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## SELF-MEDICATION IN MEDICAL STUDENTS

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**Abstract:**Self-medication is consumption of medicinal products for treating diseases without a prescription resulting in wastage of resources, increased drug resistance and causes health hazards. Self-medication, often without adult guidance, has been reported to be a common practice during adolescence. Similar to other preventable health-risk behaviors initiated in early adolescence, it has become a cause for concern universally. The main problem with self medication with antimicrobials is the emergence of pathogenic resistance. Antimicrobial resistance is an existing problem world-wide, mainly in developing countries. The aim and objective of this study was to evaluate the knowledge regarding self medication among medical students of Uttar Pradesh Rural Institute Of Medical Sciences and Research, Saifai. This was a questionnaire based study of 4 months duration. A prevalidated questionnaire was distributed to 150 students. The results of this study showed that out of 150 students 130(86.7%) students used antibiotics as self medication. Most common reason for self administration of antibiotics was insect bite 35 (26.90%). In this study we observed that the most common source of information regarding self-medication were senior students 79(60.76%) and most commonly used drugs as self-medication were antibiotics 82(63.07%). The findings from this study highlights the striking prevalence of self medication among medical students, the lack of knowledge and the risks associated with them. Most common reason for indulging self medication was the easy availability 74(56.92%) of drugs. At the policy-making level, there is an urgent need to legislate and enforce laws restricting access to the supply of medicines without prescription by pharmacies and strict rules regarding pharmaceutical advertising. Most importantly, there is a need for a robust public enlightenment campaign to educate the populace of the disadvantages and possible complications of antibiotic self medication. Emphasis on rational use of drugs is a must.

**Keywords:**Antibiotics, self medication, resistance, medical undergraduates, otc-drugs

### INTRODUCTION

It is common for people to feel unwell and use medications for treating themselves. Every day, people throughout the world act on their own for their health, by practising self-medication. Self-medication is defined as treatment of common health problems with medicines especially designed and labelled for use without medical supervision, and approved as safe and effective for such use [1]. Medicines for self medication are often called Non-Prescription or Over the Counter (OTC) and are available without a doctor's prescription through pharmacies. The most commonly available OTC medications are pain-killers, antibiotics, cough and cold remedies, anti-allergy medicines, vitamins and energy tonics. Although these medications are considered risk-free and useful for the treatment of common health problems, their excessive use can also lead to serious side-effects and unfavorable reactions. Thus, one observes that although there is an intrinsic risk when ingesting any medication, the population has easier free access and use for some drugs, which are known as low-toxicity [2].

There is growing concern about the consumption of medications, since the majority of the side effects developed frequently are more serious than the original disease itself [3]. In addition, the momentary relief of symptoms may mask the underlying disease and could aggravate it [4]. There is a trend towards the prevalence of self-medication among persons with a higher educational level, taking into consideration that knowledge may make this practice safer [5,6,7]. When this practice was analyzed among undergraduate students in the health area, who were enrolled in a course in pharmacology during the period of their academic education, a high consumption of medications without a doctor's prescription was observed. The reason for

association of university health students with this problem is mainly due to the responsibility that they, as academic students and future professionals, should have with regard to adequate conduct in the face of certain situations, in addition to the need to serve as a model for their clients [8].

Studies on self-medication show that these practices are influenced by many factors, such as education, family, society, law, availability of drugs and exposure to advertisements [9]. There are many reasons for the increased likelihood of self medication among medical students [10]. These students have easy access to information from drug indices, literature, and other medical students to self diagnose and self-medicate. In addition, they have easy access to the medication itself through physician samples provided by pharmaceutical representatives, and “The White Coat” guarantees trouble free access to drugs available in pharmacies [11]. The most common medications used for self-medication are analgesics and antimicrobials [12].

This study was conducted to find out the knowledge about dose, duration of therapy, adverse effects of medicine used as self medication and to know the source of information of medicine used as self-medication.

## MATERIALS AND METHODS

This was a questionnaire based study of 4 months duration and locus of study was Department of Anatomy, U.P. Rural Institute of Medical Sciences and Research, Saifai. The participants were briefed about the nature of the study, and verbal consent was taken.

