

**KNOWLEDGE, ATTITUDE AND PRACTICE ON OVER THE COUNTER
(OTC) DRUGS AMONG COMMUNITY PHARMACISTS**



Dissertation submitted to

**THE TAMILNADU DR.M.G.R. MEDICAL UNIVERSITY,
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In partial fulfillment of the requirements for the award of the Degree of
MASTER OF PHARMACY

IN

PHARMACOLOGY

Submitted by

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This is to certify that the dissertation work entitled “**KNOWLEDGE, ATTITUDE AND PRACTICE ON OVER THE COUNTER (OTC) DRUGS AMONG COMMUNITY PHARMACISTS**” submitted by University **Reg no.261925911** is a bonafide work carried out by the candidate under the guidance of **Dr. Prudence A Rodrigues, M.Pharm., PhD.,** Professor, Department of Pharmacy Practice, PSG College of Pharmacy and submitted to The Tamil Nadu Dr. M. G. R. Medical University, Chennai, in partial fulfilment of Master of Pharmacy in Pharmacology at the Department of Pharmacology, PSG College of Pharmacy, Coimbatore, during the academic year 2020-2021.

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Dr. Prudence A Rodrigues, M.Pharm., Ph.D.,
Guide/ Professor

DECLARATION

I do hereby declare that the dissertation work entitled “**KNOWLEDGE, ATTITUDE AND PRACTICE ON OVER THE COUNTER (OTC) DRUGS AMONG COMMUNITY PHARMACISTS**” submitted to The Tamil Nadu Dr. M.G.R. Medical University, Chennai, in partial fulfilment for the Degree of Master of Pharmacy in Pharmacology, was done by myself candidate under the guidance of **Dr. Prudence A Rodrigues, M.Pharm., PhD.**, Professor, Department of Pharmacy Practice, PSG College of Pharmacy, during the academic year 2020-2021.

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EVALUATION CERTIFICATE

This is to certify that the dissertation work entitled “**KNOWLEDGE, ATTITUDE AND PRACTICE ON OVER THE COUNTER (OTC) DRUGS AMONG COMMUNITY PHARMACISTS**” submitted by **Reg.no: 261925911** to The Tamil Nadu Dr. M.G.R. Medical University, Chennai, in partial fulfilment for the Degree of Master of Pharmacy in Pharmacology, Department of Pharmacology, PSG College of Pharmacy, during the academic year 2020-2021.

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***DEDICATED TO MY
LOVABLE PARENTS,
BELOVED TEACHERS,
ALMIGHTY & MY
DEAR FRIENDS***

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ABBREVIATION

OTC	-	Over The Counter
WHO	-	World Health Organization
FDA	-	Food and Drug Administration
CDSCO	-	Central Drugs Standard Control Organization
DCA	-	Drugs and Cosmetics Act
DCR	-	Drugs and Cosmetics Rules
SPSS	-	Statistical Package for Social Sciences

ABSTRACT

ABSTRACT

Introduction: Over The Counter (OTC) drugs are drugs which can be sold in the pharmacy without the prescription of registered medical practitioners. Central Drugs Standard Control Organization (CDSCO) regulates import, manufacture, distribution and sale of drugs and cosmetics by Drugs and Cosmetics Act (DCA) and its subordinate legislation, Drugs and Cosmetics Rules (DCR), 1940 in India. Community Pharmacists have an important role in modifying patients behaviours and curbing the misuse of OTC.

Aim: To assess the knowledge, attitude and practice towards OTC drugs dispensing among community pharmacists.

Materials and Methods: A cross-sectional questionnaire based study was conducted to assess the KAP of OTC drugs among community pharmacists working in the community pharmacies. Pamphlets were provided to community pharmacists to create the awareness about OTC drug dispensing in pharmacy. Questionnaire was distributed to 160 community pharmacists situated in Peelamedu and its surrounding areas. All the data were analysed by using SPSS software and applying descriptive statistics, odds ratio.

Results: A total of 160 participants responded to the questionnaire. About 80.6% participants were males and 19.4% were females. All participants having a qualified pharmacy degree [D. Pharm (15.0%), B. Pharm (66.9%), M. Pharm (15.0%), Pharm. D (3.1%)]. Among 160 participants, 149 (93.1%) good knowledge, 93 (58.1%) positive attitude, 85 (53.1%) practice toward OTC drug dispensing. Respondents age and education qualification were significantly associated with knowledge. Knowledge of OTC drugs among community pharmacists was positively correlated with attitude.

