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Evaluation of the knowledge, attitude, perception and practice of self-medication of drugs among engineering students in south India

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Abstract

Objectives: Self-medication practice is widespread in many countries and the irrational use of drugs is a cause of concern. The main aim is to assess knowledge, attitude, perception and practice of self-medication of drugs among engineering students in Raichur, south India.

Materials and Methods: It is a cross-sectional study in which study population consisted of final year engineering students of SLN engineering college Raichur, Karnataka, India. This study was conducted from October 2016 to December 2016 after obtaining institutional ethics committee approval. Written informed consent was obtained from each student prior to the study. Students were given a predesigned and pretested questionnaire about self-medication practice. Data collected was analysed and presented as counts and percentages.

Results: A total of 96 students enrolled in the study. It was found that 40.63% of students practiced self medication. The most common indication for seeking self medication was fever (46.88%) and headache (37.50%). Antipyretics were most commonly self medicated as reported by 52.08% of students. Majority 66.67% of the participants were of the opinion that self medication is a part of self care. Most common source of self medication was from old prescription for same illness (44.79%).

Conclusion: To conclude self-medication is practiced among engineering students & we should educate the students about advantages and disadvantages of self medication.

Keywords: Self medication, engineering students, Raichur, questionnaire

Introduction

Self-medication can be defined as “the taking of medicines, herbs or home remedies on one's own desire or on the suggestion of another person, without consulting a doctor” [1].

The drugs used for self medication do have both beneficial and unwanted effects. Self medication if not used appropriately can result in resources wastage, increased antibiotic resistance, adverse effects, drug interactions & ill health [2].

Self-medication practices also have beneficial effects too like purchasing over the counter medicines without prescription can save money & time for patients, can treat minor illness, especially in hilly & tribal areas where there is a shortage of doctors [3].

It is now evident that self-medication is prevalent in both developing as well as developed countries. India is also experiencing the problem of inappropriate use of self-medication in significant numbers [4]. Though self-medication is difficult to eliminate, intervention can be made to discourage this rampant practice by educating both the public and health professionals about various problems associated with self medication.

Hence there is a need to know the prevalence of self-medication practices among the various sections of the society before undertaking any regulatory measures. The present study intends to determine the prevalence of self medication, reasons for self medication, pattern of self medication among the professional engineering students.

Materials and Methods

The present study was a cross-sectional study carried out on the final year engineering college students of SLN College of engineering in raichur from the month of October 2016 to December 2016. Ethical committee approval was obtained from the Institutional ethics committee of Raichur institute of medical sciences, Raichur India prior to the commencement of the study. Necessary permission from the concerned authorities was also obtained.

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The purpose of the study was explained and those who consented to participate in the study were administered a predesigned and pretested questionnaire to elicit the information of self medication practices. Any event of use of over the counter (OTC) or prescription medicines without consulting a doctor was considered as self-medication. All the students were explained about the type and purpose of the study and informed that participation is voluntary and their collected information will not be shared. Written informed consent was taken from each student before the start of the study.

Data was entered into Microsoft excel sheet and analyzed using SPSS software. The statistical tests used were descriptive statistics like frequency and percentages. Data was analysed and presented as counts and percentages.

Results

A total 96 final year engineering students were included for the present study. The mean age of the study population ranges from 20-24years. Out of 96 which were analysed for practice, attitude and perception about self medication, 49 (51.04%) were males and 47 (48.96%) were females. (Table 1)

Out of 96 respondents, 39 (40.63%) reported self medication in the past six month and majority(19) said only once or twice they have used medicines on their own in last six months and they had 1 to 2 illness during last six months. (Table 2)

The most common medicines used were antipyretics (52.08%), analgesics (33.33%), antitussives, (28.13%)

followed by antihistamines (23.96%) & antispasmodics (23.96%). (Table 3)

The most common indication for self-medications were fever (46.88%), headache (37.50%), common cold (29.17%) followed by pain (29.17%) & cough (23.96%). (Table 4)

46 students (47.92%) responded that they have some knowledge about the medicines that they have taken like dose, side effects etc. Majority 65.63% of the study subjects felt that self-medication practices are harmful & 32.29% felt it's safe for few drugs & very few 6.25% students did noticed some adverse drug reaction to their medicines. (Table 5)

With regard to the reasons for self-medication, majority of them (48.96%) responded that they self-medicated because they thought illness is too trivial for consultation & was not so serious. (Table 6) & the most common source of information regarding self medication was from old prescription for same illness (44.79%) & pharmacist (39.58%). (Table 7)

Majority 66.67% of the participants were of the opinion that self medication is a part of self care (Table 8), 43.75% were of the opinion that preventing the supply of medicines without prescription is the best way to prevent growing trend of self medication (Table 9) & majority 51.04% of study subjects did not consult a doctor after they developed minor unwanted effects after self medication. (Table 10)

Table 1: Sex wise distribution of students

Sex	No	Percentage
Male	49	51.04%
Female	47	48.96%

Table 2: Prevalence of self medication patterns

Questions	Yes (%)	NO (%)	NA (%) Not answered
How many episodes of illness have you had in last six months	51(53.13%)	24(25.0%)	21(21.88%)
Have you used medicines of your own without consulting either a doctor in the preceding six months, if yes how many times	39(40.63%)	52(54.1%)	05(5.21%)

