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Original Research Article

Prevalence of self-medication and its pattern in medical students: a cross sectional study from Karnataka

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ABSTRACT

Background: Self-medication is becoming a common type of self-care behavior among the population of many countries. Obtaining and consuming drugs without the advice of physician either for diagnosis, prescription or surveillance is called self-medication. The objectives of the study were to study prevalence and existing pattern of self-medication and its determinants among the medical students.
Methods: A cross sectional descriptive study was conducted involving 200 medical students by systemic random sampling method using pretested semi-structured proforma. Analysis was done using SPSS and results were presented. Chi square and odds ratio (OR) was used as statistical tool.
Results: Out of 200 students, 66.5% students were from 22-24 years of age group (mean age 20.2±1.4 years, $p<0.05$). Prevalence of self-medication was 93%, of which 53.8% were girls and 46.2% were boys ($p>0.05$). Majority of the students (95.2%) were self-medicating with allopathy drugs. 51.6% responded that they were getting quick relief with self-medication. 82% were aware about the possible adverse effects (OR 0.5, $p>0.05$). Self-medication was practiced by 78% students for upper respiratory tract infection, headache (70%), fever (67.7%) and gastrointestinal upset (36%). Majority (83%) students consumed paracetamol tablet for various health related reasons followed by cough syrups (55.3%), nonsteroidal anti-inflammatory drugs (54.3%), antibiotics (23.1%).
Conclusions: Prevalence of self-medication was high in spite of awareness of possible adverse effects amongst students. Also, the knowledge of selection of appropriate drug for self-medication was observed to be poor.

Keywords: Self-medication, Medical students, Knowledge pattern and practices

INTRODUCTION

The use of medicines to treat self-recognized symptoms by an individual is globally on the rise. According to the WHO (World Health Organization), self-medication is defined as the "use of medicines by a patient on his own initiative or on the recommendation of a nonprofessional or a lay person instead of seeking advice from a health care provider".[1] Medicines for self-medication are often called 'nonprescription' or 'over the counter' and are available without a doctor's prescription through pharmacies, resubmitting old prescriptions to purchase medicines, sharing medicines with relatives or members of one's social circle or using leftover medicines stored at home.[2,3]

Since many years self-care has been a feature of health care. Self-medication is a double-edged sword in that it can treat minor disease conditions that do not require the expensive medical treatment and in turn reduce the pressure on medical services particularly in countries with inadequate health care system. It provides a less cost

alternative for people from lower socio-economic strata. But on the flip side, the inappropriate use of self-medication can have serious insinuations and causes wastage of resources, increases resistance of pathogens and generally causes serious health hazards such as adverse drug reactions, prolonged suffering and drug dependence.[4]

There is much public and professional hue and cry about the irrational use of drugs. The prevalence rates have been alarmingly high all over the world; up to 68% in European countries, whilst the scenario is much worse in the developing countries with the rates going as high as 92% in the adolescents of Kuwait. Our neighboring countries are not far behind and have a prevalence rate of 51% in Pakistan and 59% in Nepal. Very few studies regarding self-medication have been conducted in India which has confirmed high rates of prevalence of about 39% amongst the medical students. It is also alarming that the prevalence rates are on the rise despite unceasing efforts to limit this problem. It assumes a special significance among the medical students. The first-year medical students do not differ from the general population as they are not taught about the drug and disease condition in the first-year curriculum. But the students of the second and the subsequent years are well exposed to the details of disease condition and drugs.[4] hence, the prevalence and the pattern of drug usage varies with their knowledge of the drugs and diseases which increases with each passing year in the medical course.

Hence, the present study was designed to estimate the prevalence and evaluate the patterns of self-medication amongst the medical students of MR Medical college, Kalaburagi.

METHODS

A cross sectional descriptive study was conducted involving 200 medical students by systemic random sampling method using pretested semi-structured proforma. Analysis was done using SPSS and results were presented.

