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Research Article

A descriptive study of prevalence, pattern and attitude of self-medication among second professional medical students in a tertiary care center

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ABSTRACT

Background: The implications of self-medication practices are increasingly recognized around the world as self-medication is a common practice worldwide and irrational use of drugs is a cause of concern more so among medical students as they are future medical practitioners. The objective was to determine the prevalence, attitude, and knowledge of self-medication among second professional medical students.
Methods: A cross-sectional study was conducted among medical students in February-March 2015. Data were collected through self-administered questionnaire and expressed as percentage frequency.
Results: Of the 138 students, only 122 filled and returned the questionnaire. The majority of the students self-medicated because of the illness being too trivial for consultation (63.1%) or had previous experience of same illness (63.1%), headache (77.8%), flu/cold and sore throat (58.1%), closely followed by fever (52.4%) were the main symptoms leading to self-medication. Commonly used medicines were analgesics (74.6%), headache relievers (71.3%), antibiotics (64%), and antipyretics (50.8%). A large proportion (42.6%) and 35% used every few months or 2-3 times per year, respectively.
Conclusion: Our study showed that self-medication is widely practiced among students, easy availability of medicine probably being the cause. Educating the students regarding advantages and disadvantages of self-medication is necessary to create awareness.

Keywords: Self-medication, Medical students, Questionnaire, Prevalence, Pattern, Education

INTRODUCTION

Self-medication can be defined as the use of non-prescription medicines by people on their own initiative.[1] This includes acquiring medicines without a prescription, 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] Self-medication is a common practice worldwide,[3-7] which increases the chances of illicit use of drugs[8] and drug dependency and most of all masking the sign and symptoms of underlying disease, hence are complicating the problem, creating drug resistance, and delaying diagnosis.[9-13] It is also alarming that the prevalence rates are on the rise despite efforts to limit this problem[14] leading to wastage of resources, serious health hazards such as adverse drug reaction and prolonged morbidity.[15]

Use of self-medication is highly prevalent in both urban and rural community varying from 32.5% to 81.5%.[16-18] Self-medication is influenced by many factors such as education, gender, age, socioeconomic status, and availability of drugs.[7,19,20] Other factors like self-care orientation and medication knowledge are important factors in determining the attitudes toward and the consumption of medications.[21] Self-medication is also reported to be quite popular among Indian medical students and it assumes a special significance among the medical them as they are the future medical practitioners and have a potential role in counseling the patients about the advantages and disadvantages of self-medication and are well exposed to the knowledge about diseases and drugs. A study conducted at All India Institute of Medical Sciences, New Delhi also observed that self-medication was considerably high among undergraduate

medical and paramedical students in India and it increased with medical knowledge.[22] However, there is paucity of studies of prevalence and pattern of self-medication among medical students from India. Hence, this questionnaire-based study was undertaken to find out the prevalence and pattern of self-medication and to identify reasons for self-medication practices in second professional medical students of Government Medical College, Srinagar.

METHODS

This cross-sectional descriptive study was conducted among second professional medical students of Government Medical College Srinagar in February-March 2015 after approval of the Institutional Ethical Committee and taking informed consent among students. Data were collected through structured, validated questionnaire which was adopted from various similar studies conducted previously[23-26] after removing any ambiguities in the questions before its implementation and explaining to students the aim of the study and giving assurance about confidentiality of all information. The questionnaire included questions pertaining to demographic details, factors leading to self-medication, symptoms leading to self-medication, the most common drugs used, and frequency of intake. Descriptive data were expressed as percentage frequency.

