

## A study on knowledge, attitude and practice of over the counter drugs among 3<sup>rd</sup> year medical students of a teaching hospital in Dakshina Kannada, South India

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### Abstract

**Introduction:** Over the Counter (OTC) drugs are medicines, available without a prescription, and hence also referred to as 'nonprescription drugs'. These drugs include tonics, iron preparations, vitamin medications, analgesics, NSAIDS, cough syrups, dermatological products, drugs for pyrexia, laxatives etc. Usage of OTC drugs can lead to unwanted drug interactions, misuse / abuse of drugs and ADRs. So it is important to assess people's knowledge and understanding about OTC drugs.

**Methodology:** A cross-sectional study was conducted during October 2017 with a self-structured and pre-validated questionnaire. Study group consisted of ninety 3<sup>rd</sup> year medical students who have completed the Pharmacology course. Data were analyzed using descriptive analyses.

**Results:** In this study, it was observed that 94.5% of the students were aware of OTC drugs. Among 90 students, 87 students (96.7%) have used OTC drugs at least once. Fever (43.3%) followed by headache (38.9%) were the most common illnesses for which OTC drugs used. Difficulty in consulting doctor and easy availability of drugs were some of the reasons for using OTC drugs. Medical books and advertisements were the most common source of information used to know about OTC drugs. Most number of students (76.7%) were aware of toxicities and interactions of drugs which could be seen because of irrational use of OTC medications.

**Conclusion:** This study shows that majority of the students were aware of OTC drugs and used them regularly. Fever, headache was the most common illness for seeking medication. Easy availability, difficulty in consulting doctor were some of the reasons for using OTC drugs. Majority of the students used medical text books and advertisements as the source of information to know about OTC drugs. There is also need to create awareness and educate students regarding advantages and disadvantages of using OTC drugs by the teaching faculties in the institutions.

**Keywords:** Attitude, Medical students, Knowledge, Over the Counter, Pharmacology, Practice.

### Introduction

The drugs which are procured without the medical practitioner's prescription are called Over the Counter (OTC) drugs, but in India, though the phrase has no legal recognition, all the drugs that are not included in the list of 'prescription drugs' are considered as OTC drugs. Prescription drugs are those that fall under two schedules of the drug and cosmetics rules, 1945: Schedule H and Schedule X.

It is advisable to assess people's knowledge and understanding about OTC drugs to prevent the usage of OTC drugs that can lead to unwanted drug interactions, ADRs, misuse/abuse of drugs.<sup>1</sup>

The World Health Organization (WHO) has pointed out that responsible use of self-medication can prevent and treat diseases that do not require medical consultation and offers the cheaper alternative for treating common illnesses.<sup>2</sup> OTC drugs must be practiced based on authentic medical information otherwise irrational use of drugs can cause increase in the resistance of pathogens, wastage of resources, and can lead to serious health hazards such as adverse drug reaction and prolonged morbidity. OTC drug usage assumes a special importance among the medical students as they are the future medical practitioners and have a potential role in advising the patients about the benefits and drawbacks of OTC medication. Medical

students also differ from the general population because they are well-exposed to the knowledge about diseases and drugs.

In India, the manufacturing, importing, distributing and selling of drugs and cosmetics are controlled by the Drugs and Cosmetics Act (DCA) and its subordinate legislation, the Drugs and Cosmetics Rules (DCR).<sup>3</sup>

Intentional abuse of prescribed and OTC drugs has climbed gradually. Statistics from the 2005 national survey on drug use and health revealed that 6.4 million (2.6%) people aged 12 or older had used prescription drugs for nonmedical reasons during the previous month. Of these, 4.7 million used pain killers, 1.8 million used tranquilizers, and 1.1 million used stimulants. The nonmedical use of prescription drugs in the previous month among young adults aged 18 to 25 increased from 5.4% in 2002 to 6.3% in 2005, primarily because of an increase in the abusive use of pain killers.<sup>4</sup> It is also alarming that the prevalence rates are on the increase despite efforts to check this problem.

Globally, the use of OTC medications has been stated as being on the rise.<sup>5</sup> Various studies have shown that the use of OTC drugs is twice as common as that of prescribed medication and that OTC drugs is often used together with prescribed medication.

As there is an increasing inclination in the usage of OTC drugs that can lead to undesirable drug

interactions, ADRs, misuse / abuse of drugs. So it is advisable to assess people's knowledge and awareness about OTC drugs.

