



A STUDY ON IMPACT OF PHARMACOLOGY TEACHING ON KNOWLEDGE, ATTITUDE AND PRACTICE OF SELF MEDICATION AMONG MEDICAL STUDENTS

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ABSTRACT

This study was undertaken to determine the knowledge, attitude and practice of self-medication among medical students and to compare impact of pharmacology teaching among them. This study was questionnaire based exploratory study. A self-developed questionnaire consisting of both open-ended and close-ended questions were prepared and given to fill up to students of first and second year medical students. The results expressed as counts and percentages. Among first year students 61 and 65, among second year students 60 and 54 were male and female respectively. Among first year students 34 (26.98%) had knowledge of generic name, 65 (51.88%) had knowledge of side effects and 116 (92.08%) had knowledge of expiry date. Figure of knowledge among second year students were 101

(88.59%), 104 (91.22%) and 110 (96.49%) respectively. Attitude wise 81 (64.28%) of first year and 99 (86.84%) of second year students had felt the necessity of medical knowledge towards self-medication. Practice wise 94 (74.60%) of first year and 107 (93.85%) of second year students had taken self-medication in last 6 months. This study shows that second year students tend to have greater knowledge of appropriate self-medication, have a more confident as well as concerned attitude towards self-medication, and tend to practice self-medication more often and appropriately.

KEY-WORDS: Self-Medication; Medical Students, Pharmacology Teaching.

INTRODUCTION

Self-medication is defined as obtaining and consuming drugs without the advice of a physician either for diagnosis, prescription or surveillance of treatment. ^[1] Medicines for self-medication are often called 'nonprescription' 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]

Use of self-medication is highly prevalent in both urban and rural community varying from 32.5% to 81.5%. ^[3-5] Self-medication is also reported to be quite popular among Indian medical students. ^[6] In several studies it has been found that inappropriate self-medication results in wastage of resources, increases resistance of pathogens and generally entails serious health hazards such as adverse drug reactions, prolonged suffering and drug dependence. ^[7, 8] On the other hand, if done appropriately, self-medication can readily relieve acute medical problems, can save the time spent in waiting to see a doctor, may be economical and can even save lives in acute conditions. It is now accepted that self-care in the form of responsible self-medication can be beneficial for patients, healthcare providers, the pharmaceutical industry and governments. ^[2]

However there is a paucity of studies of the prevalence and pattern of self-medication among medical students from India. This study was planned to find out the prevalence and pattern of self-medication in undergraduate medical students and their perceptions about self-medication. This questionnaire based study was undertaken to determine the knowledge, attitude and practice of self-medication among first-year and second year medical students of the Government medical college, Rajkot and to compare impact of pharmacology teaching among them.

MATERIALS AND METHODS

The study was carried out after approval from the Institutional Ethics Committee. This was a survey-based study in which data were collected through structured, validated 11 questions based questionnaire which was filled up by students after explaining about the aim of study and giving assurance about confidentiality of all information. It was undertaken in June 2015. Study population consisted of medical students of Government Medical College, Rajkot. All

medical students of first and second year who were willing to participate in the study were enrolled.

Group 1: 1st year MBBS students (2nd semester)

Group 2: 2nd year MBBS students (5th semester)

2nd semester students are not exposed to the knowledge of drugs or disease while at the end of 5th semester Pharmacology syllabus is complete as per the Indian medical curriculum. Total 45 minutes were given to students to complete the questionnaire.

The survey was descriptive and data were summarized as frequency and percentages. Some of the questions had multiple options to choose from; therefore the sum total of percentages is not always 100%.

RESULTS

In 1st year (n=126) 61 were male and 65 were female compared to 60 and 54 respectively in 2nd year. (n=114)

Knowledge

- 34 (26.98%) student of 1st year and 101 (88.59%) students of the 2nd year had knowledge of generic name.
- 116 (92.08%) students of 1st year and 110 (96.49%) students of 2nd year has knowledge of expiry date.
- 65 students of 1st year (51.88%) and 104 students of 2nd year (91.22%) had knowledge of side effects of medicines which they had taken.

Attitude

- 6 students (4.76%) of 1st year and 3 students (2.63%) of 2nd year had attitude that medicine which had crossed expiry date can be taken.
- 63 students (50%) of 1st year and 45 students of 2nd year (39.47%) believed that it is good practice to self-medication.
- 81 students (64.28%) of 1st year and 99 (86.84%) students of 2nd year felt that medical education is necessary for better administration of self-medication. (medical education helps in self-medication)

Practice

- Out of 126 responder of 1st year student, 94 (74.60%) had taken self-medication in last 6 months, in which 51 were male and 43 were female.
- Out of 114 responder of 2nd year student, 107 (93.85%) had taken self-medication in last 6 months, in which 56 were male and 51 were female.
- All 1st year medical student who had taken self-medication were not exposed to Pharmacology teaching and 107 students of the 2nd year had taken self-medication were exposed to Pharmacology teaching.
- The important reasons for which self-medication had taken is described in table-1. The condition for which self-medication had been taken were elaborated in table-2.

