

RESEARCH ARTICLE



Pattern of self medication among medical students of a private institute in Davangere: A cross-sectional study

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Abstract

Self-medication is a common and regular practice of using medicines without any medical supervision by the people themselves for self-treatment considering it a part of self-care. Self-medication has both positive as well as a negative aspect which may lead to serious chronic ailments, cause resistance to pathogens, delays the symptoms, complicate the cause of the underlying disease and delaying the diagnosis. To assess the prevalence of self-medication among the students in a medical institute in Davangere. 2. To determine the factors associated with self medication among these medical students in Davanagere. A cross-sectional study was conducted among 300 medical students of SSIMS& RC Davanagere. Data was collected using pre-designed, semi structured questionnaire. The data was entered in MS Excel. Analysis was done using SPSS version 20. Prevalence of self medications among medical students was found to be 41%. Antipyretics were widely used as a drug for self medication. This study reinforces the importance of creating awareness and educating the students regarding the advantages and disadvantages of self medications.

Keywords: Self medications; medical students; Davanagere

Introduction

Self-medication is a common and regular practice of using medicines without any medical supervision by the people themselves for self-treatment considering it a part of self-care. On the other hand, if it is adopted appropriately, it can help relieve acute pain, save time, money and even rehabilitate a person in acute condition.⁽¹⁾ The youth is more addicted to self-

medication under the influence of advertisements and exposure to inappropriate, unclear and incomplete knowledge of the medicines.⁽²⁾ Easy availability of the medicines over the counter enhances self-medication. Medicines that are most commonly utilized for self-medication include analgesics, anti-malarial, antibiotics and cough syrups, etc.⁽³⁾ Previous studies suggest that self-medication has both positive and negative aspects for

example inappropriate intake of medicines can bring about dreadful drug reactions, may lead to serious chronic ailments, cause resistance to pathogens etc. It also either covers or delays the symptoms, complicates the cause of the underlying disease delaying the diagnosis.⁽⁴⁾ There are several complications that are associated with self-medication such as allergy, drug dependency, renal dysfunction, resistance against toxins and microbes etc. Medical students practice self-medication probably trying to implement their knowledge into practice for betterment.⁽⁵⁾ This study was conducted to assess the prevalence of self medications and factors associated with them among medical students in a private institution in Davanagere.

Objectives

1. To assess the prevalence of self medication among the students in a private medical institute in Davanagere.
2. To determine the factors associated with self medication among these medical students in Davanagere.

Methodology

A cross-sectional study was conducted among 300 medical students of S.S. Institute of medical sciences and research centre, Davanagere from December 2018 to January 2019. All medical students from 1st year M.B.B.S to final year M.B.B.S along with interns were included in the study (60 students in each year). Students who were not willing to participate in the study and those who were absent on the day of data collection were excluded from the study. Ethical clearance was obtained from the Institutional Ethical Review Board. Informed consent was obtained from each respondent prior to the interview. Students were randomly selected based on their roll numbers and approached individually in dormitories or cafeterias. Pre-designed, semi structured self administered questionnaire were distributed to obtain information on self medication. The questionnaire included socio-demographic characteristics of the students, symptoms sought for self medications, drugs used for self medication, sources for drug availability, reasons for self medications, source of drug dosage information, reasons for stopping self medication and attitude towards self medications.

Data was entered in MS Excel and analysis was done using SPSS Vs 20, presented in the form of frequencies and percentages. Chi square test was applied to find out the association between self medications practices and factors associated with it.

Results

In this study, 123 (41%) medical students practiced self medication, the majority of the participants were not using medicines for non medical use (96.6%) and a majority of the

students did not have chronic medical conditions (94.7%). The prevalence and pattern of self medication are explained in the given [Table 1](#).

Table 1. Prevalence and pattern of self medication

Variables	Frequency	Percentage
Self medications		
Practiced	123	41
Not practiced	177	59
Use of medicines for non medical use		
Using	10	3.7
Not using	290	96.6
Chronic medical conditions		
Present	16	5.3
Absent	284	94.7

Majority of the medical students practice self medication because of similar past experiences (37.3%), the source of drug dosage for self medications was a past experience (59.3%), majority of the students had stopped self medications after symptoms disappeared (65.5%), majority of the students were aware of the pharmacodynamics and pharmacokinetics of medicines used for self medication (83.7%), majority of the students were aware of adverse reactions (82.9%) and majority of the students did not have any adverse reactions by practicing self medications (87.9%). Knows and why's and how's of self medication are explained in [Table 2](#).