Study site

Study was carried out in MR Medical College, Kalaburagi, Karnataka.

Study population

A cross sectional descriptive study was conducted involving 200 medical students of MR Medical College by systemic random sampling method using pretested semi-structured proforma.

Data collection and analysis

The pre-tested, semi-structured questionnaire was prepared. Data was collected from 1st June to 15th December 2013. The study subjects were informed that the information collected would be anonymous; and participation would be totally voluntary. The age, sex, and year of study were noted. The information regarding the type of medication, illness for which the medication was used and the reason for not consulting a doctor was collected. The pattern of drug use over a two-month period preceding the study was noted. Their attitude toward self-medication and source of information for those who practiced self-medication were also recorded.

Inclusion criteria

First year to final year MBBS students who gave written consent were included.

Exclusion criteria

Medical students who didn't give written consent were excluded.

Statistical analysis

Data was collected with the help of prepared questionnaire after taking written consent from the students. Data was entered into Microsoft Excel Sheet and was analyzed with the help of SPSS 17.0 version. The results were presented using absolute figures and percentages. Chi square and odds ratio (OR) was used as statistical tool (p value less than 0.05 was considered as significant).

RESULTS

Table 1 depicts that out of 200 students, majority i.e. 53.5% was females and 46.5% were males. Majority of the students (45.5%) were studying in final year of MBBS. 66.5% students were from 22 to 24 years of age group. Mean age observed was 20.2 years with standard deviation of 1.4 years. Age of study population and self-medication was found to have a statistically significant association ($p<0.05$) whereas sex and self-medication association was not observed to be significant ($p>0.05$).

Table 2 shows prevalence of self-medication was 93% in our study, of which 53.8% were girls and 46.2% were boys. Majority (95.2%) of students were practicing Allopathy for self-medication. More than half (51.6%) responded that they were getting quick relief with self-medication and 43% told that their previous experience with self-medication for common ailments was a reason for current practice of the same. It is time saving also as responded by 32.8% of the students.

Most of the students (33.6%) received information from their classmates and/or senior colleagues about the medicines and 33.3% responded pharmacy as a source of information. 82% were aware about the possible adverse effects of self-medication which was not found statistically significant ($p>0.05$).

Table 1: Socio-demographic characteristics of study population (n=200).

Characteristic	Number	Percentage (%)
Age (years)[+]		
≤18	25	12.5
19-21	41	20.5
22-24	134	66.5
Sex*		
Male	93	46.5
Female	107	53.5
Year of study[£]		
First year	43	21.5
Second year	66	33.0
Final year	91	45.5

[+]X^2=28.47; df=2; p<0.001, *X^2=1.96; df=1; p>0.05, [£]X^2=16.32; df=2; p<0.05.

Table 2: Pattern of self-medication.

Characteristic	Number	Percentages (%)
Self-medication (n=200)		
Yes	186	93
No	14	7
Frequency of self-medication (n=186)		
Once in a week	14	7.5
Fortnight	17	9.2
Once in a month	24	12.9
Rarely	131	70.4
Drug type for self-medication		
Ayurveda	31	16.6
Allopathy	177	95.2
Homeopathy	27	14.5
Unani	5	2.7
Reason for self-medication		
Time saving	61	32.8
Quick relief among common illnesses	96	51.6
Economical	49	26.3
Previous experience	80	43.0
Mild illness	68	36.6
Long waiting time in the clinic	12	6.5
Source of information		
Pharmacy	62	33.3
Classmates or seniors	68	36.6
Consulted text books	48	25.7
Drugs left over from prior use	15	8.0
Media	13	6.9
Awareness about side effects of self-medication (n=200)[€]		
Yes	164	82.0
No	36	18.0

[€]Odds ratio=0.53 (0.24-1.1), p>0.05.

Figure 1 shows majority of the students (78%) practiced self-medication for upper respiratory tract infection followed by for headache (70%), fever (67.7%) and gastrointestinal upset (36%).

