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# Perception of pharmacists regarding over-the-counter medication: A survey

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### Abstract:

**Objective:** To assess knowledge, attitude, and practice of the pharmacists toward dispensing the over-the-counter (OTC) medications using questionnaire.

**Materials and Methods:** A cross-sectional questionnaire-based study was conducted to assess the knowledge, attitude, and practice among pharmacists regarding OTC medications. Eighty out of hundred filled questionnaires were received from various pharmacists from medical shops in and around Kolar. Data were analyzed using descriptive statistics.

**Results:** A total of 74.6% responded to the questionnaire. Most of the dispensers (97.3%) at pharmacy were qualified with a D.Pharma/B.Pharma degree. Pharmacists with B.Pharma (80%) were able to define OTC. Majority of them had more than ten consumers taking OTC per week. Among the OTCs dispensed, common were analgesics (75%), antacids (48%), antihistaminics (40%), and others (35%). The choice of OTC brand was made by pharmacists (58.7%) and consumers (41.2%). Most of them (96.5%) asked the consumer's complaints before dispensing the drug, but only few (51%) counseled them regarding the instructions to administer medication. The brand of OTC was influenced by prescriptions of local doctor (60%), consumer's choice (31.2%), cost of the drug (16.7%), and medical representatives (5%). OTCs were safe to dispense, according to 90% of the pharmacists; however, among them, 50% expressed that the consumers should first consult doctor.

**Conclusion:** Majority of the pharmacists were qualified to dispense medication, but only few knew about OTC drugs. Analgesics were most commonly used OTC. These drugs were safe to dispense, however, consulting doctor before taking medications was suggested by some of them.

### Key words:

Attitude, knowledge, over-the-counter medications, pharmacists, practice

Over-the-counter (OTC) drugs are medicines sold directly to a consumer without a prescription by a health-care professional as compared to prescription drugs which should be sold only to consumers possessing a valid prescription.<sup>[1]</sup> The phrase OTC has no legal recognition in India, but all those drugs not included in the list of "prescription only" are considered to be nonprescription drugs. At present, there is no OTC schedule in the Drugs and Cosmetics Rules 1945. Hence, any drug outside schedule H, G, and X is considered to be an OTC drug.<sup>[2]</sup>

The use of OTC drugs has steadily increased in the global and Indian pharmaceutical market. The availability of OTC medications makes it possible for consumers to treat numerous ailments without the supervision of health-care professionals. The reclassification of medicinal products from sale on prescription only to nonprescription (OTC) sale is of current interest

in many countries.<sup>[3]</sup> While OTC drugs have their own benefits such as self-medication, they also bring with it serious disadvantages such as misdiagnosis, overdose, and drug interactions.<sup>[4]</sup> Pharmacists and pharmacy attendants play an important role in fostering self-medication among consumers.<sup>[5]</sup> In country like India whose literacy rate lies at 74% (world average - 84%) with Karnataka having 75%, the responsibility of the pharmacist in helping the consumers select the appropriate OTC drug increases many folds.<sup>[6]</sup>

In a study conducted among medical students, nursing, and clerical staff in a tertiary care teaching hospital, it was seen that more than 84% used OTC drugs and 87% of them shared OTC medications with friends and relatives.<sup>[3]</sup> Because of this both prescribed and nonprescribed medications are available to the general public with ease. The pharmacists play a vital role in controlling the number of medications being

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dispensed as OTC drugs. They can also counsel and advise the consumers regarding OTC medications.

To have a deeper understanding on the pattern of sales and dispensing of OTC drugs by pharmacists, this questionnaire-based study was carried out to assess knowledge, attitude, and practice of the pharmacists toward dispensing the OTC medications.

### Materials and Methods

This was a cross-sectional questionnaire-based study approved by the Institutional Ethics Committee and conducted in Kolar district from September to November 2015. All the pharmacists and pharmacy attendants willing to participate in the study were included after obtaining written informed consent. A predesigned validated questionnaire consisting of 16 questions was used to assess the attitude and practice among study population. The questionnaire was validated by senior professors and pretested on ten pharmacists. Cronbach's alpha of 0.85 was obtained. This pretest data were excluded from the main study analysis.

