



SELF-MEDICATION PRACTICE AMONG UNDERGRADUATE MEDICAL STUDENTS IN A TERTIARY CARE MEDICAL COLLEGE, KARNATAKA

Clinical Research

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ABSTRACT

Background: Self-medication is a widely prevalent practice in India. It assumes a special significance among medical students as they are the future medical practitioners. **Aim:** To assess the pattern of self-medication practice among undergraduate medical students. **Settings and Design:** Tertiary care medical college in Tumkur, Karnataka, India. **Material and Methods:** A cross-sectional questionnaire-based study was conducted among the undergraduate medical students. **Results:** Total 300 students of the institute, consented for the study and filled in the supplied questionnaire. It was found that 160 (57.05%) respondents practiced self-medication. The principal morbidities for seeking self-medication included cough and common cold as reported by 56 students (35.21%) followed by diarrhea (41 students) (25.47%), fever (25 students) (15.73%), headache (24 students) (14.98%) and pain abdomen due to heartburn/peptic ulcer (14 students) (8.61%). Drugs/ drug groups commonly used for self-medication included antibiotics (31.09%) followed by analgesics (23.21%), antipyretics (17.98%), antiulcer agents (8.99%), cough suppressant (7.87%), multivitamins (6.37%) and anthelmintics (4.49%). Among reasons for seeking self-medication, 76 students (47.19%) felt that their illness was mild while 46 (28.46%) preferred as it is time-saving. About 25 students (15.73%) cited cost-effectiveness as the primary reason while 14 (8.62%) preferred because of urgency. **Conclusion:** Our study shows that self-medication is widely practiced among students of the institute. In this situation, faculties should create awareness and educate their students regarding advantages and disadvantages of self-medication². There is need to revisit the definition and relative significance of 'self-medication' in our local setting¹³.

KEYWORDS

INTRODUCTION:

Self-medication is an important concern for health authorities at global level¹. 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 medication². Self-medication involves the use of medicinal products by the individuals to treat self-recognized disorders or symptoms, or the intermittent or continuous use of a medication prescribed by a physician for chronic or recurring diseases or symptoms. Self-medication involves 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 home³. Easy availability of wide range of drugs without prescription of registered practitioner coupled with inadequate health care services in our country is the major factor responsible for irrational use of drugs as self-medication¹.

Self-care is what people do themselves to establish and maintain health, prevent and deal with illness. Self-medication is a common type of self-care behavior in the general public, but medical students differ in such practice, as they have knowledge about drugs and diseases⁴.

In several studies it has been found that inappropriate self-medication causes wastage of resources, increases resistance of pathogens and generally causes serious health hazards such as adverse drug reactions, prolonged suffering and drug dependence⁵.

These are many reasons for the increased likelihood of self-medication among medical students. This study was undertaken to determine the reasons for self-medication and the pattern of self-medication among medical students.

Need for the study:

Self-medication assumes a special significance among the medical students as they are the future medical practitioners and have a potential role in counseling the patients about the advantages and disadvantages of self-medication. Medical students also differ from the general population because they are well-exposed to the knowledge about diseases and drugs.

There is a paucity of studies on self-medication among Medical students, the present study was undertaken to identify the reasons for, and the patterns of, self-medication among medical students.

Objective:

To assess the self-medication practice, assess common types of illnesses, and identify frequently used drugs and determinants of self-medication.

MATERIALS AND METHODS:

Study Design- A cross-sectional, questionnaire-based study.

Study Setting- The study was conducted in Shridevi Medical College and Research Hospital, Tumkur.

Study Participants- During the study period two batches (2013-14, 2014-15) of MBBS students were available in the institute, each batch comprising 150 students. All the 300 students were considered eligible for participating in the study.

Sample size calculation^{1,2,3,4} - On the basis of the prevalence of self-medication practices of 60% and taking a relative precision of 10%, the minimum sample size was calculated to be 266 using the formula ($N=4pq/E^2$).

Where N is the sample size,

P is the prevalence of self-medication taken as 60%,

$q = (1-p)$

Inclusion Criteria:

Medical students who are willing to give consent.

