Study of Knowledge and Practices of Self-medication among Medical Students at Jammu

Rashmi Kumari, M.D., Kiran, M.D., Dinesh Kumar, M.D., Rakesh Bahl, M.D., Rajiv Gupta, M.D.

Department of Community Medicine, Government Medical College, Jammu

ABSTRACT

BACKGROUND: Self-medication is the treatment of common health problems with medicines that are taken on patient's own initiative or on advice of a pharmacist, without professional supervision. It is now becoming a common practice in many countries mainly due to lack of access to health care, easy availability of OTC drugs in market and poor drug regulatory practices.

OBJECTIVE: To assess the knowledge and practices of self-medication among medical students.

METHODS: A cross-sectional study was carried out among the students of GMC Jammu in August 2011, after taking approval from IEC. A 16-item, open-ended, pretested questionnaire was administered to students. Data was then analysed using SPSS version 12 and results expressed as counts and percentages.

RESULTS: A total of 282 students participated in the study, among which 96 were from 1st semester, 88 from 3rd and 98 from 6th semester. Knowledge of self-medication was adequate in 68% of 1st semester, 81% of 3rd and 87% of 6th semester students. 85% of respondents from 1st semester, 79% from 3rd and 78% from 6th practised self-medication.

CONCLUSION: Since seniors had better knowledge of drugs, self medication was practised less as compared to juniors. There is a need to review educational programs especially clinical pharmacology, focusing on rational use of drugs. JMS 2012;15(2):141-44

Key words: Self-medication, medical students, OTC drugs

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.

Self-medication is now increasingly being considered as a component of self-care.² Studies done on self-medication reveal that it is fairly common practice, especially in economically deprived countries. WHO has also pointed out that responsible self-medication can help prevent and treat ailments that don't require medical consultation and provide a cheaper alternative for treating common illnesses.³ However, it is also recognised that responsible self-medication must be accompanied by appropriate health information.³

In several studies, it has been found that inappropriate self-medication results in wastage of resources, increased resistance to pathogens and generally entails serious health hazards such as adverse drug reactions, prolonged suffering and drug dependence. On the other hand, if done appropriately, self-medication can readily relieve acute medical

Correspondence:

Dr. Rashmi Kumari
Plot No. 116, Bakshi Nagar, Jammu 180001, J&K
E-mail: rashmi.kailu@yahoo.com

problems, can save time spent in waiting to see a doctor and may be economical also.⁵

Though several studies have been carried out among different population settings regarding self-medication, there is paucity of literature among medical students. Since they are future doctors and health prescribers of community, it is very much important to know their knowledge level regarding different aspects of self-medication. Hence, this study was planned with the objective to assess the knowledge and practice pattern of self-medication in medical students and to study whether their knowledge about drugs and diseases resulted in any change in their practice level.

Methods

This study was a questionnaire based study approved by Institutional Ethical Committee. A self-developed, pre-validated questionnaire consisting of both open-ended and close-ended items was used. The study population comprised of medical students of Govt. Medical College Jammu. The students belonged to 3 different semesters i.e., first, third and sixth semesters. A brief explanation to students was given regarding the nature and purpose of study and how to complete the questionnaire.

Any event of use of OTC or Prescription medicines without consulting a doctor was considered as Self-medication. The pattern of drug use over period of six months preceding the study was recorded. Identity of students was kept confidential. The questionnaire which was incompletely filled was excluded from the study. The information from returned questionnaire was analysed using SPSS version 12. The results were expressed as counts and percentages. Some of the questions had multiple options to choose from, therefore the sum total of %ages is not always 100%.

Results

A total of 290 students participated in study, out of which 8 were excluded as per the exclusion criteria i.e. incomplete information. Remaining 282 students questionnaire were considered for evaluation. Distribution of students according to different semesters was: 96 from 1st, 88 from 3rd and 98 from 6th semester.

Mean age of the students was 20.13 ± 2.32 years. Out of 282 students, 154 were females and 128 males.

