

ASSESSMENT OF KNOWLEDGE, ATTITUDE AND PRACTICE OF OVER-THE-COUNTER DRUGS AMONG COMMUNITY PHARMACISTS IN KASARAGOD

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ABSTRACT

Pharmacovigilance is the science and activities relating to the detection, assessment, understanding and prevention of adverse effects or any other medicine/vaccine related problem. OTC drugs, also known as non-prescription medicines, include the drugs sold without a prescription from a registered medical practitioner (RMP) and are regulated by the Food and Drug Administration (FDA). Aim of the study is to assess the Knowledge, Attitude and Practice (KAP) of OTC drugs among community pharmacists in Kasaragod area. A cross-sectional questionnaire based study was conducted to assess the KAP of OTC drugs among community pharmacists in Kasaragod area. Questionnaire was distributed to 85 pharmacies situated in Kasaragod. The majority of the community pharmacists were female (67.5%). 73.7% gave correct responses for knowledge related questions, 71.6% gave correct responses for attitude related questions, 77.0% gave correct responses for practice related questions. The outcome of the

study suggested that Community Pharmacists should improve their knowledge, attitude, and practices regarding OTC medications under auspices of regulatory authorities and maintain good liaison with healthcare professionals.

KEYWORDS: Knowledge, Attitude, Practice, OTC, Community Pharmacist.

1. INTRODUCTION

OTC drugs, also known as non-prescription medicines, include the drugs sold without a prescription from a registered medical practitioner (RMP) and are regulated by the Food and Drug Administration (FDA). The current trend of 'Over-the-Counter (OTC) Medicines' use has grown steadily in the last few years. In India, the self-medication was more common in rural and urban areas, with rates ranging from 32.5% to 81.5% respectively.^[1] OTC medications may be abused and misused, which are regarded as clinically and ethically inappropriate.^[2] Misuse of OTC drug by consumer is through overuse, taking several drugs concurrently and using home remedies to treat potentially serious diseases^[3] the most common medical ailments for which self-medication is practiced include headache, joint pain, fever, cold and cough, allergy, heartburn and diarrhoea.^[4]

The practice of OTC medication is common in India and many other parts of the world, especially in the economically deprived communities. Unregulated availability of a wide range of drugs coupled with inadequate health services promotes OTC medication as compared to prescribed drugs. Although OTC medications are of proved efficacy and safety, their side effects and interactions have serious implications, especially in extremes of age, i.e., children, elderly and in special conditions such as pregnancy and lactation.^[5]

Many countries recognize OTC medicines as a separate category of drugs and have established regulations for their use. In India, till date there are no guidelines for licensing of OTC medicines. There is no separate category allotted for OTC medicines in India and the drugs which do not come under the prescription medicines schedule are generally sold as over-the-counter medicines.^[6] Thus, a well-regulated category of OTC medicines, patient awareness programs, and pharmacists and pharmaceutical companies' participation are imperative to optimize the use of OTC medicines in India.^[7]

Present study aims to study the knowledge, attitude and practice among community pharmacists in Kasaragod. Kasaragod, the northernmost district of Kerala. Present study is conducted in the areas of Kasaragod town.

2. MATERIALS AND METHODS

2.1. Study design

A cross-sectional questionnaire-based survey was conducted on community pharmacists in a selected area of Kasaragod, Kerala.

2.2. Study population

Community Pharmacists in the Kasaragod and its surrounding areas.

2.3. Study duration

The study was conducted for a period of four months (March to June).

2.4. Inclusion criteria

- Community Pharmacist and Owners of Community Pharmacy in the Kasaragod and its surrounding areas.
- Both male and female Community Pharmacist who can give informed consent were selected for the study.

2.5. Exclusion criteria

Community Pharmacist who are not willing to participate in the study.

2.6. Data collection Tool and Technique

A self-administered, structured, and pre-tested questionnaire was used. The questionnaire was adopted from the previously conducted similar studies and modified to fit with the current set-up. The data were collected by three data collectors who were well briefed about the data collection procedure and purpose of the study. The questionnaire composed of four parts: socio-demographic characteristics (10 questions), knowledge-related questions (10 questions), and practice-related questions (10 questions) respectively. Any doubts regarding questionnaires was clarified by investigators. It was made clear to them that at no point of the study their identity will be revealed and it is not necessary to write their name. The scores were calculated by adding the correct answers and dividing them into the total number of questions. For the questions, each correct answers to the proposed questions and dividing them into the total number of questions. A score of 1 was allocated for each correct answer or positive response and score 0 was allocated for wrong, or negative response. Only completely filled questionnaire were selected for final data analysis.^[8,9,10]

2.7. Statistical analysis

All statistical analysis will be carried out using Microsoft Excel sheet. Frequencies and percentages were used to summarize the data. Charts and tables were used to present the data.