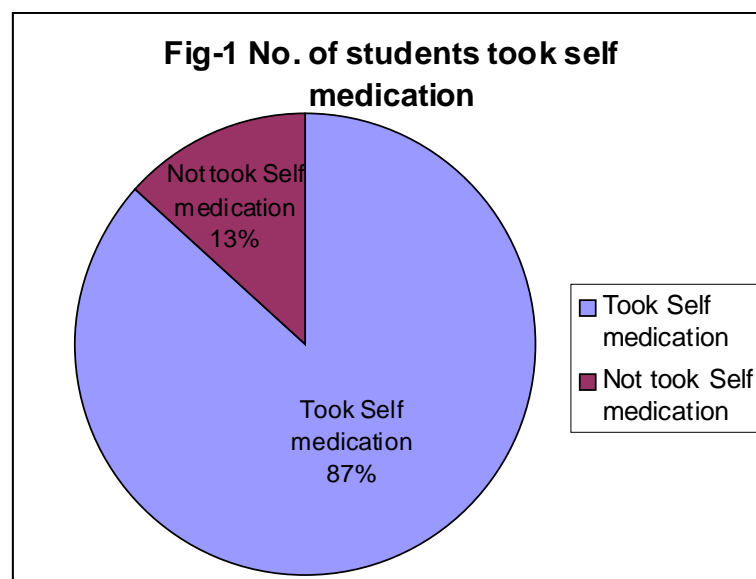
A prevalidated questionnaire was distributed to 150 students of M.B.B.S. first professional of U.P. Rural Institute of Medical Sciences and Research, Saifai. Identity of students was kept confidential. The questionnaire consists of specific questions in forms of MCQs, best two choices and fill up the blanks, regarding the cause for self administration of drugs, source of information, reasons favouring self-medication, type of drug, its chemical ingredient, dose, duration, and adverse effects. The investigators were present, in case the respondents required assistance.

## RESULTS

A total of 150 students participated in the study, of whom 97 ( 64.7 % ) were male and 53 ( 35.3 % ) were female. A total of 82 ( 84.5 % ) male participants and 48 ( 90.5 % ) female participants said they practiced self-medication. All the variables were denoted among multiple response, best two choices and fill up the blanks questions. Results were divided into six groups :

### Group A : No. of students took self-medication (Fig-1).

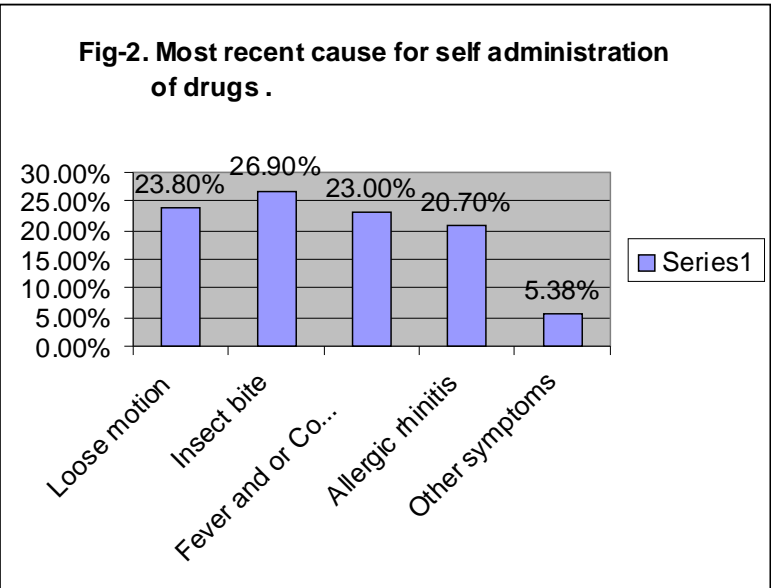
1. Out of 150 students 130 (86.7%) students took self-medication.
2. Rest of 20 (13.3 %) students never took self-medication.



### Group B : Most recent cause for self administration of drugs (Fig-2).

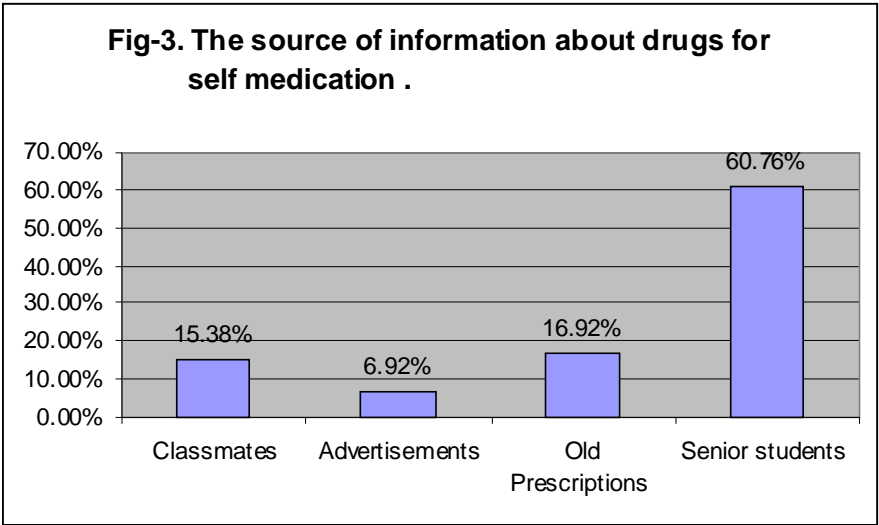
1. Loose motion – 31 (23.80%)
2. Insect bite – 35 (26.90%)
3. Fever and or Common cold – 30 (23.0%)