RESULTS

Out of a total of 138 enrolled students, 122 participated and successfully completed the questionnaire having a mean age of 20 years with 58 being males and 64 females. Majority of them were from Kashmir, i.e., 122, 7 from Jammu and only 3 from Ladakh province. The number of students from rural and urban was 80 and 42, respectively. The prevalence of self-medication was 100% (n=122) with a high frequency of 42.6% resorting to self-medication every few months, closely followed by 35.2%, 2-3 times per year. The majority of students self-medicated because of the illness being too trivial for consultation (63.1%) and previous experience of same illness (63.1%). The most common symptom leading to self-medication were headache (77.8%), flu/cold and sore throat (58.1%), and fever (52.4%). Analgesics were the most commonly used medication (74.6%) followed by antibiotics (64%) and antipyretics (50.8%). The percentage of factors leading to self-medication, symptoms, and most commonly used medication are given in Tables 1-4.

Table 1: Factors that lead to self-medication.

Gender: M/F		
Resident: Jammu/Kashmir/Ladakh (City/Village)		
Can choose more than one option using (✓)		% of students
1	Problem not serious	63.1
2	Previous experience of same illness	63.1
3	Lack of time	19.6
4	Advice from friend	15.5
5	Unavailability of transport	2.4
6	Cost of consultation	13.9
7	Urgency of problem	14.7
8	Drug advertisement/internet	18.8
9	Pharmacist prescription	31.1
10	Privacy	13.1

Table 2: Symptoms leading to self-medication.

Gender: M/F		
Resident: Jammu/Kashmir/Ladakh (City/Village)		
Can choose more than one option using (✓)		% of students
1	Headache	77.8
2	Generalized body pain	27.8
3	Toothache	22.1
4	Fever	52.4
5	Flu/cold and sore throat	58.1
6	Diarrhea/constipation	29.5
7	Allergy	27.8
8	Skin problems	16.4
9	Dyspepsia/GIT problem	28.6
10	Urinary tract conditions	1.6
11	Inability to sleep	13.1
12	Weight loss or gain purpose	4.0
13	Any other systemic problem for which used (please mention)	0.8

GIT: Gastrointestinal tumor

DISCUSSION

William Osler once commented, "The desire to take medicine is perhaps the greatest feature which distinguishes man from animals." This desire is perhaps the key factor for the practice of self-medication which can be defined as obtaining and consuming drugs without the advice of a physician either for diagnosis, prescription or surveillance of treatment[27] and as per the World Health organization, self-medication is the selection and use of medicines by individuals to treat self-recognized illness or symptoms and is considered an element of self-care[28] which has been a feature of health care for many years and people have always been keen to accept more personal responsibility for their health status.[29] The present study revealed that self-medication practices are very common among medical students and 100% of students had resorted to self-medication of one or other drug with varied frequency over 1-year. In studies conducted within India, the prevalence of self-medication among the medical students was shown to be ranging between 57.1% and 92%.[30-32] Among university students, it has been found to be up to 45% in Turkey,[25] 88% in Croatia[33], and 94% in Hong Kong.[28] The majority of the study participants followed an allopathic system of medicine, which is similar to the

Table 3: The most common drug used.

Gender: M/F		
Resident: Jammu/Kashmir/Ladakh (City/Village)		
Can choose more than one option using (✓)		% of students
1	Analgesics/pain killers	74.6
2	Headache relievers	71.3
3	Antipyretics	50.8
4	Decongestants	13.1
5	Anti-allergics	26.2
6	Anti-biotics	64.0
7	Drugs for indigestion	18.0
8	Laxatives/antidiarrheals	14.7
9	Anti-emetics	12.3
10	Antispasmodics	13.0
11	Psychotropics/anti-depressants	4.0
12	Sedatives	7.3
13	Herbal/homeopathic drugs	11.5
14	Tonics	18.8
15	Topical treatments	9.0
16	Any other drug used (please mention)	1.6

Table 4: Frequency of most common self-prescribed medication.

