

A cross sectional study on the practise of self-medication among 2nd year medical and dental students

Nagesh Raju G.^{1,*}, Manjunath S.M.², Dharmaraj B.³

¹Professor & Head, ²Associate Professor, ³Assistant Professor, Dept. of Pharmacology, Basaveshwara Medical College & Hospital, Chitradurga, Karnataka, India

***Correspondence Author:**

Email: nagpharma42@gmail.com

Abstract

Introduction: Most of the common health ailments are treated by general population themselves without medical supervision, which is termed as self-medication. There are potential risks of self-medications like adverse drug reaction, disease aggravation, drug dependence, drug resistance etc. The undergraduate medical and dental students have easy access to information from various sources to self-diagnose and self-medicate. So, we conducted the study to assess the practice of self-medication among 2nd year medical and dental students studying at Basaveshwara Medical College & S.J.M. Dental College, Chitradurga.

Materials: This was an observational, cross-sectional study based on a semi-structured, pre-validated questionnaire. Descriptive statistics was used for analysing the data. The result was analysed using the software Microsoft Excel sheet.

Results: The study included 172 students (medical & dental), out of which 57.5% were females and 42.4% were males. 82.5% of participants had practised self-medication at some point in their life. 85% felt that there was no need to consult physician for simple ailments. The source of information for self-medication was pharmacist (61.6%), followed by google & internet (46.5%), senior (32.5%). Most common conditions for which self-medication was practiced included cold (93%), cough (85%), diarrhea (80%). Drugs commonly used for self-medication included Paracetamol (94%), Antacids (59%), Antibiotics (41%).

Conclusions: Our study revealed that there is a high prevalence of self-medication among medical and dental students. We as the healthcare professionals need to raise the awareness regarding the ill effects of self-medication among undergraduates and also stress on various measures to curb its growing trend.

Keywords: Self-medication, Medical, Dental, Questionnaire, Over the counter drug.

Introduction

Most of the common health ailments are treated by general population themselves without medical supervision, which is termed as self-medication.⁽¹⁾ Self-care is a process where everyone tries to establish and maintain health, prevent & deal with illness. It is a broad concept and includes components like hygiene, nutrition, lifestyle, environmental factors, socioeconomic factors and self-medication.⁽²⁾

Self-medication involves the use of medicinal products by the individuals to treat self-recognized disorders or symptoms. It might also involve the intermittent or continuous use of a medication prescribed by doctor for chronic or recurring diseases or symptoms.⁽³⁾

Not much is known about health related problems and health care utilisation, including self-medication among the youth. The youth are easily and highly influenced by the media & internet which promotes self-medication behaviour.⁽⁴⁾ The increased advertising of pharmaceuticals poses a greater threat of self-medication to the younger population in general. This raises concerns of incorrect self-diagnosis, drug interaction, and use of drugs other than for the original indication.⁽⁵⁾

Potential risks of self-medication practices include: incorrect self-diagnosis, disease aggravation, adverse reactions, unforeseen drug interactions, improper manner of administration, wrong dosage, incorrect choice of therapy, masking of a severe disease and risk

of drug dependence.⁽⁵⁾ Self-medication offers some advantages too. Appropriate self-medication relieves acute problems, is time saving, economical, relieves the burden on the healthcare professionals and therefore can provide time for more serious ailments which require more attention. Probably these are some of the reasons for self-medication practise in countries like India.

Previous studies have reported very high prevalence rates of self-medication in many countries like 68% in European countries, 31% in India,⁽⁶⁾ 59% in Nepal.⁽⁷⁾ Prevalence rate is surprisingly high in Kuwait where its reported to be 92% in its adolescents age group.⁽⁸⁾ The prevalence of self-medication is not only high in the general population, but also it is very common in medical and non-medical university students.⁽⁵⁾

As compared to the general public, there are many factors that influence the practice of self-medication among medical and dental students. They have easy access to information from various sources which aids them to self-diagnose and self-medicate.⁽⁵⁾ As these undergraduates will be the future doctors and involved in prescribing medicines to the patients, it is imperative to assess their level of knowledge and attitude towards different aspects of self-medication.