Conclusion: Community Pharmacists are aware about OTC drugs and had positive attitudes to periodically update information regarding OTC drugs but some of them were less enthusiastic to update their knowledge. They should be properly trained and regularly update about OTC drugs.

INTRODUCTION

INTRODUCTION

The current trend of 'Over-the-Counter (OTC) Medicines' use has grown steadily in the last few years. "Over-the-counter (OTC) medicines are medicines that may be sold directly to a consumer without a prescription from pharmacy personnel, as compared to prescription drugs, which are dispensed only to consumers possessing a valid prescription"¹.

OTC medicines can be classified into two categories:

- First category of OTC medicines are the ones which have been under the category of non-prescription medicines since the time they were introduced.
- The second category of OTC medicines are those that had been prescription medicines initially but were later shifted to the OTC category².

According to World Health Organization (WHO) self - medication is the selection and use of medicines by individuals to treat self-recognized illnesses or symptoms. Self-medication involves acquiring medicines without a prescription, resubmitting old prescriptions to purchase medicines, sharing medicines with relatives or members of one's social circle or using spare medicines stored at home³.

Many countries recognize OTC medicines as a separate category of drugs and have established regulations for their use. In accordance to that, over the period large number of drugs have been deregulated and made available as OTC drugs. There are currently more than 3,00,000 different OTC drugs available only in US. OTC drugs or non-prescription drugs are group of medicines which can be obtained without the prescription of registered medical practitioners, and regulated by Food and Drug Administration (FDA) through OTC drug monograph¹.

Trend of using OTC drug is high in India. OTC drugs has no legal recognition in India, but all those drugs not included in the list of 'prescription only' are considered to be non-prescription 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. Central Drugs Standard Control Organization (CDSCO) regulates import, manufacture, distribution and sale of drugs and cosmetics by Drugs and Cosmetics Act (DCA) and its subordinate legislation, Drugs and Cosmetics Rules (DCR), 1940 in India⁴.

Drugs listed in Schedules H, H1, and X should carry a label stating that these drugs are to be sold by retail only on prescription of a registered medical practitioner. The drugs listed in Schedule G (mostly antihistamines) must carry a mandatory text on the label stating, Caution:

it is dangerous to take this preparation except under medical supervision.” Surprisingly, certain important drug categories such as diuretics and amino salicylates (sulfasalazine, mesalamine) are not included under any drug schedule creating a confusion for pharmacists whether to sell these drugs as OTC or prescription medicines. It has to be stressed that in India, the phrase “OTC” has no legal recognition. Schedule K of the Drug and Cosmetics Act and its Rules includes household remedies such as paracetamol, liquid paraffin, eucalyptus oil, tincture iodine, and various formulations for the treatment of cough and cold and are the potential OTC drugs. Currently, nondrug-licensed stores (e.g., non-pharmacists) can sell a few medicines classified as “Household Remedies” in Schedule K of the D and C Rules in villages whose population is below 1000 subject to certain other conditions. Under the provision of the Drugs and Magic Remedies (Objectionable Advertisements) Act, 1954 and Rules, 1955, the advertising and misleading promotion of some drugs/classes is kept under control to avoid self-medication by people².

Most of the epidemiological data shows that India is a country where diseases are more prevalent. Diseases must be treated or cured only by using proper medicines with proper usage. If prescribed medicines are appropriate to treat the diseases, but if they are not taken properly then it will again lead to harm instead of curing the disease⁵.

The illnesses are treated by self-medication because of easy availability of a wide range of drugs commercially coupled with inadequate health services result in increased proportions of drugs used as self-medication compared to prescribed drug. Although, OTC (over the counter) drugs are meant for self-medication and are of proved efficacy and safety, their improper use due to lack of knowledge of correct dose, side effects, and interactions could have serious implications, especially in extremes of ages (children and old age) and special physiological conditions like pregnancy⁵.

The concept of self-medication which encourages a person to look after minor ailments with simple and effective remedies has been adopted worldwide. Unsupervised self-medication places patient at risk for medication misuse. Patient self-medication may also bring out dangerous drug- drug and drug- disease interactions⁶.

