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Original Research Article

A study of pattern of self medication practices among medical students in government medical college of Madhya Pradesh, India

Shashi Marko*, Mahesh Chandra Alawa

Department of Pharmacology, Bundelkhand Medical College, Sagar, Madhya Pradesh, India

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***Correspondence to:**
Dr. Shashi Marko,
Email: drshashi0308@gmail.com

ABSTRACT

Background: Self medication practice has tremendously increased in the society that leads to unwanted consequences such as drug resistance and adverse drug reactions. The objective of this study was to evaluate the self-medication practices among the second year medical students of Government Medical College, Sagar.
Methods: It was a questionnaire based descriptive study. A prevalidated questionnaire were given to the second year medical students. Data were analyzed using excel sheet and result were expressed as counts and percentages.
Results: Males outnumber females in this study, 40 versus 35. The most common indication for which self medication was opted was cold and cough. The most common source of information used by the respondent were text book (61.29%) and pharmacist (45.16%). The attitude was positive towards self medication and favored self-medication saying that it was acceptable. Drug groups commonly used for self-medication included analgesics 77.41% and antipyuretics 50% and anta-acids 48.38%. Among reasons for seeking self-medication, 79.03% felt that their illness was minor while 64.51% preferred as it is due to previous experience.
Conclusions: This study shows that self-medication is widely practiced among second year medical students of this institution. There is intense need to make them aware about the pros and cons of self-medication in order to ensure safe usage of drugs.

Keywords: Attitude, Medical students, Practices, Self-medication

INTRODUCTION

Self medication is the use of drugs without a Doctor's advice. Self medication is the treatment of common health problems with medicine 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.[1] Globally the prevalence of self medication practice is inconsistent ranging from 32.5 to 81.5%.[2-4]

There are many reasons for the increased likelihood of self –medication among medical student.[5] 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.

The study of self-medication practice among medical undergraduates is very important as they are a segment of the population that is highly educated and with access to

information regarding their health. Looking at this practice among medical undergraduates is also very vital as they represent the future generation of drug prescribers and health educationalist.[6] Prevalence of self medication was found to vary in medical student of different countries in earlier studies.[5,7-10]

METHODS

A descriptive cross sectional study design was used in the study. The population of the present study included students of Bundelkhand medical college studying in 2and year MBBS. Semi structured self administered questionnaire was developed to collect the data. The research instrument consists of four parts: Part 1: Question related to demographic information. Part 2: Question related to knowledge of self medication. Part 3: Question related to attitude towards self medication. Part 4: Question related to practice of self medication. The content validity of the instrument was maintained and the reliability was calculated (r=0.863). administrative and ethical approval was taken from institutional ethical committee. Written consent was obtained from each respondent. In the study, researcher themselves collected data after distributing semi-structured questionnaire to the participant. The collected data was checked, reviewed and organized daily for its completeness and consistency. The data was entered in statistical package for social science (SPSS) version 20 and then analyzed and interpreted in terms of prospective statistics (frequency, percentage, mean and median etc). The finding of the study are presented in tables.

RESULTS

The total number of second MBBS students in this batch is 83. The data was collected from 75 students. The collected data was analyzed by using statistics in terms of frequency and presented in different tables.

Table 1: Respondents socio-demographic characteristics (n=75).

Variables	Frequency	Percentage
Age(years)		
>21	51	68%
22-24	24	32%
Mean age and S.D (20.56+2.33) years		
Sex		
Male	40	53.33%
Female	35	46.66%

Table 1 shows that out of 75 respondents. Concerning age, 51 (68%) were in the age group of below 21 years, 24 (32%) were in age group of 22-24 years. The mean age was of 20.56 and SD 2.33. Regarding sex of respondents, 40 (53.33%) were male and 35 (46.66%) were female.

Table 2: Prevalence of self -medication (n=75).

Self medication taken in last one year	Frequency	Percentage
Yes	62	82.66%
No	13	17.33%

Table 2 shows prevalence of self medication among medical students, 62 (82.66%) take self medication and 13 (17.33%) do not take self medication.

Table 3: Respondent's source of information (n=62).