Exclusion Criteria:

Students suffering from chronic illness.

Ethical Issues- Prior permission was obtained from the ethics committee of the institution for conducting the study. The purpose of the study was explained to the participating students and confidentiality was ensured. Informed consent was obtained from every student before filling the questionnaire.

Method of Collection of Data:

All the undergraduate medical students were contacted during the

study period (1st March to 1st April, 2016). The purpose of the study was explained to all the students, all of whom consented to the study. After obtaining informed consent, they were asked to fill up a printed, pre-tested, semi-structured questionnaire. The questionnaire was designed and pretested on 40 B.Sc nursing students (Batch 2015-2016) who were not included in the study. The questionnaire contained questions regarding socio demographic information, whether the student sought self-medication in the preceding three month, illness for which the medication was used, drug/drug group used by them and the reason for not consulting a healthcare professional.

Operational Definition⁵

For the purpose of the study, certain operational terms were defined. According to the WHO's definition,

Self medication:-

Is the use of drugs to treat self-diagnosed disorders or symptoms, or the intermittent or continued use of a prescribed drug for chronic or recurrent diseases or symptoms.

A healthcare professional was defined as a person:-

Who has obtained a bachelor of medicine and bachelor of surgery (MBBS) degree in allopathic medicine and registered with Medical Council of India/State Medical Council².

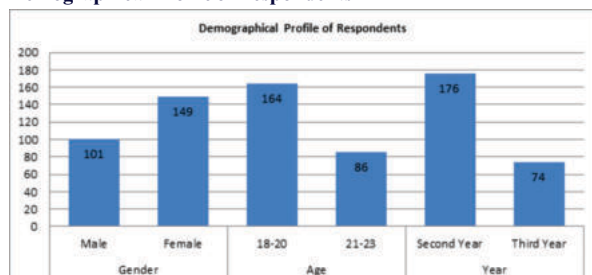
Statistical Analysis:

The returned questionnaires will be checked for completeness of data. The data obtained from the completed questionnaires was analyzed in the computer by using Statistical Package for Social Sciences (SPSS) program Version 20. Descriptive data will be expressed as percentage, frequency and mean±S.D. Chi-square test was used for testing statistical significance. AP value less than 0.05 was considered to be statistically significant.

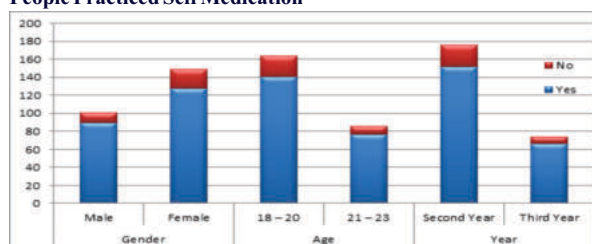
RESULTS:

It was found that the prevalence of self-medication varied significantly among different years of students as evidenced. The details of the pattern of self-medication as practiced by the study population have been enumerated. Results will be expressed in the form of descriptive tables and chi-square test will be applied to test the test of significance between two variables. It was found that cough and common cold were the predominant morbidity for which students practiced self-medication. Other causes of morbidity prompting the students to practice self-medication included diarrhea, fever, headache, pain in the abdomen due to heartburn/ peptic ulcer. Drugs or drug groups commonly used for self-medication included antibiotics followed by analgesics, antipyretics, antiulcer agents, cough suppressants, multivitamins, and anthelmintics. However, the choice of drugs varied among students of different years. The second-year students used antibiotics more than first-year students but the difference was not statistically significant. Among the reasons given for practicing self-medication, respondents felt that their illness was mild while preferred self-medication as it is time-saving².