- **Table-1: Reasons for practice of self-medication**

Serial No.	Reasons for practice of self-medication	1 st year (%)	2 nd year (%)
1	Minor ailments	55 (43.65)	78 (68.42)
2	Previous experience	72 (57.14)	56 (49.12)
3	Quick relief	42 (33.33)	37 (32.45)
4	To save time	10 (7.93)	15 (13.15)
5	Ease and convenience	8 (6.34)	17 (14.91)
6	Learning opportunity	6 (4.76)	8 (7.01)
7	Crowd avoidance	0	1 (0.87)

Table-2: Conditions for which self-medication practiced

Serial No.	Conditions	1 st year (%)	2 nd year (%)
1	Cough, cold, sore throat	66 (52.38)	77 (67.54)
2	Headache	52 (41.26)	77 (67.54)
3	Skin symptoms	14 (11.11)	13 (11.40)
4	Stomachache	13 (10.31)	10 (8.77)
5	Bodyache	6 (4.76)	19 (16.67)
6	Fever	61 (48.41)	93 (81.57)
7	Menstrual symptoms	17 (13.49)	4 (3.50)
8	Diarrhoea	15 (11.90)	26 (22.80)
9	Vomiting	10 (7.93)	31 (27.19)
10	Allergy	7 (5.56)	9 (7.89)
11	Ear symptoms	0	1 (0.87)
12	Eye symptoms	0	1 (0.87)
13	Problems with sleeping	0	1 (0.87)

Table-3: Sources of procurement of medicines

Sr.no.	Sources of medicine for self-medication	1 st year (%)	2 nd year (%)
1	Purchase from pharmacy store	96 (76.19)	101 (88.59)
2	Family members/friends	34 (26.99)	39 (34.21)
3	Remaining medicines of prior illness	2 (1.58)	10 (8.77)
4	Free physician sample	3 (2.38)	4 (3.50)

Among the sources of procuring the medicines for self-medication, most common in 1st year students was purchase from pharmacy store (76.19%) which was also most common for 2nd year students (88.59%). Second most common source for both year students were family members/friends, in 1st year students it was 26.99% and 34.21% in 2nd year students. Others minor sources are summarized in table 3.

Table-4: Sources of information for self-medication

Serial No.	Source of information	1 st year (%)	2 nd year (%)
1	Friends/Family members	67 (53.17)	46 (40.35)
2	Senior students	54 (42.45)	32 (28.07)
3	Internet	23 (18.25)	18 (15.78)
4	Books	3 (2.38)	58 (50.87)
5	Media	5 (3.96)	7 (6.14)

In our study, we found that most common source of information for self-medication in 1st year students was family and friends (53.17%) while in 2nd year students most common source was books (50.87%). Other sources are detailed in Table-4.

DISCUSSION

The study population in this survey consisted of 1st and 2nd year medical students. As per our result, 2nd year medical students had better knowledge of generic name of drugs, expiry date and side effect of drugs compared to 1st year medical students who were not exposed to pharmacological teaching in their 1st semester.

Both years medical student felt that medical education is necessary for better administration of self-medication. This suggests that public health education and increased awareness are important for making self-medication safe and useful. This has also been noted by the WHO report 1995 and by Hughes (2001).^[2, 9] This confirms that increasing medical knowledge affects prescribing behavior of medical students with James, 2006.^[10]

In 1st year medical students 74.60% had practiced self-medication out of which 54.25% were male and 45.75% were female. In 2nd year medical student 93.85% had practiced self-

medication out of which 52.33% were male and 47.66% were female. The prevalence of self-medication is difficult to compare between different studies as there are different socio-economic profiles and demographic characteristics and also change in methodologies of self-medication study.

We found that higher number of 2nd year students (93.82%) was practiced self-medication than 1st year students (74.60%). The study from India by Sontakke (2011) stated that 77.98% respondents from first year and 74.71% from second year practiced self-medication with no statistically significant difference between two groups.^[11] Another study has reported significantly greater prevalence of self-medication in 2nd year medical students (96.20%) compared to 1st year (84.81%).^[12] We found that the similar proportion of males and females practiced self-medication, there were gender-based differences in the practice of self-medication. Second year students practiced self-medication more frequently than first year students mainly because they have knowledge about drugs and also of diseases as they were exposed to medical teaching.

Most common reason for not consulting a doctor was previous expertise in 1st year students and minor ailments in 2nd year students. 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.

The most common condition for which self-medication practiced were cough, cold sore throat followed by fever in 1st year and fever followed by cough, cold, and sore throat in 2nd year. Compared to James H (2008) study conducted in Arabian Gulf University at Bahrain commonest indications for self-medication were cough, cold and sore throat (63.2% in Year 2) and headache (78.3% in Year 4), which are also comparable.^[13] Similar study conducted by Sontakke, 2011 stated that fever and pain were most common condition for which self-medication was practiced by medical students.^[11]

CONCLUSION

This cross-sectional study shows that 2nd year medical students tend to have greater knowledge of appropriate self-medication, have a more confident as well as concerned attitude towards self-medication, and tend to practice self-medication more often and appropriately.

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