Sources of information**	Frequency	Percentage
Textbook	38	61.29%
Pharmacist	28	45.16%
Senior	16	25.80%
Advertisement	08	12.9%

**Multiple responses

Out of 62 respondent, 38(61.29%) use source of information as textbook,28(45.16%) use source of information as pharmacist, 16(25.80%) use source of information as senior, and 8(12.9%) use advertisements.

Table 4: Immediate response when students fall sick (n=75).

Immediate response	Frequency	Percentage
Consult doctor	29	38.6%
Self medication	22	29.3%
Ask suggestion	21	28%
Wait till symptoms subside	9	10.6%

Table 4 indicates that: Immediate response when students fall sick. 29 (38.6%) consult a doctor followed by 22 (29.3%) does self medication, 21 (28%) ask suggestion and 9 (12%) wait till symptom subside.

Table 5: Indication for self medication (n=62).

Indications**	Frequency	Percentage
Cold and cough	51	82.25%
Pain	49	79%
Fever	46	74.15%
Diarrhea	28	45.16%
Dysmenorrhea	28	45.16%
Nausea and vomiting	20	32.25%

**multiple responses

Table 5 indicates that out of 62 respondents who practiced self-medication, 51 (82.25%) use medication for cold and cough, 49 (79%) for pain which included head body and tooth. Other conditions included fever 46 (74.15%), diarrhea 28 (45.16%), dysmenorrhea 28 (45.16%) and nausea and vomiting 20 (32.25%).

Table 6: Drugs used for self-medication (n=62).

Drugs used for self-medication**	Frequency	Percentage
Analgesics	48	77.41%
Antipyretics	31	50%
Anta-acid	30	48.38%
Antispasmodic	28	45.16%
Antibiotics	26	41.93%
Vitamins	23	37.09%
Anti-allergies	21	33.87%
Herbal	16	30.6%

**multiple responses

Drugs or drug groups commonly used for self-medication among 62 respondents. The most common drugs used are analgesic 48 (77.41%), antipyretics 31 (50%), anta-acids 30 (48.38%), antispasmodic 28 (45.16%) followed by antibiotics 26 (41.93%), vitamins 23 (37.09%), anti-allergies 21 (33.87%), herbals 16 (30.6%).

Table 7: Reasons in favor of self-medication (n=62).

Reason in favor of self-medication**	Frequency	Percentage
Minor illness	49	79.03%
Prior experience	40	64.51%
Emergency use	33	53.22%
Quick relief	19	30.64%
Lack of time to consult Doctor	22	35.48%
Cost effectiveness	12	19.35%

**multiple responses

Table 7 shows that among the reasons given for self medication. Majority 49(79.03%) respondents felt that they had minor illness of treating a similar illness followed by prior experience 40(64.51%), for emergency use 33(53.22%), for quick relief 19(30.64%) and because of lack of time to consult doctor 22(35.48%).12(19.35%) respondents reported that cost effectiveness was their minor reason in favor of self-medication.

Table 8: Medication usage pattern (n=62).

Medication usage pattern**	Frequency	Percentage
Practice self medication for yourself	35	56.45%
Practice self-medication for both	25	40.32%
Practice self-medication for someone else	5	8.06%
Practice self-medication for family	4	6.45%

**Multiple responses

Table 8 shows that medication usage pattern. Out of 63 respondents 35 (56.45%) use self-medication for themselves. 25 (40.32) practice self-medication for themselves and family member as well and 5 (8.06%) use for someone else (friends, neighbours) and 4 (6.45%) practiced self medication for family member only.

Table 9: Reason against self medication (n=13).

Reason against self medication	Frequency	Percentage
Risk of adverse drug reaction	6	46.15%
Risk of using wrong diagnosis	7	53.84%
Risk of missing actual diagnosis	4	30.76%
Risk of drug dependence	5	38.46%

Table 9 indicate that reason against self-medication among 13 respondents who did not practice self-medication in one-year period. 6 (46.15%) respondent was afraid of adverse drug reaction. 7 (53.84%), 4 (30.76%), and 5 (38.46%) are afraid of risk of using wrong diagnosis, missing actual diagnosis and drug dependence respectively.