4. Allergic rhinitis– 27 (20.70 %)  
5. Other symptoms – 7 (5.38 % )



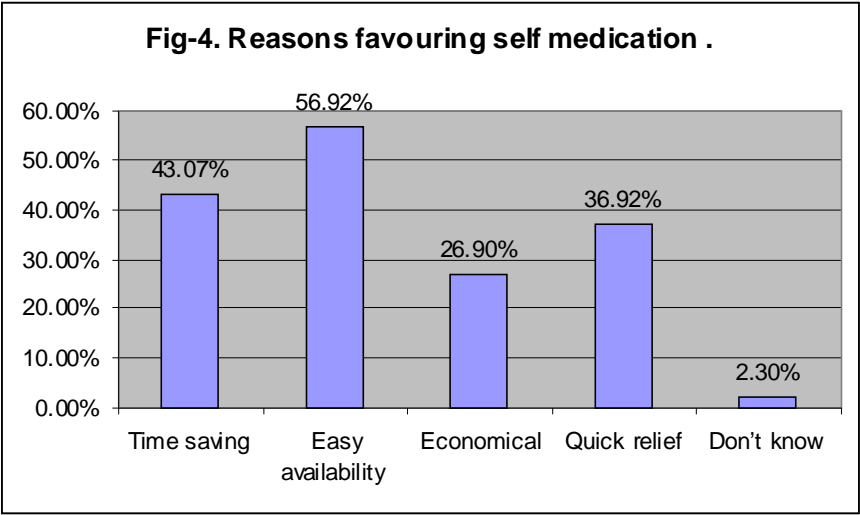
**Group C : The source of information about drugs for self-medication (Fig-3).**

1. Classmates – 20 (15.38%)  
2. Advertisements – 9 (6.92%)  
3. Old Prescriptions – 22 (16.92%)  
4. Senior students – 79 (60.76%)



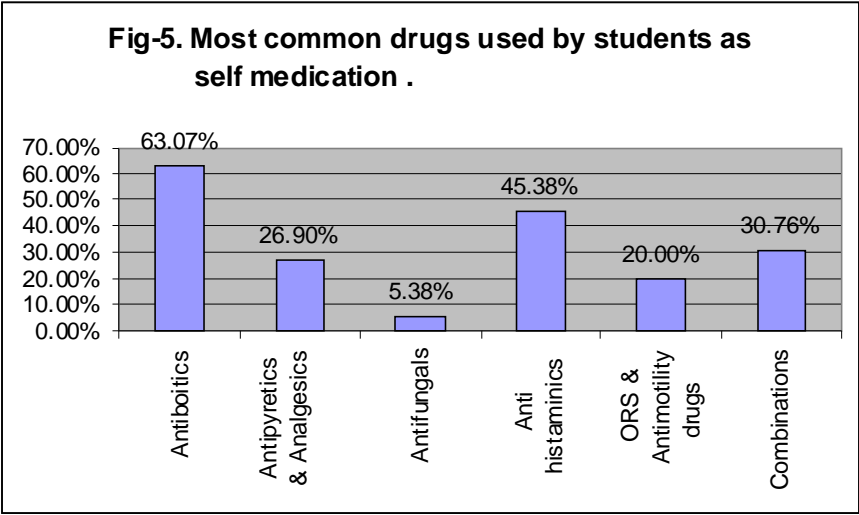
**Group D : Reasons favouring self-medication (Fig-4).**

1. Time saving – 56 (43.07%)  
2. Easy availability – 74 (56.92%)  
3. Economical – 35 (26.90%)  
4. Quick relief – 48 (36.92%)  
5. Don't know – 3 (2.30%)