The first part of the questionnaire was regarding demographic details, qualification, specialization, and knowledge of OTC medication. The second part of questionnaire was intended to collect information on the acceptance and popularity of OTC drugs among the Kolar population. The questionnaire was distributed to all the pharmacists and pharmacy attendants in and around Kolar. Participants were explained about the study and questionnaire by providing participant information sheet. The filled-in questionnaires were collected in person. They were requested to mention their qualification and designation.

### Results

The data were analyzed using descriptive statistics. A total of 150 questionnaires were distributed to pharmacists in and around Kolar of which 112 pharmacists participated in the study, thus making the response rate of 74.6%. Out of 112 pharmacists, only 43 were able to define OTC correctly without prior explanation. Among the pharmacists with B.Pharm degree, 69% of were able to define OTC correctly whereas only 31% of D.Pharm degree holders could define OTC. Majority of the pharmacists have dispensed OTC medications. The average number of consumers requesting OTC in a week is shown in Figure 1.

The most commonly dispensed OTC drugs by various pharmacies are shown in Figure 2.

The most common symptoms for which OTC medications were purchased are shown in Table 1.

Pharmacists practice and opinion regarding OTC are shown in Table 2.

The OTC medications were considered safe as per 43.7% pharmacists and 49.1% suggested that consumers should consult physician before taking the drug.

**Table 1: Common symptoms for which over-the-counter drugs were dispensed**

Symptoms	OTC drugs dispensed (%)
Common cold	78.57
Headache	76.78
Fever	72.32
Acidity	53.57
Vomiting	49.1
Joint pain	51.78
Diarrhea	39.28
Constipation	22.32
Myalgia	5.35
Giddiness	2.67

OTC=Over-the-counter

**Table 2: Pharmacists practice and opinion regarding over-the-counter drugs**

Question	Reply	Response (%)
1. Choice of OTC medication dispensed is made by	Consumer	42
	Pharmacist	58
2. Are consumer complaints asked before dispensing OTC drugs?	Yes	96.5
	No	3.5
3. Do you counsel the patient before dispensing the drug?	Yes, always	52.6
	Yes, sometimes	47.4
4. Do the consumers purchase the drug by brand name or generic name?	Brand name	67
	Generic name	33

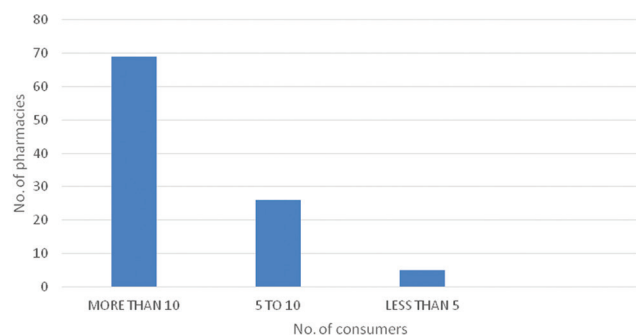
OTC=Over-the-counter

### Discussion

Use of OTC drugs and self-medication is becoming an increasingly important area within health care. The World Health Organization considers self-medication as part of self-care that helps in reduction of the burden on health-care system.<sup>[3]</sup> The recent trend is to expand the list of OTC medicines and to increase the availability of controlled drugs as this can increase choice to the people to take informed treatment decisions.<sup>[7]</sup> On the other hand, it is associated with increased risk of abuse of these medications, which is becoming an area of national concern. The need to avoid unnecessary exposure to medication is a concern among the health-care community and most consumers. Interestingly, there has been a decrease in prescription drug use but an increase in the use of OTC medications, herbals, and dietary supplements.<sup>[8]</sup> Moreover, in case of misuse, overuse, or due to drug interactions, such OTC medications can also lead to adverse drug reactions.

Hence, the safety of OTC drugs is debatable. In this scenario, it is the pharmacist who plays a prime role in educating and guiding the consumers to take informed decisions as he is the most accessible health-care professional to the consumers.

