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A Study on Use of Over the Counter Drugs among 1st Year Medical Students in a Tertiary Care Teaching Hospital

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ABSTRACT

Background: It is a common tendency among medical professionals to practice self-medication when they themselves feel sick. The practice of self-medication gets incorporated in the medical professional's right from their undergraduate days. It assumes a special significance among medical students as they are the future medical practitioners.

Objective: To analyze the pattern of self-medication practice among undergraduate medical students.

Material and Methods: A cross-sectional questionnaire-based study conducted among the 1st year medical students of MVJMC&RH, Bangalore.

Results: In our study, it was seen that majority (82.6%) of the participants were aware of OTC drugs. Self medication was seen among 56.6% of the medical students. Headache (76.3%) followed by fever were the most common ailments for which analgesics (60.1%) followed antipyretics were the most common OTC drugs used. . Confidence in self medication (46.2%), finding it cumbersome to go to doctor where the some of the reasons for using OTC drugs. Media advertisements (32.3%) followed by text book/journals were the most common source of information used to know about OTC drugs. Large number of students were aware of package insert/ prescription label (81.5%) and also they followed label instructions while self medicating (88.4%).

Conclusion: Our study shows that Majority of the participants were aware of OTC drugs & self-medication is widely practiced among them. In this situation, faculties should create awareness and educate their students regarding advantages and disadvantages of self-medication.

INTRODUCTION

The non-prescriptive drugs or over-the-counter drugs (OTCs) are the drugs that are purchased without prescription. There are currently more than 300000 different OTC drugs available only in US ^[1,2]. There is no regulation for the use of OTC drugs in India. The poor economic status and busy lifestyle of an individual makes him rely on the OTC drugs. In India, it has been shown that literate people were 76% more likely to self-medicate than illiterate people ^[3].

Self-medication is widely practiced worldwide and often considered as a component of self-care [4]. The World Health Organization (WHO) has appropriately pointed out that responsible self-medication can help prevent and treat diseases that do not require medical consultation and provides a cheaper alternative for treating common illnesses [5]. The practice of self-medication must be based on authentic medical information otherwise irrational use of drugs can cause wastage of resources, increased resistance of pathogens, and can lead to serious health hazards such as adverse drug reaction and prolonged morbidity. Self-medication assumes a special significance among the medical students as they are the future medical practitioners and have a potential role in counselling 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.

Therefore the present study was taken up to analyze the use of OTC drugs among medical students in a tertiary care teaching hospital.

OBJECTIVE

To analyze the use of over the counter drugs among 1st year medical students in a tertiary care teaching hospital.

MATERIALS AND METHODS

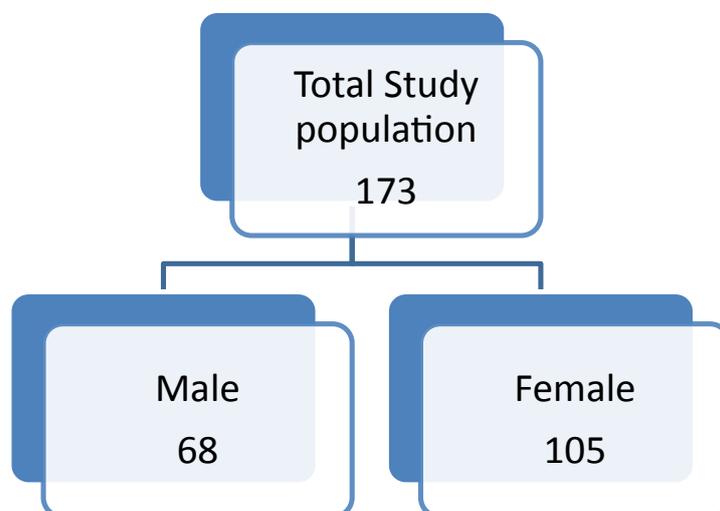
The present study was conducted among 1st year medical students of MVJMC & RH, Bangalore. It was a cross sectional, non-interventional, observational study with a study population of 173.