Table 1 shows the awareness of respondents about various aspects of self-medication. Awareness about OTC medicines, Generic drugs and Branded medicines was more among senior students. (Table 1)

Table 2 shows the various reasons cited by respondents in favour of self-medication. Major advantages reported were almost similar from all the semester students such as time-saving, no need to visit doctor for minor illnesses, easy availability, and economical. (Table 2)

Table 3 depicts the various reasons for not favouring

TABLE 1. Awareness about various aspects of Self-medication

Awareness	1st Semester	3rd Semester	6th Semester
Self-medication	65(68%)	72(81%)	85(87%)
OTC medicines	25(26%)	34(38%)	66(67%)
Generic medicines	45(47%)	48(54%)	72(73%)
Branded medicines	49(51%)	65(73%)	74(76%)
ADRs of medicines	66(69%)	69(78%)	83(85%)

TABLE 2. Merits of Self-medication stated by respondents

Merits	1st Semester	3rd Semester	6th Semester
Time-saving	52(54%)	40(45.4%)	56(57.1%)
No need to visit doctor for minor illnesses	42(44%)	39(44.3%)	33(33.6%)
Easy availability	31(32%)	30(34%)	23(23.5%)
Economical	22(23%)	18(20.4%)	23(23.5%)
Feeling of self-confidence	3(3.5%)	5(5.6%)	8(8.2%)
Crowd avoidance	13(14%)	9(10.2%)	10(10.2%)
Unavailability of doctor	9(9.3%)	6(6.8%)	4(4.1%)
Don't know	4(4.2%)	5(5.6%)	3(3.1%)

self-medication, amongst which the common were lack of knowledge about dose, adverse drug reactions, drug addiction and drug resistance. (Table 3)

TABLE 3. Demerits of Self-medication

Demerits	1st Semester	3rd Semester	6th Semester
ADRs	50(52.1%)	54(61.3%)	64(65.3%)
Lack of knowledge about dose	39(40.6%)	42(47.7%)	23(23.5%)
Wrong medication can be fatal	21(21.8%)	19(21.5%)	13(13.3%)
Disease aggravation	12(12.5%)	7(7.9%)	4(4.1%)
Drug addiction	8(8.3%)	5(5.6%)	7(7.2%)
Drug resistance	4(4.1%)	5(5.6%)	6(6.1%)
Drug interactions	2(2.1%)	3(3.4%)	2(2.04%)
Drug allergy	2(2.1%)	2(2.2%)	6(6.1%)

As far as practice part of Self-medication was concerned, 85% students from 1st semester, 79% from 3rd and 78% from 6th semester practised self-medication in last 6 months. Most common system practised by all the students was allopathic, followed by Ayurvedic, Homeopathic and others as shown in Figure 1.

Figure 2 shows various drugs employed in self-medication. Most common group of drugs used was analgesics, followed by antibiotics. A small proportion of students used vitamins and minerals also.

Figure 3 shows the various symptoms for which self-medication was taken. Headache, fever, cough, cold & sore throat were the common indications.

83.12% of the respondents reported that their source of information regarding various drugs was Doctor's prescriptions provided during their prior illnesses. Other sources of information were family members, friends, advertisements etc., as depicted in Table 4.

FIGURE 1. Medical System Practised

FIGURE 2. Drugs used in Self-medication

FIGURE 3. Symptoms for which Self-medication taken

Discussion

Self-medication is treatment of common health problems with medicines without medical supervision. Various studies have reported the practice of self-medication among medical as well as non-medical students. The present study was conducted among medical students to assess their knowledge level and practices pattern regarding self-medication. This type of study using self-administered questionnaire, is largely dependent upon the information

TABLE 4: Source of information about drugs used in Self-medication

Source	Respondents
Doctors(from prior illnesses)	83.12%
Family members	43.2%
Friends	40.78%
Advertisements	21.2%
Pharmacists	19.18%
Books	9.5%

given by respondents. Although students were encouraged to fill the questionnaire independently, still mutual influence between the pupils and recall bias could not be ruled out completely.