Demographical Profile of Respondents

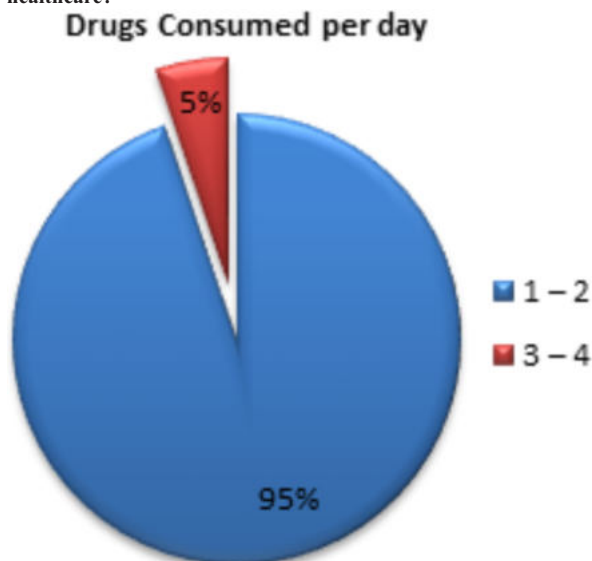


People Practiced Self Medication



Medication without Doctor's advice	Frequency	Percent
Yes	190	76.00
No	60	24.00
Total	250	100.00
Self-Medication entirely safe	Frequency	Percent
Yes	36	14.40
No	214	85.60
Total	250	100.00
Suggest self-medication for non-medical	Frequency	Percent
Yes	18	7.20
No	232	92.80
Total	250	100.00
Prefer self-medication	Frequency	Percent
Yes	104	41.60
No	146	58.40
Total	250	100.00
Experienced adverse effects	Frequency	Percent
Yes	26	10.40
No	224	89.60
Total	250	100.00
Symptoms relieve on self-medication	Frequency	Percent
Yes	239	95.60
No	11	4.40
Total	250	100.00

What do you think about self-medication with drugs for self-healthcare?



ANOVA ^a					
Model		Sum of Squares	df	Mean Square	F
1	Regression	.144	3	.048	.426
	Residual	27.760	246	.113	
	Total	27.904	249		

a. Dependent Variable: Practiced self medication
b. Predictors: (Constant), Year, Gender, Age

DISCUSSION:

World Health Organization considers self medication as part of the self care that helps efficient use of the burdened health care system¹ with guidelines for the regulatory assessment of medicinal products for use in self-medication. The recent trend is to expand the list of over the counter medicines and to increase the availability of controlled drugs; this will give more liberty and choice to the people to take informed treatment decisions. However inflating the list of over the counter drugs is questionable especially in less educated society with weak health systems where most of the medical care cost is out of the pocket of the patients. Also it is understandable that higher rate of self medication is associated with less control and easy availability of drugs. The case for advocating the self medication in our local society is quite weak, where drug resistance is emerging and even prescription medicines¹ are readily available and can be dispensed through inexpert hands.

To us 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. Similarly self medication may find rationale where the situation is not serious and the complaint is well evident 26 like headache after a tiring day for an otherwise healthy person could use up to one gram of acetaminophen in a single dose. Therefore as an optimistic approach “self medication “is not always hazardous when one knows for what complaint which medicine is to be use. However it is necessary to educate people for circumstances where they may self medicate and when they must see a doctor even for apparently trivial complaint.

It would be interesting to know further about the risk and hazard perception of young adults especially regarding self care. Future studies should be directed to describe the perceived hazard¹³.

CONCLUSIONS:

Responsible self-medication has to be promoted among both the medical students and the general public. Self-medication creates awareness among the individuals toward maintaining their health. Drugs made available for self-medication must be provided with proper information about use. Both medical students and public has to be educated on the type of illnesses to be self-diagnosed, type of drugs to be self-medicated and when to seek professional advice. It is only then that responsible self-medication prevails to promote health, prevent and treat illnesses. Educating about self-diagnosing illnesses, the drugs for the same and to seek professional advice if needed, is very much important to promote health by practicing self-medication⁴. To conclude the practice of self medication is highly prevalent in medical students with majority restricting the use to treatment of minor ailments with over the counter drugs. The pattern of self medication practice changes with time and advancement of knowledge¹⁰. The frequency of self medication practices is alarmingly high in the educated people, both medical and non medical students despite the majority knowing that it is incorrect¹³.

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