Safe use of OTC drugs:

- Consult your doctor or pharmacist before purchasing an OTC product
- Read the label carefully

- Do not take medicines with the same active ingredients
- Only treat the symptoms you have
- Keep a current list of medicines you take
- If you are pregnant or breastfeeding consult with your doctor before taking an OTC medicine
- Remember herbal supplements are not the same as OTC medicines
- Always check the expiration date
- Only use the measuring device that comes with the OTC product
- Seek medical attention if your symptoms get worse or you experience side effects^{7,8}

Over-the-counter (OTC) medicines are those you can buy at the store. You don't need a prescription from your doctor. They help you feel better by treating or preventing common health problems. These could include pain, allergies, constipation, cold and flu, or nausea. But sometimes OTC medicines can cause unpleasant effects⁹. These are called adverse effects.

They include:

- side effects
- drug-drug interactions
- food-drug interactions
- allergic reactions

Side Effects:

Side effects are effects that medicines have on your body that don't help your symptoms. Most side effects are unpleasant. A few examples are nausea, dizziness, or bleeding in your digestive tract. Sometimes, side effects can be useful. For example, certain antihistamines can cause sleepiness. This might be bad for people who take antihistamines during the day. But if you're taking an antihistamine at night time, this side effect might help you get the sleep you need. Side effects are not the same thing as true drug allergies. Those are much less common⁹.

Drug – drug Interactions:

The body processes every medicine differently. When medicines are used together, the ways they affect the body can change. This is called a drug-drug interaction. It happens whether they

are prescription or OTC medicines. It can increase the chance that you will have side effects from medicines you are taking.

The main interaction types are:

- **Duplication:** This is when you take 2 medicines that have similar active ingredients. It can give you more medicine than you need. An example is when you take OTC ibuprofen (Advil, Motrin) plus a prescription anti-inflammatory medicine. Too much of either an anti-inflammatory or pain reliever can hurt your kidneys or liver.
- **Opposition:** Medicines with active ingredients that have opposite effects on your body can interact. This may reduce the effectiveness of 1 or both medicines. For example, OTC decongestants may raise your blood pressure. This can work against (cause opposition to) medicines that lower your blood pressure.
- **Alteration:** One medicine may change the way your body absorbs, spreads, or processes another medicine. For example, aspirin can change the way some prescription blood-thinning medicines work^{9,10}.

Drug – food interactions:

Food may change how your body processes some OTC or prescription medicines. This is called a drug-food (or drug-nutrient) interaction. Sometimes what you eat and drink can affect the ingredients in a medicine you're taking. This can prevent the medicine from working the way it should. For example, medicines taken by mouth are usually absorbed through the lining of the stomach. The nutrients from the food you eat are also absorbed this way. If you take a medicine with food but the directions say not to, your body might not be able to absorb the medicine the right way.

Food does not affect all OTC medicines. But what you eat and when you eat it does matter with some medicines. This is why some medicines should be taken on an empty stomach. That means 1 hour before or 2 hours after eating. At the same time, some medicines are absorbed or processed better when you take them with food⁹.

Allergic Reactions:

It's not common, but some people are allergic to certain medicines. Signs of an allergic reaction include itching, rash, hives, and breathing problems. If you've ever had an allergic reaction to a medicine, avoid medicines that contain the same ingredients. Call your doctor or seek immediate medical help if you think you're having an allergic reaction⁹.

Community Pharmacist Role in OTC medications:

While more is being done to promote awareness regarding the importance of the safety and appropriate use of OTC drugs, pharmacists are still the patients best resource in the proper selection of OTC products. Moreover, while it is important for all patients to properly use OTC products, individuals of advanced age, individuals with pre-existing medical conditions such as diabetes, the pediatric population, and those currently using prescription drugs should always consult a health care professional when considering the use of OTC drugs to avoid possible contraindications, drug-drug interactions, food-drug interactions, drug-alcohol interactions, and/or dosing errors¹¹.

When patients are taking multiple OTC products, pharmacists should encourage patients to always check the active ingredients of these products and ensure that a particular ingredient is not in another product they are taking to avoid possible over-dosages, and to use only products that treat their specific symptoms and therefore avoid the unnecessary use of multiple products. As the profession of pharmacy continues to progress, the role of the pharmacist will expand as well. In the midst of these advances, pharmacists will always be considered the drug experts and the fundamental source of drug information for all patients who use these products¹¹.

While it is virtually impossible for pharmacists to counsel every patient who uses an OTC product, pharmacists should remain accessible to patients. When a patient does seek guidance with regard to these products, pharmacists also should seize the opportunity to educate the patient about the importance of using these products appropriately. When used correctly, OTC products are very effective in treating a variety of common ailments. Recommendations from pharmacists enable patients to make educated choices regarding the use of OTC products¹².