A total of 282 students from different semesters participated in the study. 68% of students from 1st semester, 81% from 3rd and 87% from 6th semester had adequate knowledge about self-medication. Surprisingly, even the first semester students were well aware about the importance of completing the entire course of therapy but their knowledge about the medicines for which complete course is essential was incomplete. Similar results have been reported by a study conducted by Sontakke SD, *et al*⁶ who compared the knowledge level of self-medication among first year and third year medical students.

Reasons given in favour of self-medication were comparable in all the groups and main reasons were time-saving, convenience, economical, no need to visit doctor for minor illnesses. Results were almost similar to those reported in other studies.^{6,7,8} Demerits of self-medication stated by students were comparable with those reported in various other studies.^{6,7,8}

As far as practice of self-medication was concerned, 81% of the respondents practised some form of self-medication in preceding six months. In previous studies, prevalence of self-medication varied widely ranging from 26.2%⁶ to as high as 92%.¹⁰ Most common system practised was Allopathic system, followed by Ayurvedic, Homeopathic and others. Reasons given in favour of Ayurvedic medicine were that herbal medicines are free of side-effects and elderly persons in the household possessed good knowledge and experience with these medications.^{11,12}

Drugs most commonly used by all the groups were Analgesics and Antipyretics followed by Antibiotics, Antacids etc. Similar results have been observed in number of other studies.^{13,14} Antimicrobials were used to very small extent in the present study. Lesser use of antimicrobials in senior medical students has been reported by James H¹⁵ in his study and that senior medical students perceive drug resistance as a possible risk of self-medication and hence use them less often.

To conclude with the present study, senior 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. As responsible self-medication is now increasingly being considered as a component of self-care, there is a need for review of educational programs especially teaching of clinical pharmacology and rational and judicious use of medicines. At policy making level, there is an urgent need to legislate and reinforce laws restricting the use of antibiotics, antihistaminic and others. There is a need for robust public enlightenment campaigns to educate general public of disadvantages and possible complications which can arise due to self-medication.

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, McInay JC, Fleming GF. Benefits and risks of self-medication. *Drug Saf* 2001;24:1027-37.
3. World Health Organisation. Report of 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. Kafle KK, Gartulla RP. Self-medication and its impact on essential drugs schemes in Nepal: a socio-cultural research project 1993.
5. Kiyangi KS, Lauwo JAK. Drugs in home: danger and waste. *World Health Forum* 1993;14:38.
6. Sontakke SD, Bajait CS. Comparative study of evaluation of self-medication practices in first and third year medical students. *International Journal of Biological & Medical Research* 2011;2:561-64.
7. Henry J, Handu SS, Khalid AJ, et al. Evaluation of Knowledge, Attitude and Practice of Self-medication among first year medical students. *Med Princ Pract* 2006; 15:270-75.
8. Olayemi OJ, Olayinka BO, Musa AI. Evaluation of antibiotic self-medication pattern amongst undergraduate students of AhmaduBello University. *Research Journal of Applied Sciences Engineering and Technology* 2010; 2:35-38.
9. Martins AP, Miranda AC, Mendes Z, et al. Self-medication in a Portuguese urban population: a prevalence study. *Pharmacoepidemiol Drug Saf* 2002;11: 409-14.
10. Abahussain E, Matowe LK, Nicholls PJ. Self-reported medication use among adolescents in Kuwait. *Med Princ Pract* 2005;14:161-64.
11. Geissler PW, Nokes K, Prince RJ, et al. Children and medicines: self-treatment of common illnesses among Luo school children in Western Kenya. *Soc Sci Med* 2000;50:1771-83.
12. Osaka R, Nanakorn S. Health care of villagers in North east Thailand - a health diary study. *Kurume Med J* 1996; 43:49-54.
13. 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.
14. Zafar SN, Waqar S, Zubairi AJ, et al. Self-medication amongst university students of Karachi: prevalence, knowledge and attitudes. *J Pak Med Assoc* 2008; 58:214-17.
15. James H, Handu SS, Khaja KA, et al. Influence of medical training on self-medication by students. *Int J Clin Pharmacol Ther* 2008;46:23-29.