After obtaining ethical clearance from institutional ethics committee, questionnaire was given to 1st year medical students who were willing to participate in the study. Questionnaire consisted of 12 questions which included basic details of the student and questions on OTC drugs. Questionnaires were then collected back from students on the spot after ten minutes.

At the end of the study, all the data were pooled and results were analyzed in percentages & averages

RESULTS

In our study, 105 respondents were female and 68 were males (Flow chart 1). Out of 173, 123 respondents were in the age group of 17-19yrs and 40 were in the age group of 20-22yrs (Flow chart 2).



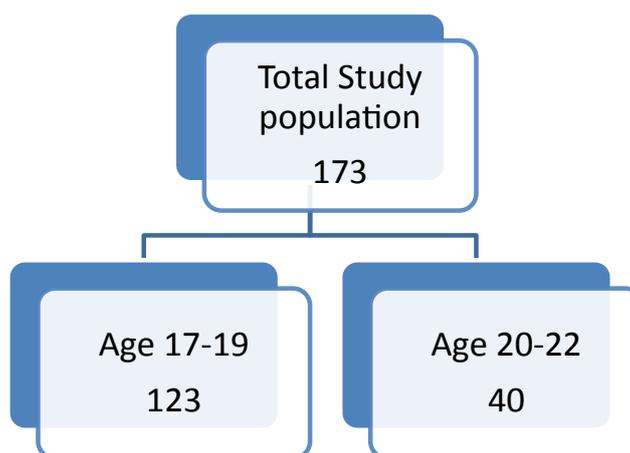
Flow Chart 1: Gender distribution of the study population.

It was found that 143 (82.6%) respondents were aware of OTC drugs where as 30 (17.3%) were not. Among participants, 56.6% of them bought OTC drugs for self administration, 20.2% of them for parents, 5.2% of them for children and 12% of them for others.

Looking at the frequency of buying OTC drugs, it was found that 68.7% of the participants bought OTC drugs rarely (Table 1). Common ailments for which OTC drugs were bought included Headache (76.3%), Fever (60.6%) as shown in Table 2. Commonly used OTC drugs were analgesics (60.11%) followed by antipyretics (Table 3)

There were many reasons for using OTC drugs, the most common being confidence in self medication (46.2%) as shown in Table 4. The most common source of information used to know about OTC drugs was Media advertisement followed by Text books/journals (Table 5).

Among the participants, 81.5% were aware of package insert/ prescription label and 88.4% of them followed label instructions while self medicating. While self medicating 124(71.6%) of them didn't experience any negative effects. Usages of OTC drugs were recommended by 46.2% participants while the remaining didn't.



Flow Chart 2: Age distribution of the study population.

DISCUSSION

In our study it was seen that majority (82.6%) of the participants were aware of OTC drugs. Self medication was seen among 56.6% of the medical students. In another study conducted among medical students in Karnataka revealed 53% students practicing self-medication [6].

Table 1: Frequency of buying OTC drugs.

| FREQUENCY OF BUYING OTC DRUGS | PERCENTAGE (%) |
|-------------------------------|----------------|
| Once a week | 13.8 |
| Once in 15 days | 4.6 |
| Once a month | 8.6 |
| Rarely | 68.7 |
| Very frequently | 4 |

Regarding the morbidities which prompted the medical students to practice self-medication, Headache (76.3%) was most common followed by fever. In studies conducted among first-year medical students in Bahrain (2006) [7], headache was the most common one (70.9%) followed by cough/common cold, stomach-ache, and fever. Headache (72.4%) was also the most common morbidity among medical students seeking medication in the study conducted in Karachi [8].

