

Assessment of Knowledge, Attitude and Practice of Self-medication among Second Year MBBS Students

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Abstract

Introduction: The objective of this study was to elicit the self-medication patterns in second year medical students and to assess whether medical training results in any change.

Methods: This was a cross-sectional study in which a self-developed, pre-validated questionnaire with both open and close-ended items on various aspects of self-medication was used. Study population consisted of 150 second year medical students, who were required to fill the questionnaire. Analysis was done by SPSS software and the frequency distribution and percentages of the variables were obtained.

Results: A total of 150 students, 80 female and 70 male, were included in the study. Self-medication was reported by 137 students (91.3%). The respondents who used self-medication found it to be time-saving in providing relief from minor ailments. The most common ailments for which self-medication was used were: fever (52.6%), URTI (51.1%) and headache (49.6%). The source of information regarding drugs and doses were previous prescription, package inserts, seniors & friends. NSAIDs (65.5%), antihistamines (50.3%) and antibiotics (13.8%) were the most common self-medicated drugs. Of the respondents, 63.4% were unaware of the adverse effects of the medication and 8% had experienced adverse reactions. 76% of participants feel that their knowledge in pharmacology has positively influenced their attitude towards self-medication.

Conclusion: The prevalence of self-medication among medical students is high, facilitated by the easy availability of drugs and information from textbooks and seniors. A significant number of students are unaware of the ethical issues and principles of rational drug use. Therefore it is essential that students be made aware of the potential problems of self-medication and the principles of rational and ethical drug use.

Keywords: Self-medication, Medical students, inappropriate drug use, rational drug use

Introduction

Self-medication is the treatment of common health problems with medicines especially designed for use without medical supervision and approved as safe and effective for such use.⁽¹⁾ Self-medication is now increasingly being considered as a component of self-care.⁽²⁾ Unlike other aspects of self-care, self-medication involves the use of drugs and drugs have the potential to do good as well as cause harm.

Several studies have shown that inappropriate self-medication results in wastage of resources, increases resistance of pathogens and entails serious health hazards such as adverse drug reactions, prolonged suffering and drug dependence.^(2,7,8)

There are many reasons for the increased likelihood of self-medication among medical students.⁽⁴⁾ They have easy access to information from drug indices, literature and medicines through physician samples provided by pharmaceutical representatives, and "The White Coat" guarantees trouble free access to drugs available in pharmacies.⁽⁵⁾

There is a paucity of studies on self-medication among medical students.⁽⁴⁾ So the present study is undertaken to identify the reasons and the patterns of self-medication among medical students and to study whether knowledge of drugs and diseases results in improvement in this practice.

Methodology

This cross-sectional study was undertaken in Jawaharlal Nehru Medical College, Belgaum, Karnataka, India, with approval from the Institutional Ethics Committee. The study population consisted of second year medical students. The participants were briefed about the nature of the study, written consent was taken and a pre-validated questionnaire was administered to them. The information pertaining to knowledge, attitude and practice of self-medication were included in the questionnaire. The investigators were present in case the respondents required assistance.

The data was analysed using SPSS version 16.00 and rates were expressed as percentage.

Results

The questionnaire was administered to 150 students and all the students (n = 150) responded to the questionnaire, of whom 70 (46.7%) were males and 80 (53.3%) were females. Their mean age was 20.82 +/- 0.35.

Knowledge: All were aware and knew about self-medication. 146 students (97.3%) responded that there were several advantages of self-medication. The most important advantages were avoiding hospitals for mild

illnesses (65 students, 43.3%), time saving (52 students, 34.7%), easy availability (29 students, 19.3%) At the same time they were also aware of the disadvantages of self-medication such as adverse drug reaction (55 students, 36.6%), drug interactions (49 students, 32.7%), wrong medication (25 students, 16.7%), disease aggravation (18 students, 12%), risk of drug dependence (2%).