Prevalence of self-medication was found to vary in medical students of different countries in earlier studies undertaken to ascertain the self-medication practice among medical & dental students. Since majority of the studies were conducted in countries other than India,

pattern of self-medication practices in our country remains unknown. In view of this, the present study was undertaken to ascertain the pattern, prevalence & practices of self-medication, as well as to find out the common ailments, common drugs used for self-medication among 2nd year medical and dental undergraduates studying at Basaveshwara Medical College & S.J.M. Dental College, Chitradurga in Karnataka.

Materials & Methods

This was an observational, cross-sectional study based on the questionnaire. The present study was conducted by the Department of Pharmacology to assess the practice of self-medication among 2nd year medical and dental students studying at Basaveshwara Medical College & S.J.M. Dental College, Chitradurga in Karnataka. Prior permission was sought from the Institutional Ethics Committee for the study.

In the present study we used a semi-structured, pre-validated questionnaire to assess the practice of self-medication in 2nd year medical & dental students. The questionnaire was based on previous studies done on self-medication and was suitably modified for our study.

The current study included 172 students and they were divided into 2 groups: Group I: 2nd year medical students, Group II: 2nd year dental students. The questionnaire containing 8 sets of questions was administered to all the participants. Students were given a brief description regarding the purpose of the study and the specific instructions for filling the questionnaire. Students were instructed not to reveal their identity in the questionnaire. 20 minutes was the time allotted for answering the questionnaire. Descriptive statistics was used for analysing the data. The results was analysed using the software Microsoft Excel sheet. All the data is presented in the form of frequency & percentage.

Results

In total 172 students participated in the study, out of which 99 (57.5%) were females and 73 (42.4%) were males.

Out of 172 students, 16 students (9.3%) thought that it is safe to take self-medication. 51.1% of the students preferred to take self-medication. Only 36 students (20.9%) preferred to suggest self-medication to other non-medical people. A staggering 82.5% of participants had practised self-medication at some point in their life. 81.3% of students were relieved of the symptoms on practising self-medication and only 22.1% of students experienced side effects by self-medication (Table 1).

Table 1: Characteristics of Study population

		Yes N (%)	No N (%)
a	Is the self-medication entirely safe?	16 (9.3%)	156 (90.6%)
b	Do you prefer to take self-medication	88 (51.1%)	68 (39.5%)
c	Do you suggest self-medication for non-medical personal	36 (20.9%)	132 (76.7%)
d	Have you practised self-medication	142 (82.5%)	26 (15.1%)
e	Were your symptoms relieved by self-medication	140 (81.3%)	30 (17.4%)
f	Did you experience any side effect by self-medication	38 (22.1%)	134 (77.9%)

Regarding the reasons for self-medication, majority of students i.e. 85% of the students were of the thought that there was no need to consult physician for simple ailments and 36% chose the option lack of time to consult to be the reason for self-medication (Table 2).

Table 2: Characteristics of study subject used in self-medication

	Reasons for self-medication	
a	Physician consultation fee expensive	28 (16.2%)
b	Lack of time to consult	62 (36%)
c	No need to consult for simple ailments	146 (84.8%)
d	Non-availability of health care professionals	16 (9.3%)

Regarding the source of information for self-medication, 61.6% was from pharmacist, followed by google & internet (46.5%), senior (32.5%), textbook (23.2%) and advertisement (20.9%) in this order (Fig. 1).

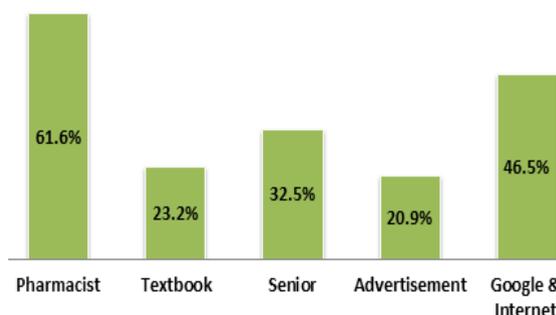


Fig. 1: Source of information for self-medication

About 14% of students were of the opinion that over the counter drugs means drugs procured by the patients without prescription, 10.4% thought they are always dispensed by the pharmacist himself. Surprisingly,

62.7% had no idea about over the counter drugs (Table 3).

Table 3: What are OTC (Over the Counter) drugs

	Over the Counter drugs	N (%)
a	Dispensed by Pharmacist on Physician order	20 (11.6%)
b	Always dispensed by Pharmacist himself	18 (10.4%)
c	Procured by the patient himself without prescription	24 (13.9%)
d	Procured from relatives and friends	08 (4.6%)
e	No idea	108 (62.7%)

A majority of the students perceived that lack of knowledge about dose (74.4%), adverse drug reactions (72%), and wrong medication can be fatal (70.9%) as the main disadvantages of self-medication (Table 4).