In this study, we have documented the perception of pharmacists regarding the use and dispense of OTC medications. It was found that all of the pharmacists had



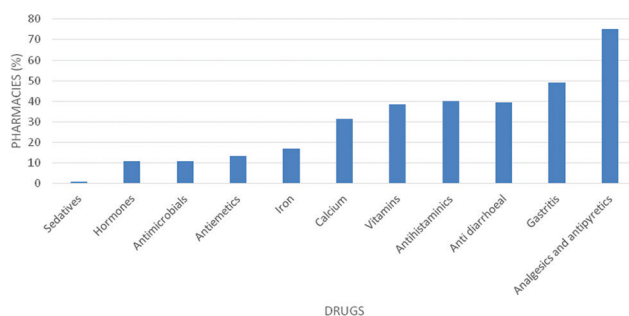
**Figure 1:** Average number of consumers requesting over-the-counter drugs in a week

dispensed OTC medications. However, only very few of them (39.4%) could define OTC drugs correctly without prior explanation. When a comparison was drawn between their level of education and ability to define OTC drugs, it was seen that most of the pharmacists with a B.Pharma degree answered correctly while a very minimal number of pharmacists qualified with D.Pharma could do the same. They had dispensed the OTC drugs without knowing the meaning of it, which could be doubtful regarding the safe dispensing practice among them. Studies done among pharmacies in Bengaluru, Karnataka and Tamil Nadu showed high proportions of dispensing counters without prescription which is alarming.<sup>[9,10]</sup>

The present study found that most of the pharmacists encountered more than ten consumers per week asking for OTC medications. Analgesics and antipyretics, drugs for gastritis, and antidiarrheal agents were the most commonly dispensed OTC drugs, which is in line with the results of similar studies conducted in other parts of the country.<sup>[11]</sup> This could be due to pain being the most common symptom encountered by the consumers, and most of them would be aware of the common analgesics through media or through old prescriptions.

The choice of the OTC medication dispensed is made by either consumers or pharmacists. Sometimes, the consumers reveal the complaints to the pharmacist who then decides the appropriate OTC medication. Most (96.5%) of pharmacists enquired about patient complaints before dispensing OTC medications. Almost all pharmacists counsel the patient on how to consume the OTC drugs, of which half of them always counsel and the remaining only sometimes. Knowing the patient complaints and counseling them is a welcome step by pharmacists as they can understand the seriousness of the problem and advise them to seek help from doctor if necessary.

Most of the pharmacists stated that the consumers purchase the drug by its brand name. Around 60% of the pharmacists dispensed the brand of OTC medication which was most commonly prescribed by doctors in their locality. Nearly 31.2% of pharmacists chose the drug brand based on the consumers choice while 16.7% of them decided depending on the cost of the drug and 18% relied their decision on media such as television and newspaper. Therefore, it is not only the pharmacists but also the consumers who have a significant influence on the OTC brands purchased. Consumers may be



**Figure 2:** Commonly dispensed over-the-counter medications by pharmacies

exposed to such information through health-care professionals or through OTC drug advertising, television, and print promotions.<sup>[12]</sup>

Majority of the pharmacists (50%) opined that dispensing OTC medications is safe, but one should consult the physician first. According to 43.75% pharmacists, OTC medications are safe to dispense while 6.25% pharmacists say that such drugs are unsafe. It is alarming that many of the pharmacists still feel that dispensing OTC drugs without consulting doctor is completely safe. Pharmacists need to be educated regarding the dispensing practices pertaining to OTC/non-OTC drugs. They should make an attempt to ask the consumers regarding the complaint for which they are seeking drug. If needed, the pharmacist should advise the consumer to consult doctor for the necessary treatment. The drugs other than OTC medications should not be dispensed without prescription.

Regulations on the purchase and use of OTC medications are therefore required to prevent unnecessary adverse drug reactions and interactions. That way, the burden on the health-care system to treat drug toxicities arising from illegitimate use of OTC drugs can be alleviated, and the health resources can be utilized for better purposes. Pharmacists, being the prime mediators, should be well trained to identify the circumstances under which OTC drugs may be dispensed and when to refer the patient to a doctor. OTC drug advertising should also be regulated so that the consumers get the correct information regarding the various OTC medications.

## Conclusion

Majority of the pharmacists were qualified to dispense medication, but only few knew about OTC drugs. Analgesics were most commonly used OTC drugs. These drugs were safe to dispense; however, consulting doctor before taking medications was suggested by some of them.

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### Conflicts of Interest

There are no conflicts of interest.

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