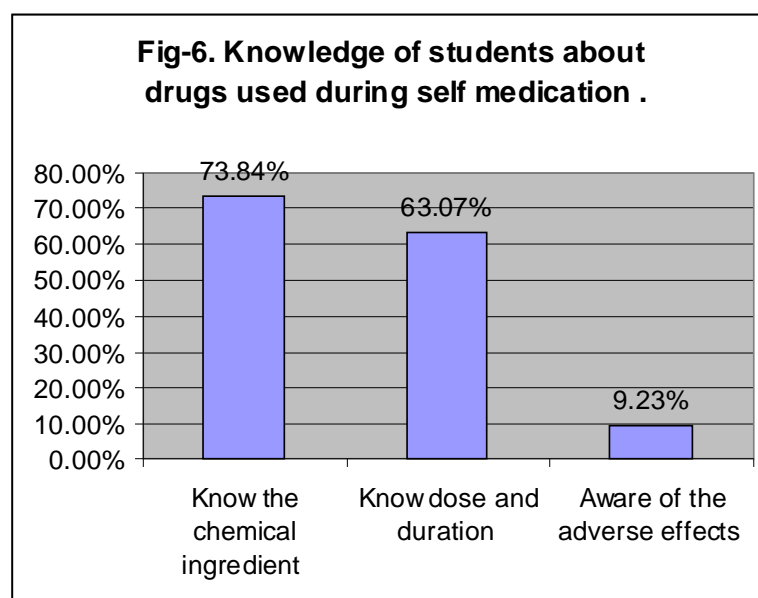
**Group E : Most common drugs used by students as self-medication (Fig-5).**

- 1. Antibiotics – 82 (63.07%)
- 2. Antipyretics & Analgesics – 35 (26.90%)
- 3. Antifungals – 7 (5.38%)
- 4. Anti histaminics – 59 (45.38%)
- 5. ORS & Antimotility drugs – 26 (20.00%)
- 6. Combinations- 40 (30.76%)



**Group F : Knowledge of students about drugs used during self-medication (Fig-6).**

- 1. 96 (73.84%) students know the chemical ingredient of drug.
- 2. About 82 (63.07%) students know dose and duration of drug.
- 3. But only 12 ( 9.23%) students were aware of the adverse effects of drug.



## DISCUSSION

Self-medication is treatment of common health problems with medicines without medical supervision. Doctors also tend to self-medicate to the extent feasible due to their knowledge about both diseases and drugs. Several studies have reported prevalence of self-medication varying from 25-56% [13,14]. Medical students acquire knowledge of drugs and skills of drug selection and prescribing during the undergraduate training which includes internship in many countries including India. It is also known that this group starts relying on self-medication during their formative years of undergraduate training. Some studies have reported prevalence and pattern of self-medication in medical students with varying results [15].

The present study was conducted among medical students in Saifai to assess their knowledge, level, and practices pattern, regarding self-medication. Our study, using self-administered questionnaire, is largely dependent upon the information given by students. Although students were encouraged to fill the questionnaire independently, but still mutual influence between the pupils and recall bias could not be ruled out completely.

Our study has found a prevalence of self-medication of 87% in medical students in contrast to 59% in a non-medical population in a previous study [9]. It is also noted that a high level of education and professional status are predictive factors for self-medication [10]. This is similar to the findings in a study conducted by Erlend Hem and colleagues [13] (90%) but is higher than the findings (60%) in the study conducted by Henry James and colleagues [10].

In our study it was found that more female students (90.5%) practiced self-medication than male students (84.5%). This differs from a previous study conducted by Badiger S et al [11] among medical students, which showed a greater prevalence among male students (60.5%) than female students (39.5%). Also the most common cause for self-administration of drugs in our study was the insect bite (26.90%), loose motions (23.80%), fever and or common cold (23.0%), followed by allergic rhinitis (20.70%), which is in contrast with other studies which shows minor ailments (82%) as the major cause for self-medication [10,11]. It may be due to the fact that the hostels in Saifai are near the fields and the common crops grown in them is the wheat. This would have been responsible for allergic rhinitis too, as there is a lot of hay in the vicinity during harvest of these fields.

The next common reason for self-medication in our study among medical students was the source of information from senior students (60.76%) which is unique to this study group. Incomplete knowledge can lead to inappropriate self-medication, development of resistance, and can expose the participants to all the risks associated with inappropriate use of medications. At the same time it also indicates towards healthy and caring attitude of senior students towards their juniors.