Table 10: Respondents view toward self-medication (n=62).

Statements	Responses	
	Yes	No
Do you follow doctor's prescription?	58 (93.54%)	4 (6.45%)
Do you discontinue the prescribed medicines by yourself when symptoms are not relieved?	25 (40.32%)	37 (59.67%)
Do you reuse the prescription when experienced with similar symptoms?	22 (35.48%)	40 (64.51%)
Do you increase the drug dose on yourself when symptoms are not relieved?	5 (8.06%)	57 (91.93%)
Do you experience adverse reaction during self-medication?	19 (30.64%)	42 (67.74%)
Are you habitual to any drug?	8 (12.90%)	54 (87.09%)
Do you give your prescription to someone who is having similar symptoms as yours before?	15 (24.19%)	47 (75.80%)
Do you combine herbal medicine and western medicine?	10 (16.12%)	52 (83.87%)

Table 10 shows among 62 respondents, 93.54% follow doctor's prescription, 59.67% do not discontinue the prescribed medicine by themselves when symptoms are

not relieved. The respondents who do not reuse the prescription are 64.51% and who do not increase the drug dose when symptoms are not relieved are 91.93%. 67.74% do not experience adverse reactions during self-medication and 87% were not habitual to some drug. The respondents who do not give their prescription to other who have similar symptoms are 75.80%, 83.87% do not combine herbal medicine and western medicine.

DISCUSSION

Concerning the demographic characteristics, the respondents were of age (20.56±2.33) years and were medical second year students. Regarding the prevalence of self-medication, 82.66% had practiced self-medication, of which out of total 40 male, and 35 females. The most important reason for higher trend of self-medication might be the easy availability of all categories of medicines without prescription.

Concerning the source of information about self-medication, 61.29% respondents use textbook as a source and 45.16% respondent follow pharmacist. Whereas the finding ii a previous study conducted among medical student by Wajantri, Angadi and Masali which revealed 49.68% use pharmacist and 8.91% use textbook.[11] Majority 82.25% respondent use medication for cold and cough, 79% use for pain and 74.15% use for fever. This study is supported by the finding of Pandya R.N. where 52.5% respondent use medicine for cold and cough, 54% respondent for pain and 48.72% for fever.[12]

Regarding indications for self-medication; diarrhea, dysmenorrhea and vomiting were 45.16%, 45.16% and 32.25% respectively. This is in contrast to the study conducted by Pandya R.N. where 11.53% use for diarrhea, 12.82% use for dysmenorrheal and 7.69% use for vomiting.[12] The discrepancy in the finding might be due to higher number of female.

With respect to drugs that were commonly used more than three fourth students use analgesics 77.41%, antipyretics 50%, antibiotics 41.93% and antiallergies 33.87%. This is similar to the study conducted by James, Handu, Khaja and Otoom which shows analgesic 81.3%, antipyretics 43%, antibiotic 6% and antihistamine 13%.[5] The use of antibiotics is not as common as analgesic and antipyretics, it might be due to knowledge regarding antibiotics resistance and its adverse effects.

Concerning reason of self medication, major reason was minor illness 79.03% and the disease of prior experience 64.5%. This finding is in congruence with the finding of the study conducted by Banerjee and Bhadury.[13] Regarding reason against self-medication, 46.15% respondents were afraid of self-medication because of risk adverse drug reaction and 53.84% respondent were afraid due to risk of using wrong diagnosis. The result concerning the reuse of prescription 35.48% used the same prescription when experienced with similar symptoms. Likewise, regarding adverse reaction 30.64% experienced it during self-medication.

Thus this study demonstrates that self-medication is highly prevalent in medical students and it may be due to medical students are quite aware about the prescribing trend as well as are updated as they come to second MBBS. This study was limited to single setting. The study will be helpful to provide base line data about prevalence and practice of self medication. Though self-medication is difficult to eradicate, various measures can be taken to discourage such practices. Restriction of sale of drugs with potentially harmful effects can be implemented effectively with monitoring system between the significant stake holders. Steps can also be taken to the pharmacist not to provide OTC drugs.

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