International Journal of Health Sciences and Research
www.ijhsr.org ISSN: 2249-9571

Original Research Article

Practice of Self-Medication among Undergraduate Students of Ahmedabad

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Received: 02/12//2013 *Revised: 04/01/2014* *Accepted: 08/01/2014*

ABSTRACT

Introduction: A desire to take medicine is perhaps the great feature which distinguishes man from animals. This desire however may play havoc when a person starts taking medicines on his own, forgetting that all drugs are toxic and their justifiable use in therapy is based on a calculable risk.
Objectives: Cross-sectional study to determine the prevalence and pattern of Self-medication among the undergraduate students of Ahmedabad.
Materials and Methods: Study was conducted among 1000 students of 5 Colleges (Medical, Engineering, Pharmacy, Commerce and Arts) of Ahmedabad. 200 students from each college were included. All the students were selected by Simple Random Sampling Method. All students were given predesigned and pretested questionnaire.
Results: The prevalence of Self-medication was found out to be 54.69%. Practice of Self-medication was higher in Medical students compared to other students. The main reason for Self-medication was minor health problem. Most common Health Problem for Self-medication was Headache.
Conclusion: Prevalence of Self-medication was higher in Medical students. Also it was higher in final year students compared to other years students. Prevalence of Self-medication has increased in the last decade may be due to increased advertisement for the medicine and high cost of health care services.

Key Words: Self-medication, Ahmedabad, Undergraduate Students

INTRODUCTION

"A desire to take medicine is perhaps the great feature which distinguishes man from animals. This desire however may play havoc when a person starts taking medicines on his own, forgetting that all drugs are toxic and their justifiable use in therapy is based on a calculable risk"- William Osler. Self-medication is defined as "Use of medication by a patient on his own initiative or on the advice of a pharmacist or a lay person instead of consulting a medical practitioner".[1]

Self-medication is an age old practice of taking medication indiscriminately without any prescription by people due to ill health.[2] Self-medication is an area where governments and health authorities

need to ensure that it is done in responsible manner, ensuring that safe drugs are made available Over the counter (OTC) and the consumer is given adequate information about the use of drugs and when to consult a doctor.[3,4] Self-medication involves use of drugs which have the potential to do good as well as harm. An inappropriate Self-medication results in wastage of resources, increase resistance to pathogens and generally entails serious health hazards such as adverse reaction and prolonged suffering.[5] It is now evident that Self-medication is widely practiced in both developing,[6] as well as developed countries.[7] India is also experiencing the problem of inappropriate use of Self-medication in significant numbers.[8] Though Self-medication is difficult to eliminate, intervention can be made to discourage the rampant practice. The increasing Self-medication will require more and better education of both the public and health professionals to avoid the irrational use of drugs. If action is not taken, the danger of drug interactions and side effects could increase because it is expected that adverse reactions are mostly under reported since the use of Over the Counter drugs may not be recorded or reported to the doctor.[9]

Overall Self-medication in modern public health management seems to be a field in which information is scarce. The present study was conducted to determine the prevalence of Self-medication among the undergraduate students, reasons behind Self-medication.

MATERIALS AND METHODS

The present study was conducted among the under-graduate students of Medical, Engineering, Pharmacy, Commerce and Arts. Five government colleges, B.J. Medical College, L.D. Engineering College, L.M. College of Pharmacy, H.L. College of Commerce, and L.D. Arts College of Ahmedabad were selected for conducting the study. To determine the sample size for the study a pilot study was carried out in which the prevalence of Self-medication was found out to be 62%. Applying the formula $\frac{4pq}{L^2}$ taking p as the prevalence found out in the pilot study, q as 100-p and L (allowable error) as 5% of the prevalence (p), sample size came out to be 980.

For the convenience of the study, the sample size was taken as 1000 with 200 students from each college. In each college, students were selected from each years of the study. So in colleges with 4 years of curriculum (Medical, Engineering and Pharmacy) 50 students and in colleges with 3 years of curriculum (Commerce and Arts) 75 students from each year were selected by Simple Random Sampling Method. Thus, total 1050 students were included in the study. All the students were explained regarding Self-medication and the purpose of the study and informed consent was taken.

Students were given predesigned, pretested questionnaire. All the filled questionnaires were reviewed for completeness and the incomplete forms were discarded. So out of 1050 forms, 39 forms were discarded and 1011 forms were included. The data entry and analysis was carried out in Epi-info software version 3.5.1. Simple Percentages and Chi-square test was used to test the significance.

RESULTS

Results of current study are based on the evaluation of completely filled questionnaire by the 1011 Undergraduate students of Ahmedabad. The study was carried out between October 2010 to October 2011. Table 1 shows the distribution of the students on the basis of study branch and socio-demographic factors.

Overall prevalence of Self-medication was found out to be 54.69%. Table 2 shows the comparison of different socio-demographic factors in terms of prevalence of Self-medication.

Table No. 1: Socio-demographic Profile (N = 1011).