The OTC Committee of the Organization of Pharmaceutical Producers of India is working toward the promotion of responsible self-medication and creating awareness in the general public as well as the government¹³. This study was designed to study knowledge, attitude and practice on over the counter (OTC) drugs among Community Pharmacists.

BACKGROUND

BACKGROUND

Over the counter drugs are medicines sold directly to consumer without a prescription from health care personnel. The factors influencing OTC drugs dispensing without a prescription may differ in various developing and developed countries, and attempts in developing interventions need to address the context and focus on the root causes specific to the part of the world. Although professional competency of Community Pharmacists in OTC drugs dispensing is essential, least number of studies have evaluated the knowledge and attitudes concerning OTC drugs dispensing. Hence, this study was designed to study the knowledge, attitude and practice on Over the Counter (OTC) drugs among Community Pharmacists.

REVIEW OF LITERATURE

REVIEW OF LITERATURE

1.Meher BR et al., Knowledge, Attitude and Practice of Over the Counter Drugs among Dispensers Working in the Retail Pharmacies of a South Indian City-A Cross-sectional Questionnaire Based Study. Journal of Clinical & Diagnostic Research. 2018 Jan 1;12(1).

This study conducted as a cross-sectional questionnaire based study to assess the KAP of OTC drugs among dispensers working in the retail pharmacies. This study showed that many dispensers were not aware about OTC drugs. They were also not aware in which schedule OTC drugs has been included. There was less enthusiasm to periodically update OTC drugs. So, there should be an awareness programme to update their knowledge regarding various aspects of OTC as well as drug schedules.

2.Angamo MT, et al., Knowledge, attitude and practice of self-medication in Southwest Ethiopia. Int J Pharm Sci Res. 2012 Apr 1;3(4):1005.

This study conducted as a cross sectional study to assess the knowledge, attitude and practice of self-medication among Medical Sciences Faculty students of Jimma University. This study showed that awareness of Medical Faculty students about self-medication was high even though there was some malpractice. Most of respondents use self-medication irrespective of the seriousness of the illnesses. Lack of proper information and the ease of access from drug outlets were the most important problems.

3.Waghmode RI, et al., Evaluation of Knowledge, Attitude and Practices of Second Year MBBS Students, Interns and Pharmacists about ‘Over the Counter (OTC) Drugs’.

This study conducted as a prospective, cross sectional, observational, questionnaire based study among community pharmacists, second year MBBS students and interns. In this study shows that analgesics were the most commonly used class of drug followed by antipyretics and antacids. It has been observed in our study that lack of time to consult the doctor, the ease and convenience of OTC drugs are the most common reasons for their increasing use. Greater vigilance for adverse reactions is needed and the reporting system should be widened to include pharmacists.

4.Bekele KM, et al., Knowledge, Attitude, and Practice on Over-the-Counter Drugs Among Pharmacy and Medical Students: A Facility-Based Cross-Sectional Study. *Integrated Pharmacy Research & Practice*. 2020;9:135.

This study conducted as a cross-sectional study to assess KAP of OTC medications use and related factors among medical and pharmacy students at the University of Gondar, Gondar, Northwest Ethiopia. This study shows the Self-medication with OTC drugs is widely practiced among medical and pharmacy students. Significant problems and malpractices were identified such as; sharing of OTC medications, the use of expired medicines, doubling the dose of medications when they were ineffective, storage of OTC medications, and not reading labels and expiry dates.

5.Foroughinia F, et al., Evaluation of knowledge, attitude, and practice of community pharmacists toward administration of over-the-counter drugs for the treatment of diarrhea in children: A pretest–posttest survey. *Journal of research in pharmacy practice*. 2016 Jul;5(3):200.

This study conducted as a descriptive cross-sectional study to assess knowledge, attitude, and practice of community pharmacists toward administration of over-the-counter (OTC) antidiarrheal drugs in our city pharmacies, Shiraz, Iran. This study concluded that training programs such as educational pamphlets and continuing educational seminars may play important roles in increasing pharmacists' knowledge and therefore improving their performance in prescribing OTC medicines.

6.Hanumantharayappa NB, et al., Use of over the counter drugs in urban and rural populations of Mandya district: a cross-sectional study. *International Journal of Basic & Clinical Pharmacology*. 2017;5(4):1617-21.