Majority of the students were of the age group 21-23 years (54%), males and females were equal in number (50%), an equal proportion of students were selected from each class. Majority of the students were the resident of urban areas. Majority of the students sleep for > 6 hours, studies for < 6 hours, and involving in sports activity for < 1 Hour. Majority of the students were non-smokers and non-alcoholics. The association between self medications and its associated factors are explained in [Table 3](#).

In this study, majority of the medical students considered self medication as acceptable when they have same symptoms as of previous illness. The attitude towards self medications among medical students is explained in [Table 4](#).

Table 2. Knowledge and practice regarding self medication among medical students

Reasons	Frequency	Percentage
Time saving	9	7.3
Minor ailments	39	31.7
Economical	2	1.6
Past experience	46	37.3
Confidence of self diagnosis	14	11.3
Urgency	12	9.7
Information of dosage of self medications		
Consulting a doctor	10	8.1
Consulting a pharmacist	9	7.3
Consulting family members/friends	20	16.2
Internet	11	8.9
Past experiences	73	59.3
Stopping of self medications		
After symptoms disappeared	67	65.5
A few days after the recover	25	20.3
When you run out of medicines	7	5.6
At the completion of the course	17	13.8
After consulting a doctor/pharmacist	9	7.3
Awareness towards pharmacodynamics & Pharmacokinetics		
Yes	103	83.7
No	20	16.3
Awareness of adverse reactions		
Yes	102	82.9
No	21	17.1
Had adverse reaction by having medications		
Yes	15	12.1
No	108	87.9

Table 3. Factors associated with self medications among medical students

Variable	Self medications		Total	χ^2 Value	P value	
	Practiced	Not practiced				
Age	< 20 years	39 (37.5%)	65 (62.5%)	104 (100%)	32.3	<0.001
	21-23 years	62 (38.2%)	100 (61.8%)			
	> 23 years	22 (64.7%)	12 (35.3%)			
Sex	Females	70 (46.3%)	81 (53.7%)	151(100%)	17.2	<0.001
	Males	53 (35.5%)	96 (64.5%)	149 (100%)		
Year of study	1st year	24 (40%)	36 (60%)	60 (100%)	33.3	<0.001
	2nd year	16 (27.1%)	43 (72.9)	59 (100%)		
	3rd year	17 (28.3%)	43 (71.7%)	60 (100%)		
	Final year	29 (48.3%)	31 (51.7%)	60 (100%)		
	Interns	37 (61%)	24 (39%)	61 (100%)		
Residence	Rural	25 (49%)	27 (51%)	51 (100%)	12.5	0.014
	Urban	99 (39.9%)	149 (60.1%)	248 (100%)		
Sleeping hours	< 6 hours	38 (30.6%)	86 (69.4%)	124 (100%)	22.9	0.001
	> 6 hours	85 (48.2%)	91 (51.8%)	176 (100%)		
Study hours	< 6 hours	114 (42.6%)	153 (57.4%)	267 (100%)	16.1	0.012
	> 6hours	9 (27.2%)	24 (72.8%)	33 (100%)		
Sports hour s	< 1 hour	102 (44.3%)	128 (55.7%)	230 (100%)	18.17	0.006
	>1 hour	21 (30%)	49 (70%)	70 (100%)		
Alcohol consumption	Yes	28 (65.1%)	15 (34.9%)	43 (100%)	25.3	<0.001
	No	95 (36.9%)	162 (63.1%)	257 (100%)		
Smoking	Yes	14 (53.8%)	12 (46.2%)	26 (100%)	13.56	0.009
	No	109 (39.9%)	164 (60.1%)	273 (100%)		

Table 4. Attitude towards self medications among medical students

Variables	Frequency	Percentage
Self medication is harmful, will not practice	101	33.6
Self medication is harmless	42	14.1
Acceptable when they have the same symptoms as of previous illness	143	47.6
Continue to use in future only for self	14	4.7