Table 1: Indications for medication use, common medications used and sources of drug information

	No. of Students (Percent)
Indications for Use	
Fever	72 (52.6%)
Upper respiratory infection	70 (51.1%)
Headache	68 (49.6%)
Aches & pains	58 (42.3%)
Menstrual symptoms	25 (18.2%)
Diarrhoea	16 (11.6%)
Gastritis	14 (10.2%)
Vomiting	5 (3.6%)
Medications Used	
NSAIDS (analgesics/ antipyretics)	90 (65.5%)
Antihistamines	69 (50.3%)
Antibiotics	19 (13.8%)
Antacids	15 (10.9%)
Antispasmodics	10 (7.2%)
Source of Information	
Previous experience	38 (27.7%)
Previous prescriptions	32 (23.3%)
Package inserts	27 (19.7%)
Consulting family members	21 (15.3%)
Consulting pharmacist	13 (9.4%)
Books, newspaper	5 (3.6%)

Attitude: A majority of the participants (110) favoured self-medication saying that it was acceptable, while 40 students felt it was unacceptable and that drugs must be taken only under the supervision of a doctor.

104 participants (69.3%) said that they could treat minor illness by themselves while 39 students (25.8%) were not sure and 7 (4.6%) said that they were not confident about treating themselves.

114 participants (76%) felt that learning pharmacology had made them consider more issues before taking medications. They are more careful while selecting a drug, make sure they take the right dose and also keep in mind the adverse effects of the drug.

Practice: Of 150 responders 137(91.3%) reported that they had practiced self-medication in the past one year, with a frequency of one to five times. Of these 66 responders were male and 71 were female. The most important reasons quoted for not consulting a doctor were convenience (50.36%), mild illness (48.9%), time saving (20.4%), quick relief (16.05%) and cost saving (4.37%). There were several indications for self-

medication, the most common being fever, upper respiratory tract infection, headache.

The most common drug groups used by the students for self-medication were analgesics and antipyretics, in which NSAIDS like paracetamol and ibuprofen were more commonly used. Other drugs are shown in Table 1. It may be noted here that all the users of antispasmodics were females. The majority of the students 65.6% (90 students) obtained their medications from the pharmacy as over the counter drugs. The remaining obtained their medications from physician's samples, medicine left over from previous prescriptions and friends and seniors medicines as shown in Fig. 2.

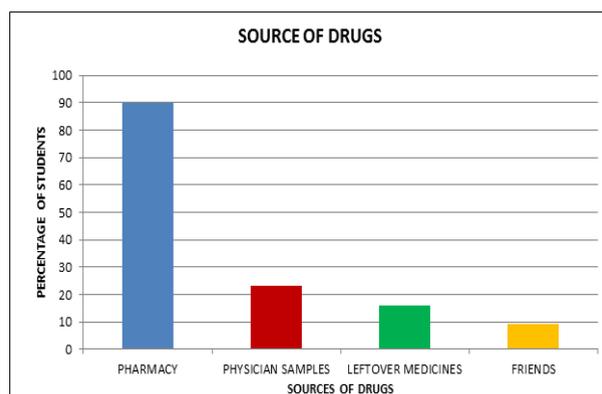


Fig. 1: Sources of Medications Used

While obtaining drugs 61 (44.5%) considered the indication, 42 (30.6%) brand of the drug, 25 (18.2%) side effect profile of the drug and 9 (6.5%) price of the drug. The source of information regarding drugs and doses are shown in Table 3.

126 participants (91.9%) read the package inserts. Of these 66 were females, representing 92.9% of females and 60 males representing 90.9% of male subjects.

125 students had not faced any adverse effect due to self-medication while 12 students experienced adverse effects in the form of gastritis, nausea, vomiting, diarrhea for which they stopped the medication by themselves.

Discussion

This study reveals that self-medication is very common among second year medical students (91.3%) as seen in previous studies with medical students.⁽¹³⁾ Also they are well aware of the advantages and disadvantages of self-medication. The factors that preferred self-medication were avoiding hospitals for mild illness, time saving, easy availability, convenience. These perceptions are similar to those reported by the WHO and other studies.^(3,2,12)

This also indicates that health services have to be made more accessible so that patient's waiting time is minimized. It has been identified that one of the predictive factors for self-medication is length of waiting time for medical consultation.⁽¹¹⁾ The most important deterrents for self-medication were fear of adverse drug

reactions, drug interactions, risk of making a wrong diagnosis and risk of using a wrong drug, similar to an earlier study.⁽²⁾

Most students felt that self-medication was acceptable and that their learning of pharmacology had helped them to be more restrained and careful in their use of drugs. They have become more alert about adverse effects and dose of the drugs. However it is arguable that misplaced self-confidence may encourage inappropriate self-medication and expose the subjects and their family members to potential health risks.