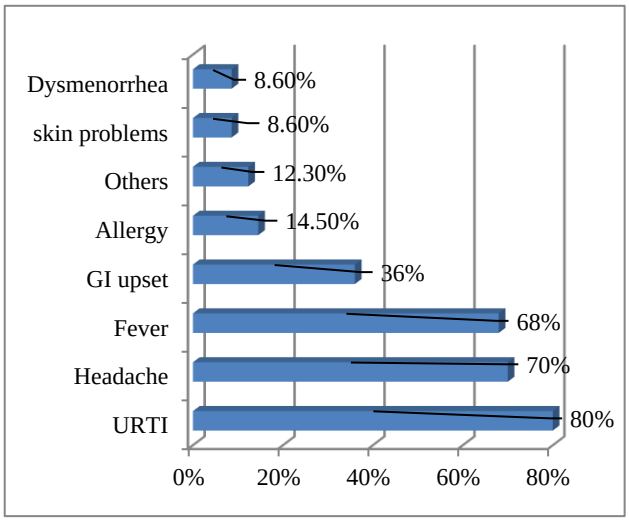

Figure 1: Distribution of study population according to common symptoms for self-medication (n=186).

Table 3: Distribution of study population according to commonly used drugs for self-medication (n=186).

Drug	Number	Percentages (%)
Paracetamol	156	78
NSAIDs	101	50.5
Cough syrups	103	51.5
Antibiotics	43	21.5
Multi-vitamins	39	19.5
Topical agents	22	11
Anti-ulcer agents	36	18
Anti-spasmodic	8	4
Anti-emetics	24	12
Laxatives	5	2.5
Anti-diarrheal	32	16
Others	9	4.5

In Table 3 it was observed that 83% students consumed paracetamol tablet for various health related reasons followed by cough syrups (55.3%), nonsteroidal anti-inflammatory drugs (NSAIDs) (54.3%), antibiotics (23.1%), multi vitamins (20.9%), anti-ulcer agents (19.35%), antidiarrhoeals (17.25%), anti-emetics (12.9%), topical agents (11.8%) and laxatives (2.6%).

DISCUSSION

In our study the prevalence of self-medication was 93%. Similar finding was observed in a study by Badiger et al i.e. 92% and as against 59% in a study done by Shankar et al.[5,6] It was observed in our study that paracetomol was the most common medication for various ailments in 83%

students followed by cough syrups (55.3%) and NSAIDs (54.3%). Drugs most commonly used by self-medication were analgesics and antipyretics. This has also been observed in most of the other studies on self-medication.[6-9]

In our study more than half (51.6%) responded that they were getting quick relief with self-medication and 43% told that their previous experience about self-medication for common ailments as a reason for current practice of the same. It is time saving also as responded by 32.8% of the students. Similar findings were found by Verma et al in a study conducted in North India.[10] Majority of the students (78%) practiced self-medication for Upper respiratory tract infection followed by for headache (70%), fever (67.7%) and gastrointestinal upset (36%). Similar finding was seen in a study done by Gutema et al and Badiger et al.[5,11] In the study it was noticed that the classes of drugs that were commonly used were antipyretics (71%), analgesics (65%), antihistamines (37%) and antibiotics (34%). This is similar to studies done earlier, which showed antipyretics (43%), analgesics (81%), antibiotics (6%) and antihistamines (13%) were commonly used.[12]

When asked about the sources of information most of them consulted their classmates and seniors for medication (36.6%). 33.3% took medication from pharmacy. This is similar to other studies, which showed medical students use their academic medical knowledge 50% of the time to self-medicate.[13]

CONCLUSION

Prevalence of self-medication was high in spite of awareness of possible adverse effects amongst students. Allopathic drugs were commonly used for self-medication. Also, the knowledge of selection of appropriate drug for self-medication was observed to be poor.

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