Discussion

This study was conducted among medical students of SSIMS & RC, Davanagere to assess the prevalence and pattern of self medication. The prevalence of self medications among medical students was found to be 41%. This is similar to a study done by Banerji I et al.⁽⁶⁾ which showed that the prevalence of self medications was 57.%. A study done by Badiger S et al.⁽⁷⁾ showed that the prevalence of self

medication was 92% which was much higher than the present study. A study done by Mehta RK et al.⁽⁸⁾ showed that the prevalence of self medication among medical students was 78.6%. In the present study, the majority of the study participants were between the age group of 21-23 years, and equal number of males and females were included. In the present study both males and female students were equal in number. Banerjee I et al.⁽⁶⁾ showed more males and Badiger S et al.⁽⁷⁾ study had more females. In the present

study, majority of the medical students were the resident of urban area. This is similar to study done by Mehta RK et al. (8) In this study, majority of the students were studying < 6 hours and sleep for > 6 hours and involving in sports activity for < 1 hour which was significantly associated with self medications. The majority of the students were non-smokers and non alcoholics which were significantly associated with self medications. In this study majority of the students practiced self medication because of their past experiences. A study done by Badiger S et al. (7) showed that the majority of the students practiced self medications because of minor ailments. A study done by Kumar N et al. (8) showed that the majority of the students practiced self medication because of illness too trivial for consultation. In this study, the main source of dosage of self medications were past experience. In this study majority of the medical students were aware of the adverse effect of self medication, which is similar to a study done by Badiger Set al. (7) In the present study majority of the students did not have any adverse reaction due to self medications which is similar to Badiger S et al. (7) study. In this study, the attitude towards self medication among medical students was acceptable when they have the same symptoms as of previous illness. In the present study, antipyretics were widely used as a drug for self medications which is similar to Mehta RK et al. study. (8)

Conclusion

The prevalence of self medication among medical students in SSIMS and RC was found to be 41%. This will help us to spread awareness regarding drug interactions, risk of self medications practices to minimize the practice. Restriction of the sale of drugs with potentially harmful effects should be implemented effectively with monitoring systems between the physicians and pharmacists. Health education is needed

for pharmacists too to crosscheck with the prescribing physician while dispensing such drugs.

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References

- 1) James H, Handu SS, Khaja KAJA, Otoom S, Sequeira RP. Evaluation of the Knowledge, Attitude and Practice of Self-Medication among First-Year Medical Students. *Medical Principles and Practice*. 2006;15(4):270–275. doi:10.1159/000092989.
- 2) Zafar SN, Syed R, Waqar S, Zubairi AJ, Waqar T, Shaikh M. Self-medication amongst university students of Karachi: Prevalence, knowledge and attitudes. *J Pak Med Assoc*. 2008;58:214–221.
- 3) Osemene KP, Lamikanra A. A Study of the Prevalence of Self-Medication Practice among University Students in Southwestern Nigeria. *Tropical Journal of Pharmaceutical Research*. 2012;11(4):683–692. doi:10.4314/tjpr.v11i4.21.
- 4) Mumtaz Y, Jahangeer S, Mujtaba T, Zafar S, S A. Self Medication among University Students of Karachi. *JLUMHS*. 2011;10:102–105.
- 5) Imtiaz S, Salam NA, Kamran. Conditions, frequencies and sociodemographic factors leading self medication practice in Sargodha area of Punjab Pakistan. *Journal of Applied Pharmacy*. 2013;5:151–158. doi:10.21065/19204159.5.151.
- 6) Banerjee I, Bhadury T. Self-medication practice among undergraduate medical students in a tertiary care medical college, West Bengal. *Journal of Postgraduate Medicine*. 2012;58(2):127–127. doi:10.4103/0022-3859.97175.
- 7) Badiger S, Kundapur R, Jain A, Kumar A, Patanashetty S, Thakolkaran N. Self medication patterns among medical students. *Australas Med J*. 2012;5(4):217–220.
- 8) Mehta RK, Sharma S, Knowledge. Attitude and Practice of Self-Medication among Medical Students. *Journal of Nursing and Health Sciences*. 2015;4(1):89–96.