Compared to first year medical students (69.8%) practice of self-medication was more common among second year students.⁽¹³⁾ The reason for this could be attributed to their knowledge in pharmacology. There was not much gender difference in the practice of self-medication. The most common indications were mild illness like fever, URTI, headache and the most commonly used drugs were analgesics, antipyretics of which paracetamol was the most common. These result are similar to earlier studies.^(4,5,13)

Most of the students obtained drugs from the pharmacy as over the counter drugs and a few from physician's samples. Unlike the general population medical students have an easy access to drugs. Even though they had access to all the information regarding diseases and drugs in their text books, only very few have referred to their books. Most of them relied on previous experience and previous prescriptions. This has implications, because many diseases have similar symptoms, and a person using previous experience may be exposed to the dangers of misdiagnosis and consequently wrong treatment.

Irrational use of medicines is a major problem worldwide. WHO estimates that more than half of all medicines are prescribed, dispensed or sold inappropriately, and that half of all patients fail to take them correctly. Medical students need to be convinced about rational drug use, which is possible only under medical supervision. Inappropriate drug use can be reduced by imparting a good knowledge of the pharmacology of drugs and the provision of education and information on making a diagnosis and prescribing medication rationally after making a diagnosis. Some of the problems of self-medication that need to be made clear to the students include issues such as compromise of professional objectivity, poor or no clinical examination, over-treatment for quick relief and lack of clinical diagnosis and documentation. Many medical students are not aware of the ethical issues in treating oneself, so a huge responsibility lies on the teachers to provide education on safe self-medication and the value of consulting a doctor and taking medications under the supervision of a doctor.

Conclusion

After studying the pharmacology of drugs, second year medical students have become more careful to

consider indications, doses and adverse effects of the drugs they take, with a majority of students restricting self-medication to treatment of minor ailments with over the counter drugs.

Providing education on safe self-medication for minor ailments, increasing awareness of the benefits of taking medication under the supervision of a doctor, are proposed strategies for maximising autonomy and minimising the risk of inappropriate medication use by medical students.

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. Hughes CM, McElnay JC, Fleming GF. Benefits and risks of self medication. *Drug Saf*. 2001;24:1027-37.
3. World Health Organization: Report of the WHO Expert Committee on National Drug Policies 1995. <http://www.who.int/medicines/library/dap/who-dap-95-9/who-dap-95.9.shtml>.
4. 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.
5. Badiger S, Kundapur R, Jain A, Kumar A, Pattanshetty S, Thakolkaran N *et al*. Self-medication patterns among medical students in South India. *AMJ* 2012, 5, 4, 217-220.
6. Geissler PW, Nokes K, Prince RJ, Achieng RO, Aagaard-Hansen J, Ouma JH: Children and medicines: self-treatment of common illnesses among Luo school children in western Kenya. *Soc Sci Med* 2000;50:1771-1783.
7. Kiyangi KS, Lauwo JAK: Drugs in home: danger and waste. *World Health Forum* 1993;14:381-4.
8. Clavinjo HA: Self-medication during pregnancy. *World Health Forum* 1995;16:403-404.
9. Montastruc JL, Bagheri H, Geraud T, Lapeyre MM: Pharmacovigilance of self-medication. *Therapie* 1997;52:105-10.
10. Hebeeb GE, Gearhart JG: Common patient symptoms: patterns of self-treatment and prevention. *J Miss State Med Assoc* 1993;34:179-81.
11. 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;11:409-414.
12. Shankar PR, Partha P, Shenoy N: Self-medication and non-doctor prescription practices in Pokhara valley, Western Nepal: a questionnaire-based study. *BMC Family Practice* 2002;3:17.
13. Pandya RN, Jhaveri KS, Vyas FI, Patel VJ. Prevalence, pattern and perceptions of self-medication in medical students. *Int J Basic Clin Pharmacol*. 2013;2(3):275-80.