3. RESULTS AND DISCUSSION

3.1. Socio – demographics

3.1.1. Gender wise distribution

Among 85 study participants 28(32.6%) were males and 58 (67.4) % were females. Female participants are more compared to males. The [Table 1/Fig 1] summaries the gender wise details of participants.

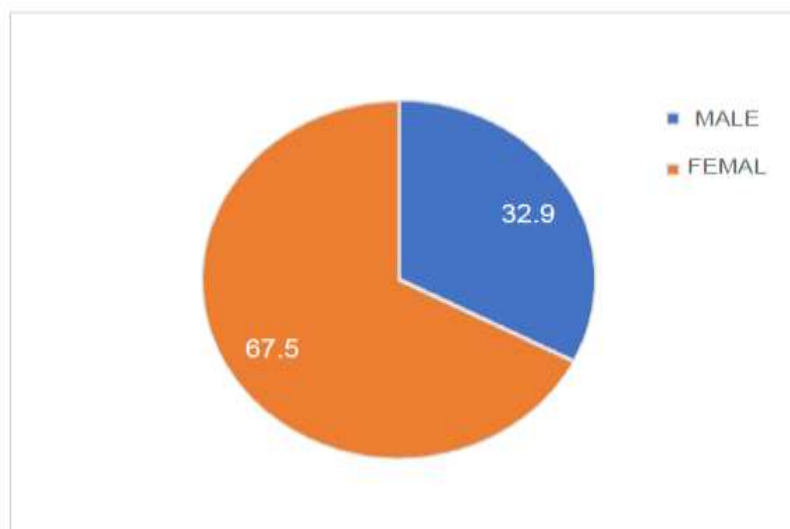


Figure 1: Gender wise distribution.

Table 1: Gender wise distribution.

Gender	No of participants	Percentage
Male	28	32.9%
Female	57	67.5%

3.1.2. Age wise distribution

Based on the age, the study participants can be categorized into 3 groups such as 20- 29 years(49%), 30-40 years (37%) and above 40 years (14%). 20 – 29 age group was more compared to other age groups. The [Table 2/Fig 2] summaries the age wise details of participants.

Table 2: Age wise distribution.

Age	Numbers	Percentage
20 – 30	42	49%
30 – 40	31	37%
40 above	12	14%

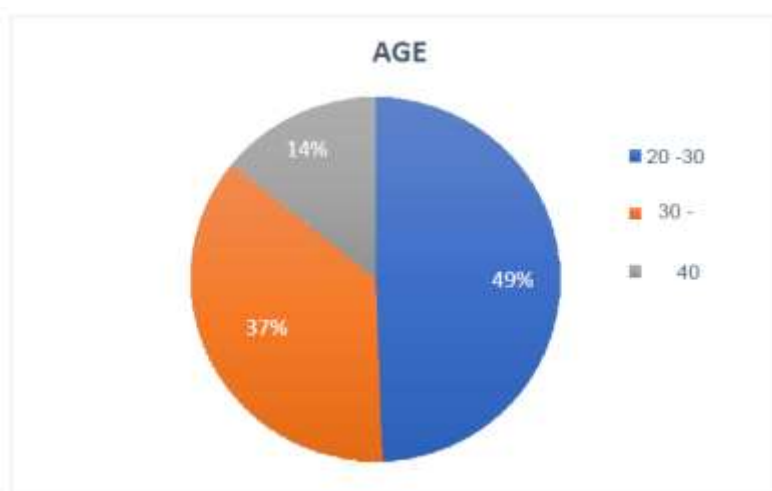


Figure 2: Age wise distribution.

3.1.3. Education wise distribution

All the study participants of this study are pharmacy graduates [D. Pharm (55%), B. Pharm (35%), M. Pharm (6%), Pharm. D (4%)]. D. Pharm was higher compared to other pharmacy programs. The [Table 3/Fig 3] summarizes the education wise details of participants.

Table 3: Education wise distribution.

Qualification	No of participants	Percentage
D. Pharm	47	55%
B. Pharm	30	35%
M. Pharm	5	6%
Pharm. D	3	4%

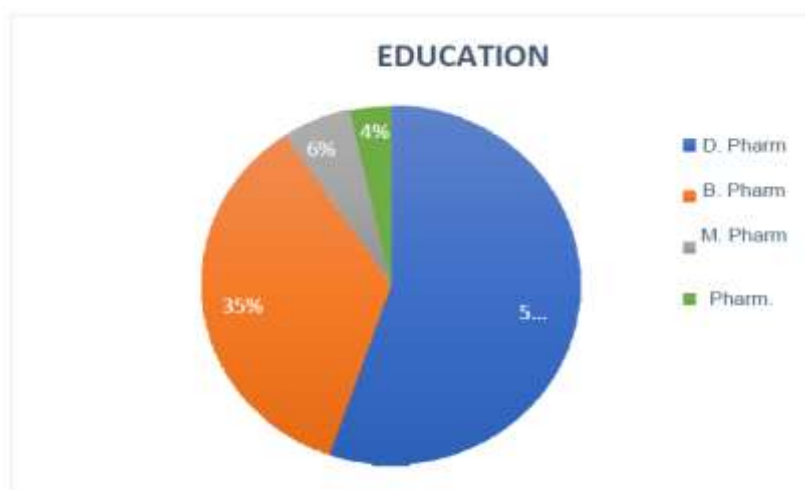


Figure 3: Education wise distribution.