Table 2: Common ailments for which OTC drugs were used.

| COMMON AILMENTS | PERCENTAGE(%) |
|-------------------|---------------|
| Headache | 76.3 |
| Fever | 60.6 |
| Constipation | 9.2 |
| Diarrhoea | 9.8 |
| Acidity | 16.7 |
| Skin problems | 5.2 |
| Tooth ache | 5.7 |
| Muscle/joint pain | 5.2 |
| Cold/cough | 47.3 |

The drugs which were frequently used for self-medication in our study were analgesics (60.1%) followed by antipyretics. This could be because pain is the most common symptom that we encounter in day to day life. In the study conducted in Karachi [8] analgesics were the most common (88.3%) followed by antipyretics and antibiotics; the study in Bahrain (2006) [7] also reported analgesics to be the most commonly used drug group (81.3%) with antibiotics contributing only 6% of the total share. The reason provided by the researchers for limited use of antibiotics in medical students in Bahrain is that the governments in the countries to which the study respondents belonged have strict regulatory policies about the prescription and over-the-counter (OTC) sale of antibiotics. However, some studies conducted in developing countries with similar intent have reported a higher use of antimicrobials for self-medication, especially where there is increased incidence of infectious diseases and antibiotics are freely available OTC [9]. This suggests that use of antimicrobials is high when there is lack of implementation of proper regulatory control over the OTC sale of these drugs. Regarding reasons which provoked students for self-medication, confidence in self medication was the most common one (46.2%) followed by the reason that they find it cumbersome to go to doctor. Where as in a study conducted in Bahrain (2006) 45.5% of students preferred self-medication as it is time-saving while 25.4% preferred it due to minor nature of illness [7].

Table 3: Commonly used OTC drugs.

| DRUGS | PERCENTAGE (%) |
|--------------------|----------------|
| Analgesics | 60.1 |
| Antipyretics | 47.3 |
| Cough suppressants | 34.6 |
| Anti allergics | 24.8 |
| Antacids | 17.3 |

Looking at the source of information used to know about OTC drugs, media advertisements (32.3%) was the most common source followed by text book/journals. It is a common tendency among medical professionals to practice self-medication when they themselves feel sick. The practice of self-medication gets incorporated in the medical professional's right from their undergraduate days. In this situation further multicentric studies with the objective of evaluating the knowledge, attitude, practices of self-medication involving a wider section of the medical students (both undergraduates and postgraduates) across different medical colleges in the country is urgently needed to estimate the magnitude of self-medication in the medical fraternity. The findings of such multicentric studies could dictate the need of incorporating responsible self-education as an intrinsic component in medical curriculum.

Table 4: Reasons for using OTC drugs.

| REASONS | PERCENTAGE (%) |
|-----------------------------------|----------------|
| Going to doctor cumbersome | 27.7 |
| Minor ailment, why seek Dr advice | 16.1 |
| Confidence in self medication | 46.2 |
| Available freely on the counter | 27.1 |

Table 5: Source of information about OTC drugs.

| SOURCE OF INFORMATION | PERCENTAGE(%) |
|--------------------------------|---------------|
| Media advertisements | 32.3 |
| Peers | 12.1 |
| Self learning through internet | 21.9 |
| Text books / journals | 26.5 |
| Other sources | 6.9 |

CONCLUSION

Our study shows that majority of the participants were aware of OTC drugs and self-medication is widely practiced among them. Headache, fever were the most common ailments for seeking self medication and analgesics, antipyretics were the most common drugs used. Confidence in self-medication, finding it cumbersome to go to doctor where the some of the reasons for using OTC drugs. Majority of the participants used media advertisements as the source of information to know about OTC drugs. Large number of students were aware of package insert/prescription label and also they followed label instructions while self medicating.

Our study appreciates the need of conducting further multicentric studies involving wider sections of medical professionals to estimate the magnitude of self-medication practice in the medical fraternity. There is also need to create awareness and educate students regarding advantages and disadvantages of self-medication by the teaching faculties in the institutions.

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I being the corresponding author take the complete responsibility of publishing the data.

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