Table 3: Self medication drugs used by the participants

What type of medicine did you use	Yes (%)
Antipyretics	50(52.08%)
Antitussives	27(28.13%)
Analgesics	32(33.33%)
Antihistamines	23(23.96%)
Ant diarrheal	13(13.54%)
Antiemetic	09(9.38%)
Antispasmodics	23(23.96%)
Antiulcer	5(5.21%)
Sedatives	02(2.08%)
Antibiotics	07(7.29%)
Tonics/vitamins	07(7.29%)

Table 4: Indications for self medication

What were the indications for self medication	Yes (%)
Fever	45(46.88%)
Headache	36(37.50%)
Flu/cold	28(29.17%)
Cough	23(23.96%)
Pain	28(29.17%)
Sore throat	03(3.13%)
Vomiting	06(6.25%)
Diarrhoea	08(8.33%)
Ulcer in mouth	08(8.33%)
Rash/allergies	05(5.21%)
Lack of sleep	04(4.16%)
Any others	03(3.13%)

Table 5: Knowledge about side effects, harmful effects of self medication drugs

Questions	Yes (%)	No (%)	NA (Not answered) (%)
Did you have knowledge about dose, side effects, interactions, of the medicines you have taken	46(47.92%)	45(46.88%)	5(5.21%)
Do you think self medication is harmful	63(65.63%)	31(32.29%)	2(2.08%)
Did you find adverse drug reaction(ADR) & what was the most common ADR	06(6.25%)	66(68.75%)	24(25.00%)

Table 6: Reasons for self medication

What were the reasons for self medication	Yes (%)
Illness too trivial for consultation	47(48.96%)
Sufficient knowledge about drugs	38(39.58%)
To save money	19(19.79%)
Avoid crowd at opd and save time	19(19.79%)
Privacy	11(11.46%)

Table 7: Source of information of self medication medicines

what was the source of information about drugs for self medication	Yes (%)
Old prescription for same illness	43(44.79%)
Pharmacist	38(39.58%)
Family/friends	38(39.58%)
Drug advertisement/media/net	21(21.88%)

Table 8: Students opinion on self medication

What is your opinion on self medication	Yes (%)
Self medication is a part of self care	64(66.67%)
Continue with/start self medication	04(4.17%)
Advice self medication to friends	11(11.46%)
Self medication should be avoided	36(37.50%)

Table 9: Methods to prevent growing trend of self medication

How to prevent growing trend of self medication	Yes (%)
Prevent the supply of medicines without prescription	42(43.75%)
Awareness and education regarding implications of self medication	30(31.25%)
Enforcing strict rules regarding misleading pharmaceutical advertising	15(15.63%)
Working towards making health care facilities easily available	26(27.08%)
No opinion	18(18.75%)

Table 10: Unwanted effects of self medication medicines

Questions	Yes (%)	No (%)	Not answered NA (%)
After self medication if you suffered from any unwanted effects, have you consulted a doctor	27(28.13%)	49(51.04%)	20(20.83%)

Discussion

In the present study, the prevalence of self-medication is 40.63%, when compared to various other studies [5-9] the prevalence of self medication ranges from 38% to 98%. In the present study the most common causes for which they practised self-medications were fever, headache, common cold & cough. Similar findings were also reported in studies conducted by Kayalvizhi S *et al.* [10] & Sheethal M P *et al.* [11]. However in few other studies like Abay SM *et al.* [5] & Gutema GB *et al.* [12], the most common symptoms for which they practiced self-medications were headache, followed by cough and common cold.

In our study illness being not too serious for consultation was the most major reason for self medication. Similar finding also is seen in other studies done by Banerjee I *et al.* [13], Badiger S *et al.* [14] & Kumar N *et al.* [15] In contrary, time saving and for quick relief were observed as the commonest reason in few studies done by Kayalvizhi S *et al.* [10] & Gupta V *et al.* [16]

In our study old prescription for same illness was the commonest source of information about the self-medication of drugs, which was similar to observation made in other studies done in India like by Kayalvizhi S *et al.* [10], Kumar N *et al.* [15], and Verma RK *et al.* [17]. Whereas, few other studies reported that textbooks were the commonest source of information i.e. in studies done by Abay SM *et al.* [5] & Badiger S *et al.* [14]

Only 6.25% students noticed some adverse drug reactions to

their medication. This shows the students lack knowledge about drugs which are self medicated. So the students should be educated about the side effects of drugs which will help in early detection and treatment of side effects if they occur.

In our study antipyretics were the most common medicines used. The finding is similar to other studies done by Kumar N *et al.* [15] & Abay SM *et al.* [5] where antipyretics were the most common class of drugs self medicated. Majority 66.67% students were of the opinion that self medication is a part of self care. This finding is more when compared to a study done by Kumar N *et al.* (47%). [15]

Self medication has its advantages and disadvantages. Self medication is an easy alternative to treat minor illness and part of self care, whereas inappropriate self medication can have unwanted effects. Even the OTC drugs are considered safe and meant for self medication, there can be dangerous implications if they are not used properly due to lack of knowledge of their adverse effects and drug interactions. So the staffs of the institute must teach the students about the advantages and disadvantages of self medication. More multicentric studies should be carried out on periodic basis among professional students and general population at large to study the self medication patterns and to create awareness about the beneficial & harmful effects of self medication.

Conclusion

It can be concluded from this study that self-medication is practiced among engineering students & students lack knowledge about the dosage, adverse effects, and drug interaction of self medication of drugs. Conclusion was drawn solely based on the response given by the students. So it's necessary to educate the students about advantages and disadvantages of self medication. Further comprehensive studies 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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