Table 4: Disadvantages of self-medication includes

	Disadvantages	N (%)
a	Adverse drug reactions	124 (72%)
b	Lack of knowledge about dose	128 (74.4%)
c	Wrong medication can be fatal	122 (70.9%)
d	Disease aggravation	30 (17.4%)
e	Drug addiction	50 (29%)
f	Drug resistance	30 (17.4%)
g	Drug interactions	28 (16.2%)

79% of the students felt that awareness and education regarding implications of self-medications are the main tools to prevent its growing trend. 46.5% of students thought that preventing the supply of medicines is another effective way to prevent the growing trend (Table 5).

Table 5: Methods to prevent growing trend of self-medication

	Perception	N (%)
a	Prevent the supply of medicines without prescription	80 (46.5%)
b	Awareness and education regarding implications of self-medication	136 (79%)
c	Enforce strict rules regarding misleading pharmaceutical/media advertisements	68 (39.5%)
d	Working towards making healthcare facilities easily available	62 (36%)
e	No opinion	06 (3.4%)

It was observed that, most common conditions for which self-medication were practiced included cold (93%), cough (85%), diarrhea (80%), bodyache (74%), gastritis (54%), vomiting (50%) and fever (48%) (Table 6).

Table 6: Condition for which self-medication is practised

	Condition	N (%)
a	Cold	160 (93%)
b	Cough	146 (84.8%)
c	Bodyache	128 (74.4%)
d	Gastritis	94 (54.6%)
e	Vomiting	86 (50%)
f	Fever	82 (47.6%)
g	Diarrhoea	138 (80.2%)
h	Headache	42 (24.4%)
i	Allergy	62 (36%)
j	Pain during menstruation	10 (5.8%)
k	Sleeplessness (insomnia)	02 (1.1%)

Drugs commonly used for self-medication included Paracetamol (94%), Antacids (59%), Antibiotics (41%), Anti-histaminics (41%) and Analgesics (39%) (Fig. 2).

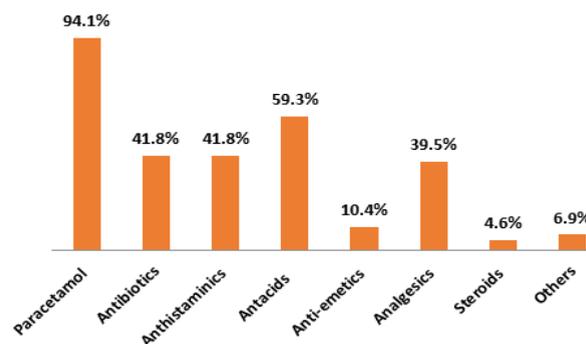


Fig. 2: Drugs commonly used for self-medication

Discussion

The present study had 57.5% female participants and 42.4% male participants. In a study by Lakshmi et al.⁽⁹⁾ female participants were 73.3% & male participants were 37.7%.

In our study, 81.3% of participants were relieved of symptoms and only 22.1% experienced side-effects due to self-medications. This is consistent with the study by Lakshmi et al.⁽⁹⁾ who reported 86% were relieved of symptoms and only 21% experienced side-effects due to self-medications.

In our study, the source of information for self-medication was 61.6% from pharmacist, followed by google & internet (46.5%) senior (32.5%), textbook (23.2%) and advertisement (20.9%). In a study by Raj kumar et al.⁽¹⁰⁾ the source of information was 60.3% from pharmacist followed by (46%) textbook, (31.7%) senior, and (17.4%) from advertisements.

Only 9% of students thought that self-medication is safe, 21% preferred to suggest self-medication to non-medical persons. This might be due to knowledge of students about pharmacology. These findings are consistent with the study by Lakshmi et al.⁽⁹⁾ who reported that only 7% students thought that self-

medication is safe & 11% preferred to suggest self-medication to non-medical persons.

In our study, 85% of the students felt that there is no need to consult a physician for simple ailments. Compared to Jagadeesh et al.⁽¹³⁾ where a majority of 72% preferred self-medication due to the same reason.

In our study, 14% of students had knowledge about OTC drugs. In contrast, in a similar study done by Kumari et al.⁽¹¹⁾ 38% of individuals had knowledge of OTC drugs. The reason for this difference might be due to better understanding of the subject.