3.2. Community pharmacist knowledge about otc drugs

Responses pertaining to knowledge by the participants are depicted in Table 4/ Fig 4.

Table 4: Community pharmacists knowledge about OTC drugs.

Sl. No.	Knowledge related questions	Response	Percentage
1	In medical parlance acronym OTC stands for what?	54	63.5%
2	Prescription only drugs can be given only with prescription of a registered medical practitioner (T/F)	85	100%
3	OTC drugs can only be given with prescription from a RMP (T/F)	50	58.8%
4	Drugs categorized under Schedule H can be sold without a prescription (T/F)	85	100%
5	Is there any legal recognition for OTC (T/F)	24	28.2%
6	All OTC drugs are safe and effective(T/F)	81	95.2%
7	Paracetamol toxicity may induce liver damage (T/F)	85	100%
8	Aspirin is beneficial for gastritis (T/F)	28	32.9%
9	Patient can buy opioid analgesics as OTC (T/F)	85	100%
10	Does OTC antibiotics cause superinfection(T/F)	49	57.6%

3.3. Community pharmacist attitude about otc drugs

Responses of participants regarding questions related to attitude are depicted in Table 5/ Fig 5

Table 5: Community pharmacists attitude about OTC drugs.

Sl. No.	Attitude related questions	Response	Percentage
1	Do you contemplate that antibiotics should be made available as OTC? (Y/N)	85	100%
2	Does misuse of OTC concerns you? (Y/N)	81	95.2%
3	Is it necessary to update the information about OTC periodically? (Y/N)	85	100%
4	Should an age limit be imposed for procuring OTC? (Y/N)	38	44.7%
5	Do you agree that OTC drugs support selfmedication in patients? (Y/N)	85	100%
6	It is appropriate to treat minor-ailments like fever with OTC medications. (Y/N)	85	100%
7	Over the Counter drugs are not affected by storage conditions, like temperature, moisture, and direct sunlight. (Y/N)	6	7.05%
8	Do you think that antibiotic selection is prompt through OTC? (Y/N)	81	95.2%
9	Over the Counter drugs can modify or alter the action of another drug(Y/N)	34	40%
10	It is okay to share OTC medications with others (Y/N)	29	34.1%

3.4. Community pharmacist practice about otc drugs

Response of participants regarding questions related to practice are depicted in Table 6/ Fig 6

Table 6: Community pharmacists Practice about OTC drugs.

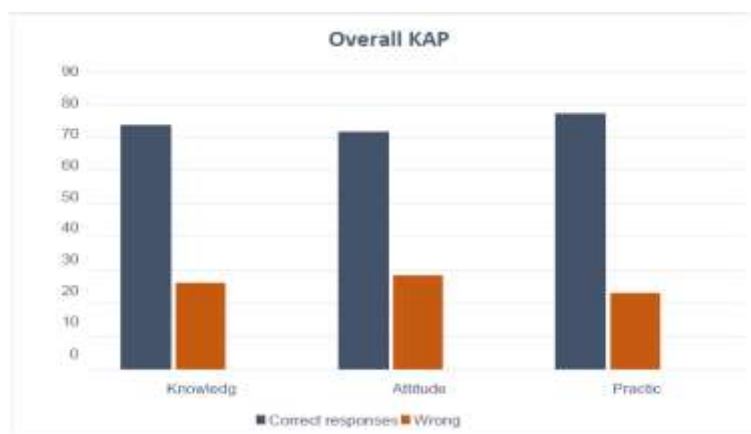
Sl. No.	Practice related questions	Response	Percentage
1	Do you ask for prescription before dispensing drugs? (Y/N)	85	100%
2	Do you update your knowledge regarding OTC? (Y/N)	47	55.2%
3	Do you ever advice patients to consult a doctor when they come to you with any ailments rather than giving them medicine yourself? (Y/N)	85	100%
4	Did you ever sell any IV fluid or injection without prescription? (Y/N)	85	100%
5	If you suspect about the abuse/misuse of OTC, will you counsel the costumers/ patients? (Y/N)	85	100%
6	Do you dispense OTC medication for major ailments (Y/N)	84	98.8%
7	Do you reported/ suspect the ADR with OTC medications? (Y/N)	34	40%
8	Before dispensing the OTC, drugs do you take any patient medication history interview or medical history? (Y/N)	37	43.5%
9	Do you dispense an alternative brand in case of unavailability of prescribed brand without consulting the concerned physician? (Y/N)	27	31.7%
10	If OTC drugs show a change in shape, color, and or odor can we Continue using until it expires (Y/N)	85	100%

3.5. Kap scores overall

KAP scores depicted in Table 7/ Fig 7.