Socio-demographic Profile	Number (%)
College:	
B.J. Medical College (MEDICAL)	192(18.99%)
L.D. Engineering College (ENGINEERING)	187(18.49%)
L.M. College of Pharmacy (PHARMACY)	200(19.78%)
H.L. College of Commerce (COMMERCE)	215(21.27%)
L.D. College of Arts (ARTS)	217(21.47%)
Gender:	
Male	515(50.93%)
Female	496(49.07%)
Residence:	
Local	596(58.95%)
Hostel	415(41.05%)
Type of Family:	
Nuclear	699(69.14%)
Others	312(30.86%)

It is seen that practice of Self-medication is significantly higher among Male students, in those residing in hostels and in those belonging to nuclear family, compared to their counterparts. Table 3 shows the comparison of different study branches and also the different years of study in terms of prevalence of Self-medication.

Practice of Self-medication is significantly higher among medical students compared to other study branch students. Also it is higher among final year students compared to other year's students. Among those practicing Self-medication 77.75% of the students stated Minor Health Problem as the reason for Self-medication. Headache and Fever were the most common problem for which students practice Self-medication with 70.88 % and 63.29% respectively. 22.06 % of the students didn't know the name of medicine they used for Self-medication. 40.14 % of the student stated about the use of Antibiotics as Self-medication but 66.21% among them didn't know the name of the antibiotic they used.

Table No. 2: Relationship of Gender, Residence and Type of Family with Practice of Self-medication (N = 553).

Parameters		Practice of Self-medication		Chi-square value	P - Value
		Yes	No		
Gender	Male	317(61.55%)	198(47.58%)	19.90 (df - 1)	<0.001
	Female	236(38.45%)	260(52.42%)		
Residence	Hostel	273(65.78%)	142(34.22%)	34.90 (df - 1)	<0.0001
	Local	280(46.97%)	316(53.03%)		
Type of Family	Nuclear	397(56.79%)	302(43.21%)	4.02 (df - 1)	<0.05
	Others	156(50%)	156(50%)		

Table No. 3: Comparison of Practice of Self-medication within study branches, with Medical and other branches and within different years of study (N = 553).

Parameters		Self-medication		Chi-square Value	P value
		Yes	No		
College	Medical	159(82.81%)	33(17.19%)	135.2 (df - 4)	<0.001
	Engineering	138(69%)	62(31%)		
	Pharmacy	96(51.33%)	91(48.67%)		
	Commerce	88(40.55%)	129(59.45%)		
	Arts	72(33.48%)	143(66.52%)		
Branch	Medical	159(82.81%)	33(17.19%)	75.60 (df - 1)	<0.001
	Others	394(48.10%)	425(51.90%)		
Year of Study	1st year	116(42.64%)	156(57.36%)	90.87 (df - 3)	<0.001
	2nd year	172(52.76%)	154(47.24%)		
	3rd year	164(58.57%)	116(41.43%)		
	4th year	101(75.93%)	32(24.07%)		
Medical (Year of Study)	1st year	27(60%)	18(40%)	31.68 (df - 3)	<0.001
	2nd year	38(76%)	12(24%)		
	3rd 1st year	48(96%)	2(4%)		
	3rd 2nd year	46(97.87%)	1(2.13%)		

DISCUSSION

Study using a self-administered questionnaire is largely dependent upon information given by the respondents. Although students were encouraged to complete the questionnaire independently and honestly, mutual influence between students could not be entirely ruled out. But since due to large sample size, the results should closely resemble and reflect the behavior of the undergraduate students of Ahmedabad.

In the present study prevalence of Self-medication was 54.69%. Various studies carried out in India among students as well as among general population show a range of Self-medication prevalence from 53% to 90%. In a recent study by Rohit Verma et al among professional students in North India, the prevalence was 87%.[10] Practice of Self-medication was higher in male students as compared to female students. Similar findings were reported by Shankar et al.[11] Significant difference (X^2=34.90, DF=1, P<0.0001) in the practice of Self-medication was found between students residing in hostel and those residing locally. No studies were found either in favor or against of the above comparison. In the present study 82.81% of Medical students practice Self-medication while only 48.10 % of students of other branches practice Self-medication. However in a study by Nabeel Zafar et al in Karachi no significant difference was found in the Self-medication practices among medical and non-medical students.[12]

Practice of Self-medication was higher in the IVth year students as compared to students of other years. The difference in practice of Self-medication between students of different year was statistically highly significant. However in the study by Nabeel Zafar et al in Karachi no significant difference was found in the Self-medication practices among the students of different years.[12] In a study by Phalke et al,[2] the most common reason for practicing Self-medication was economic reasons while most common reasons for practice of Self-medication in the current study as stated by the students was minor health problems. Most common health problem for which Self-medication was practiced in this study was headache, followed by fever and cold. These findings were consistent with studies by Phalke et al,[2] Shankar et al,[11] Nabeel Zahar et al.[12]

CONCLUSIOIN

It can be concluded from this study that Self-medication was more common in Medical students as compared to Non-Medical students. It was more common in males as compared to females and in those residing in hostels compared to locals. Students lacked knowledge regarding antibiotics. Conclusion was drawn solely based on the response given by the students. Further comprehensive study including students and the general population is required to get more precise status of practice of Self-medication in the general population.

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How to cite this article: Parikh S, Patel M, Singh A et. al. Practice of self-medication among undergraduate students of Ahmedabad. Int J Health Sci Res. 2014;4(2):7-11.

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