Our study revealed that cold and cough are the most common conditions for which self-medication are practised. These findings are consistent with the study done in South India which also revealed that cold and cough to be the most common conditions for which self-medication was practised.⁽¹²⁾

In the present study, Paracetamol (94%) was the most common drug used for self-medication followed by Anatacids, Antibiotics, Anti-histaminics & Analgesics. These findings are in agreement with the findings by Lakshmi et al.⁽¹¹⁾

According to our study, the various reasons for not favouring the self-medication were lack of knowledge about dose, adverse drug reactions, wrong medication could be fatal, drug addiction and drug resistance etc. These results are consistent with the findings by Lakshmi et al.⁽⁹⁾

Participants were of the view that raising awareness & education regarding the implications of self-medications (79%), and preventing the supply of medicines without prescription (46%) to be the preferred methods of curbing the growing trend of self-medications. These findings are in agreement with the findings by Lakshmi et al.⁽⁹⁾ who reported that raising awareness & education regarding the implications of self-medications (49%), and preventing the supply of medicines without prescription (43%) to be the most effective methods to reduce the trend of self-medications.

Conclusion

Our study revealed that there is a high prevalence of self-medication among medical and dental students. This poses the risk to the health due to various drug related factors like adverse drug reactions, disease aggravation, drug addiction, drug resistance etc. We as the healthcare professionals need to raise the awareness regarding ill effects of self-medication among the undergraduates and also stress on various measures to curb the growing trend of self-medication like enforcing strict rules regarding misleading pharmaceutical/media advertisements & prevent the supply of medicines without proper prescription of a registered medical practitioner.

Acknowledgment

We would like to thank all the 2nd year medical and dental students for their wilful participation in the study and providing honest opinions in the questionnaire.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional ethical committee.

References

1. Kasulkar AA, Gupta M. Self-Medication Practices among Medical Students of a Private Institute. *Indian J Pharm Sci* 2015;77(2):178-82.
2. Gutema GB, Gadisa DA, Kidanemariam ZA, Berhe DF, Berhe AH, Hadera MG, et al. Self-medication practices among health sciences students: the case of Mekelle University. *J Appl Pharm Sci*. 2011;1(10):183-9.
3. Guidelines for the regulatory assessment of medicinal products for use in Selfmedication, WHO 2000. Available: <http://apps.who.int/medicinedocs/pdf/s2218e/s2218e.pdf>. Accessed: 2016 Oct 12.
4. Klemenc-Ketis Z, Hladnik Z, Kersnik. A cross sectional study of sex differences in self- medication practices among university students in Slovenia. *Coll Antropol* 2011;35(2):329-34.
5. Burak LJ, Damico A. College students' use of widely advertised medications *J Am Coll Health* 2000;49(3):118-21.
6. Deshpande SG, Tiwari R, Self-medication - a growing concern. *Indian J Med Sci* 1997;51:93-6.
7. Shankar PR, Partha P, Shenoy N. Self-medication and non-doctor prescription practices in Pokhara valley, Western Nepal: a questionnaire-based study. *BMC Fam Pract* 2002;3:17.
8. Abahussain E, Matowe LK, Nicholls PJ. Self-reported medication use among adolescents in Kuwait. *Med Princ Pract* 2005;14:161-4.
9. Patchva LD, Sowmya, Priyambada S, Jagadeesh, Dwaraka. Practice of self-medication among 2nd year medical and dental students. *Int J Basic Clin Pharmacol* 2016;5:2013-6.
10. Mehta RJ, Sharma S. Knowledge, Attitude and Practice of Self-Medication among Medical Students. *IOSR J Nursing AND Health Sci* 2015;4:89-96.
11. Kumari R, Kiran, Kumar D, Bahl R, Gupta R. Study of knowledge and practice of self-medication among medical students at Jammu. *J Med Sci* 2012;15(2):141-4.
12. Gaikwad NR, Patil AB, Khan TA. Comparative evaluation of knowledge, attitude and practice of self-medication among first and second year medical students. *J Datta Meghe Inst Med Sci Univ* 2010;5:157-62.
13. Jagadeesh K, Chidananda KN, Revankar SP, Prasad NS. Study on self-medication among 2nd year medical students. *Int J Basic Clin Pharmacol* 2015;4:164-7.