Table 7: Overall KAP scores.

Scores	Correct responses	Percentage	Wrong responses	Percentage
Knowledge	627	73.7%	223	26.2%
Attitude	609	71.6%	241	28.3%
Practical	655	77.0%	195	22.9%



4. DISCUSSION

Over-the-counter medications play a prominent role in the healthcare system and account to be the most predominant means of treating common health problems in India.^[11] Due to the increase in the cost associated with the healthcare sector, the use of OTC medications and self-medication have been increasing dramatically in the last decades. With pharmacists being the frontline of contact for the patients and having the opportunity to possibly counsel and educate patients on suitable OTC medication use, we have focused the present study on the community pharmacy settings where the drugs directly meet their consumers.

Community pharmacists have a huge role in health-care management and they can positively influence healthcare promotion. Their professional activities include providing an accurate supply of the appropriate products, offering guidance to patients on the distribution of non-prescription and prescription medications as well as providing drug information to the patients, health professionals, and the public, and engaging in health promotion programs.^[12]

The proportion of the respondents who had practiced self-medication with OTC drugs is very high. OTC drugs empower the patients; its use may lead to mind boggling harms to the consumers. Their improper use and inability to follow the necessary precautions due to lack of knowledge of their side effects and interactions could lead to serious complications, especially in children and elderly. Hence, the public must be educated on the type of illnesses that are to be self-diagnosed and medicated and about the pitfalls and hazards of OTC.^[13]

Pharmacists and drug dispensers are the final link between medication and patients. Public also finds pharmacists as an easily accessible and acceptable source of advice and suggestion. Hence, the pharmacists could play a vital role in modifying the behaviour of patients as far as self-medication is concerned. They can also provide suitable, clear and relevant information to the patient about their medications and about various nuggets of OTC drug use. All these are clearly laid down in good pharmacy guideline.^[14]

There are few studies done to delve into the perception of dispensers/ pharmacists working in community pharmacies about OTC drugs. Hence, we planned to assess the KAP of OTC drugs among Community Pharmacists working in the pharmacies. The majority of the community pharmacists were female (67.5%) and most of the surveyed pharmacists are qualified with a diploma in pharmacy (55%). Among the pharmacists, only few were able to define OTC (63.5%) and all were aware of prescribed drugs (100%). Large numbers of

participants in our study (95.2%) were concerned about the misuse of OTC. Some other studies undertaken among pharmacists have also made similar observations. This misuse of OTC is more prevalent these days among the youth because of the advancement in technology. Most of them have access to internet and they are able to get drug information over internet and their unrestricted supplies in the pharmacies are intensifying this practice. Among 85 participants, 95.2% pharmacists believed that OTC drugs are safe drugs to consume. The rational use of OTC drugs should be promoted because OTC drugs are believed to be safe and effective, indeed they are not. When adopted effectively the self-medication practice can be beneficial because it may relieve acute pain, reduce treatment cost and physician interaction time. However, when used inappropriately they can cause severe health related complication such as masking the underlying disease and causing several adverse effects. Inappropriate and frequent use of OTC drugs can lead to the inappropriate dosing, drug duplication, drug interaction and treatment failure. In our study, only 55.2% pharmacists were periodically updating the knowledge about OTC drugs. It was reported in this study that, only 40% of participants have reported/ suspected ADR of OTC medications in Kasaragod.

5. CONCLUSION

It is a sustainable fact that OTC use is not illegal, but it might be associated with safety and other issues and may lead to potential health hazards. The findings of the study show that the majority of the community pharmacists have basic knowledge regarding OTC drugs. It is recommended that the need for health educational interventions such as pamphlets and awareness programs about the hazards of misusing drugs targeting both the general public as well as community pharmacists thereby promoting the appropriate use of drugs. They should be properly trained and should regularly update about OTC drugs with respect to CDSCO. There is need of awareness in drug usage and about existing rules and regulation which is governed by Drugs and Cosmetic Act 1940 and rules 1945. Community Pharmacists should improve their knowledge, attitude, and practices regarding OTC medications under auspices of regulatory authorities and maintain good liaison with healthcare professionals. Hence the study concludes that improving pharmacist's KAP about OTC can improve the rational use of non-prescription (OTC) drugs.

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