The prescription drugs are listed under schedule 'H' in India. There are about 570 molecules in schedule 'H' category that are stocked in a total of 5 – 8 lakh retail chemists. At present non-pharmacy stores can sell a few drugs on the schedule 'K' of the drugs and Cosmetics act in rural areas in villages whose populations is less than 1000.<sup>6, 7</sup>

FDA appoints a team of experts to review the safety and efficacy of all OTC drugs. These OTC team members have been assigned the products on a category basis e.g.: analgesics, antacids and anesthetics. The prerequisites of an NDA for prescription and OTC drugs are similar. A medication to be sold as OTC, according to the FDA regulations, it must be safe and effective.<sup>8, 9</sup>

An OTC drug is safe when it has low prevalence of adverse reactions and side effects under conditions of widespread accessibility. Safety depends on using medications appropriately, for e.g.; most headaches are not threatening, but in rare cases a headache is an early warning of a brain tumor or hemorrhage. People must use commonsense in determining when a symptom or illness is minor and when it needs medical attention and consult a doctor if they are unsure.<sup>10</sup>

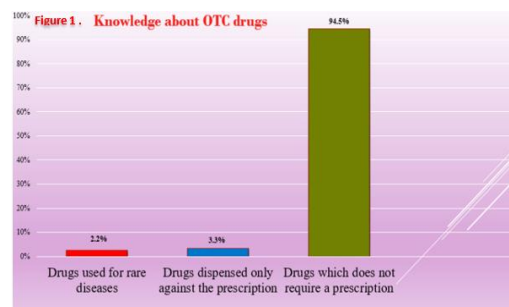
## Materials and Methods

A cross-sectional analysis was conducted in the month of November 2017 with a self-structured and pre-validated questionnaire. Study population included 90 medical students who have completed the pharmacology course. This study was a questionnaire based exploratory study. A self-developed questionnaire comprising of both open-ended and close-ended questions was prepared and was given to students of III year medical students. Data was analyzed and associations were tested using the Chi square test. The results were expressed as counts and percentages.

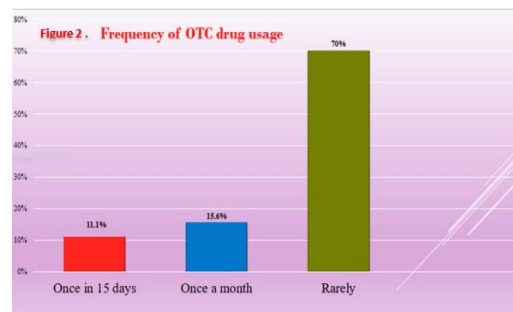
## Results

**Table 1:**

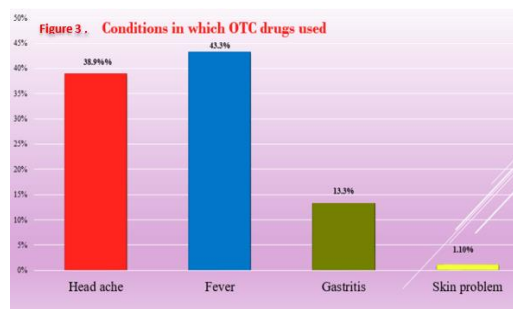
Conditions in which OTC drugs used	
Conditions	Percentage
Head ache	38.9%
Fever	43.3%
Gastritis	13.3%
Skin problem	1.1%



**Fig. 1:**



**Fig. 2:**



**Fig. 3:**

## Discussion

In this study, it was observed that 94.5 % of the students were aware of OTC drugs. Among 90 students, 87 (96.7%) students have used OTC drugs at least once. Fever (43.3%) and headache (38.9%) were the most common illness for which OTC drugs used. Difficulty in consulting the doctor and easy availability of drugs were some of the reasons for using OTC drugs. Medical books and advertisements were the most common source of information used to know about OTC drugs. Large numbers of students (76.7%) were aware of toxicities and interactions of drugs, which could be seen because of irrational use of OTC drugs.

## Conclusion

This study shows that majority of the participants were aware of OTC drugs and used them regularly. Fever, headache were the most common ailments for seeking medication. Easy accessibility, finding it cumbersome to go to doctor were some of the reasons for using OTC drugs. Majority of the participants used

medical text books and advertisements as the source of information to know about OTC drugs.

There is also need to create awareness and educate students regarding advantages and disadvantages of using OTC drugs by the teaching faculties in the institutions.

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