frequency	Students (Percent)
Once a week	12 (7.7%)
Once every 15 days	7 (4.5%)
Once monthly	56 (36.1%)
Once every 6 monthly	63 (40.6%)
Once yearly	17 (11%)

Of the 155 subjects who had practised self-medication, 63(40.6%) had done so once in the preceding 6 months. Followed by 56 students had done once monthly. (Table 4)

Among all students who practised Self Medication, 110 students had taken the antibiotic followed by antipyretic which was 90. Followed by analgesic which was 50 students.

Previous prescription was found to be the most common source of information for 108(69.7%) cases, followed by 61(39.4%) the seniors. The internet was source of information for 46(29.7%) students and 50 (32.3%) refer medical books as source of information. (Figure 2)

The easy availability 126 (81.3%) was the most prevalent cause and the 92 (59.4%) then high fees of physician. About 91(58.7%) students take advice from the friends and family. (Figure 3)

Table 5: Common Indications

Common Indications	Number of Students
Fever	140 (90.3%)
Headache	123 (79.4%)
Flu/Cough/Cold	120 (77.4%)
Pain	110 (71%)
Sore throat	97 (62.6%)
Vomiting	91 (58.7%)
Menorrhagia/Metorrhagia	37 (23.9%)

The common illnesses for which all students had prescribed were fever, headache, cough/cold, pain, sore throat, vomiting. The fever (90.3%) was the most common indication followed by headache (79.4%) and flu/cough/cold (77.4%). (Table 5)

DISCUSSION

In a review of self-medication in doctors and medical students, the idea of treating one's own illnesses without going through the normal channels patients would usually follow (doctor self-treatment) is deeply ingrained in the medical industry and is picked up as early as when future doctors are medical students.[15]

The present study was conducted to evaluate the practices, attitude and perception of self-medication among medical students. The prevalence of self-medication in our study was found to be 42.6%. In studies conducted within India, the prevalence of self-medication among the medical students was shown to be ranging between 57.1% and 92%.[17-19]

Among medical students planned the study, there is a lack of data regarding self-medication.

Concerning the demographic characteristics, the respondents were of age (20.3±1.92) years. In our study it was found that more male students 12 (out of 86) practice self-medication than female students 7 (out of 69). This differs from a study conducted among medical students, which showed that a greater prevalence was observed among female students (45%) than male students (44%).[22]

In contrast to just over 30% in the study by Badiger et al., more than 80% of respondents knew of the negative effects linked to self-medication.[16]

Our study found that while important sources of information regarding drugs are previous prescription, textbook and related materials and seniors and friends. However, the use of textbooks and related materials major source of information advanced from first year to third year students which suggests that medical students prefer more on the objective sources of information with progressive gain in knowledge about medicines.[20]

However, fever was the most common indication in our study which was similar to self-medication in conducted in Ethiopia [21]. Most common indication for self-medication was cold and cough to observations made in southern part of India [16].

The most common class of drugs was Antibiotics in our study which was similar to observations made in west Bengal [17]. However, antipyretics were the most common class of drugs self-medicated in studies from Ethiopia [21]. Another study from Bahrain reported analgesics as most common class of drugs self-medicated with antibiotics contributing only 6%. The reason being given by the researchers for limited use of antibiotics in Bahrain is their government has strict regulatory policies about the prescription and over the counter sale of antibiotics [22]. This

suggests that the use of antibiotic is high in our study which could be due to lack of regulatory policy governing the OTC sale of antibiotics.

Studies in the past have shown that antimicrobial usage was greater when research participants were healthcare professionals, suggesting that the general public may not have as easy access to these medications as medical students have.[22]

Self-medication as a component of self-care is only acceptable in situations when medical professionals utilise medications appropriately. Resources being wasted and major health risks including drug use, severe reactions, and protracted pain are other issues associated with self-medication. Antibiotic resistance is a global issue, especially in underdeveloped nations where access to drugs is generally unrestricted. [23]. Students in a Portugal study showed a widespread lack of understanding about the proper use of antibiotics.[24] A telephone-based population study conducted in the United States revealed that 58% of participants were unaware of the potential health risks linked to the use of antibiotics.[25]

In our study, the majority of students knew about over-the-counter medications. Senior medical students in a research by Sontakke et al. had a greater awareness of over-the-counter medications.[18] These considerations are crucial because if students solely use over-the-counter (OTC) pills for self-medication, they will have fewer bad effects and save money on prescription costs by choosing generic drugs.

CONCLUSIONS

This descriptive study discovered that self-medication is quite prevalent among medical students. In order to reduce self-medication, medical students should receive sufficient exposure to help them comprehend rational prescription. Additional research on self-medication is required, both among different health professionals and the general public.

The limitations of this study included the absence of a comparison group, such as students from a different field, the lack of treatments, such as disclosing information about the risks of self-medication.

Conflict of Interest: The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.