Gender: M/F		
Resident: Jammu/Kashmir/Ladakh (City/Village)		
Choose only one option using (✓)		% of students
1	Once in a year	5.7
2	2-3 times per year	35.0
3	Every few months	42.6
4	Every few weeks	14.0
5	All the time	4.0
Any other comment regarding self-medication		

observations made in other studies from India.[34,35] Use of drugs from alternative medicine, (herbal, ayurvedic) was also reported by 11.5% of students which could be due to continuation of self-medication practices in general which is in consistence with a study in China reporting use of Chinese herbal medicines by university students.[26]

In our study, the most common reason for self-medication reported by large number of participants was the illness being too trivial, i.e., 63.1% and previous experience of same illness (63.1%). Similar observations were reported in a few studies from India[30,32] and studies from Ethiopia,[36,37] Karachi,[38] and Malaysia[39] in which prior experience with the illness was observed to be the most common reason for self-medication. Studies made in Tamil Nadu,[40] Uttar Pradesh[34] made similar observations. However, in a study from Punjab,[35] the most common cause for self-medication was the quick relief of symptoms. The most common symptoms leading to self-medication were headache (77.8%), flu/cold and sore throat (58.1%), and fever (52.4%) in our study and the drugs most commonly used were analgesics (74.5%), headache relievers (71.3%), antibiotics (64%), and antipyretics (50.8%) which were consistent with studies conducted in Bahrain,[41] among 1st year medical students in which headache was the most common one (70.9%) followed by cough/common cold and fever. Headache was also most common morbidity among medical students seeking medication in study conducted in Karachi[42] and study conducted in Ethiopia[36] in which fever and headache were the most commonly reported symptoms for self-medication followed by cough and common cold. Sore throat was the most common medication for antibiotics use in the study from China[43] and Europe[44] while as in Turkey[25] and Greece,[45] common cold was the most common medication for antibiotic use. Analgesics were the most common (88.3%) followed by antipyretics and antibiotics in study conducted in Karachi and in Bahrain also.[41,42]

Although it is true that self-medication can help treat minor ailments like headache, after a tiring day for an otherwise healthy person that do not require medical consultation and hence reduce the pressure of medical services particularly in the underprivileged countries with limited healthcare resources,[33] self-medication may be justified only in safe hands that are aware of the nature of the drug and able to perceive the drug-related side effects e.g., there may be two major problems regarding self-medication with most commonly used drugs analgesics, first being possible risk of nephropathy, hepatotoxicity, and possible drug-induced gastric ulceration and second being overuse of analgesics in combination increase the risk of chronic toxicity.[46,47] Similarly, self-medication with antibiotics could result in several unwanted health consequences on the individual and the health system including the global emergency of multidrug-resistant pathogens,[10] drug dependence and addiction,[11] masking of malignant and potential fatal diseases,[12] hazards of misdiagnosis,[13] problems relating to over and under dosing,[48] drug interactions,[49] and tragedies relating to the side effect profile of specific drugs.[50]

Another problem with self-medication is a risk of using expired drugs, sharing them with friends or taking medicine that have been originally prescribed for some other problem and irrational use of drugs resulting in accidental drug poisoning. Therefore, it can be inferred that the practice of self-medication gets incorporated in the medical professionals right from their undergraduate days. Self-medication has its pros and cons and as an optimistic approach responsible self-medication is a convenient alternative to treat minor illnesses as well manage acute emergency, and is not always hazardous when one knows for what complaint which medicine is to be used, it is necessary to educate students for circumstances when they may self-medicate and when they must see a doctor even for apparently trivial complaints. Medicines that are not over the counter drugs should not be given without prescription and a strict system of checks and

balances should be implemented to prevent this problem from escalating. Finally, a good number of students cited pharmacists prescription (31.1%) and drugs advertisement/ internet (14.7%) as factors leading to self-medication which previous research has also demonstrated effecting the youth decision to self-medicate[51] for which further research and strict rules and regulations need to be placed in this regard.

Our study also appreciates the need of conducting further multicentric studies involving wider sections of medical professionals to estimate the magnitude of self-medication practice in the medical fraternity.

Limitations

The questionnaire was self-reported one and this could have led to under or over reporting of the self-medication practices. The second limitation was that it was a convenience sample, which is inferior to probability sampling in the representativeness.

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