Easy availability (56.92%) of drugs was the common reason given by our students which is not in concordance with other studies that reported the shortage of time to consult a doctor (32%) as the main reason [10]. It could be due to the fact that medical students can obtain the drugs easily by virtue of their profession and their attire in white coat. Previous studies have also reported higher use of antibiotics when the study participant was a healthcare professional [10].

In the study it was noticed that the classes of drugs that were commonly used were antibiotics (63.07%) and anti-histaminics (45.38%). This is similar to studies done earlier where students have widely used antibiotics, which may be because of their knowledge about antibiotics [16]. A good number of students (73.84%) knew the chemical ingredient of drug, (63.07%) students knew the dose and duration of drug, but only (9.23%) students were aware of the adverse effects of drug. This shows medical students have better knowledge about certain aspects of self-medication which reflects the influence of medical training. Even the junior students are well aware of many facts which could be due to easy availability of information

through media, internet etc.

## CONCLUSIONS

Our study has found that self-medication is very common among medical students, facilitated by the easy availability of drugs, and information from seniors. A significant number of students are unaware of the adverse effects of the drugs that they themselves take and suggest to others. Since inappropriate knowledge of medication has the potential to cause serious harm, not only to the students themselves but also to those, whom they suggest medication, potential problems of self-medication should be explained to the students to minimise this risk.

The limitations of this study included the absence of a comparative group, such as students from another field; the small sample size; and the absence of interventions, like providing information regarding hazards of self-medication.

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## FINANCIAL OR OTHER COMPETING INTERESTS

None.

## REFERENCES

1. Abdelmonein SA, Eman R, Hussain A. Self-medication practices among diabetic patients in Kuwait. Medical Principles and Practices 2008;17:315-20.
2. Paulo LG, Zani EAC. Automedicacao no Brasil. Rev Ass Med. 1988;34(2):69-75.
3. Martins AP, Miranda AC, Mendes Z, Soares MA, Ferreira P, Nogueira A. Self-medication in a Portuguese urban population: a prevalence study. Pharmacoepidemiol Drug Saf. 2002;11:409-14.
4. Arrais PSD. Perfil da automedicacao no Brasil. Rev Saude Pub. 2005;31:71-9.
5. Bohomol E, Ramos LH, D'Innocenzo M. Medication errors in an intensive care unit. J Adv Nurs. 2009;65(6):1259-67
6. Klemenc-Ketis Z, Hladnik Z, Kersnik J. Selfmedication among healthcare and non-healthcare students at University of Ljubljana, Slovenia. Med Princ Pract. 2010;19(5):395-401.
7. Nascimento AC. Medication advertising in Brazil. Can it be regulated? Cien Saude Colet. 2009;14(3):869-77.
8. Dilles T, Vander Stichele RR, Van Bortel L, Elseviers MM. Nursing students' pharmacological knowledge and calculation skills: ready for practice? Nurse Educ Today. 2011;31(5):499-505.
9. Shankar PR, Partha P, Shenoy N. Self medication and non-doctor prescription practices in Pokhara valley, Western Nepal: a questionnaire based study. BMC Family Pract. 2002;3:17.
10. James H, Handu SS, Khalid AJ, Khaja A, Otoom S, Sequeira RP. Evaluation of the knowledge, attitude and practice of self medication among first year medical students. Med Princ Pract. 2006;15:270-275.
11. Badiger S, Kundapur R, Jain A, Kumar A, Patanashetty S, Thakolkaran N, Bhat, Ullal N. Self medication patterns among medical students in South India. AMJ 2012; 5(4): 217-220.
12. Martins MC, Souza Filho MD, Moura FS, Carvalho JS, Müller MC, Neves RV et al. Use of anti-obesity drugs among college students. Rev Assoc Med Bras. 2011;57(5):570-6.
13. Hem E, Stokke G, Tyssen R, Grønvold N T, Vaglum P, Ekeberg O. Self-prescribing among young Norwegian doctors: a nine-year follow-up study of a nationwide sample. BMC Med. 2005;3:16.
14. Graciela ET, Castro SA, Oppelt AM, Petrini RM, Pereira IV, Sassi BT. Working conditions and self-medication among primary healthcare professionals in an urban area of Pelotas, RS. Rev bras Epidemiol. 2007;10:66-74.
15. Abay SM, Amelo W. Assessment of Self-Medication Practices Among Medical, Pharmacy, and Health Science Students in Gondar University, Ethiopia. J Young Pharm. 2010;2:306-10.
16. Sarahroodi S, Arzi A, Sawalha A.F, Ashtarinezhad A. Antibiotic Self-Medication among South Iranian University Students. International Journal of Pharmacology. 2010;6(1):48-52.



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