This study conducted as a cross-sectional study using a pre-tested & semi-structured questionnaire. This study shows the proportion of the respondents who had practiced self-medication with OTC drugs is very high. The prevalence of self-medication with OTC drugs in our study was found to be 72.87% and is nearly same in both rural and urban population. The main reasons identified for self-medication were their assessment of their ailment as being minor and financial constraint and non-availability of doctors in rural areas. Health-care

providers should educate patients on the dangers of self-medication. Government should create awareness about existing health facilities so that patients will know where to go, when the need arises thereby minimizing the potential resort to self-medication.

7.Halila GC, et al., The practice of OTC Counseling by community pharmacists in Parana, Brazil. Pharmacy practice. 2015 Oct;13(4).

This study conducted as a cross-sectional survey to examine the practice of community pharmacists. This study shows the poor knowledge of terms related to evidence based practice among community pharmacists, which compromises understanding of scientific studies. This practice could be implemented in undergraduate pharmacy studies.

8.Susheela F, et al., Assessment of knowledge, attitude, and practice toward responsible self-medication among students of pharmacy colleges located in Anantapur district, Andhra Pradesh, India. Journal of education and health promotion. 2018;7.

This study conducted as a cross-sectional survey to assess knowledge, attitude, and practice (KAP) toward responsible self-medication among pharmacy students. This study shows the pharmacy students are shown more positive attitude toward responsible self-medication. However, students are lack of knowledge and practice of responsible self-medication.

9.Shroti R, et al., A study on over the counter drugs in retail pharmacies in Indore city. Der Pharmacia Lettre. 2011;3(3):133-8.

This study conducted as a cross sectional study to determine the extent and pattern of use of over the counter medications. This study shows the prevalence of over the counter drug use was estimated and found substantial use of over the counter medications in our study. We recommend a strong patient education program and government legislative control over the sale of medications in the country.

10. MacFadyen L, et al., Community pharmacists' experience of over-the-counter medicine misuse in Scotland. The journal of the Royal Society for the Promotion of Health. 2001 Sep;121(3):185-92.

This study conducted as a postal questionnaire study to determine the Community pharmacists' experience of over-the-counter medicine misuse. This study shows the Pharmacists expressed a need for support from training organisations and other pharmacists in dealing with the problem of OTC misuse. Sharing of information with other local pharmacists; and referral to other members of the primary care team. Pharmacists expressed a need for support in managing OTC misuse and in organising early warning systems' to share information locally.

11. Deepika Tikoo, et al., Comparison of awareness, attitude and use of non-prescription drugs among medical and non-medical undergraduates: a questionnaire based study. 2016 Feb;

This study conducted as using pre-validated questionnaires to Comparison of awareness, attitude and use of non-prescription drugs among medical and non-medical undergraduates. This study shows the problem of Self-medication which is rampant not only among medical students but non-medical students too. Many studies in the past have highlighted similar issues. Proper education and dissipation of information about non-prescription drugs can lead to their responsible and controlled use which can treat minor illnesses. Also the health regulatory authorities should exercise strict control over the injudicious sale of these drugs without a proper prescription by the doctor which will further promote rational use of these drugs.

AIM AND OBJECTIVES

AIM AND OBJECTIVES OF THE STUDY

AIM:

To assess the knowledge, attitude and practice towards OTC drugs dispensing among community pharmacists.

OBJECTIVES:

- To assess the community pharmacist's knowledge about OTC drugs dispensing.
- Creating awareness among community pharmacists on knowledge and practices related to OTC drugs dispensing.

PLAN OF STUDY

PLAN OF STUDY

PHASE I:

- Literature review
- Designing the protocol
- Getting permission for questionnaire
- Institutional human ethical committee approval

PHASE II:

- Selection of study subject
- Obtaining informed consent
- Data collection using questionnaire
- Creating awareness

PHASE III:

- Statistical analysis of data
- Results
- Conclusion

METHODOLOGY

METHODOLOGY

STUDY DESIGN:

Cross-Sectional Study

STUDY POPULATION:

Community Pharmacists in the Peelamedu and its surrounding areas.

STUDY DURATION:

The study was conducted for a period of six months.

SAMPLE SIZE:

Sample size is calculated using RAO software. At confidence interval of 95% and margin of error is 5%, the sample size found to be 145 community pharmacists.

INCLUSION CRITERIA:

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

EXCLUSION CRITERIA:

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

STUDY TOOL:

- Pre-validated questionnaire in both English and Tamil languages with four sections (i.e., socio-demographics, knowledge, attitude and practice) was utilized during data section.
- Pamphlets (To creating awareness)

Socio-demographic information:

Some questions related to socio-demographics were asked during the study including name, age (later categorized into three categories such as 20-29 years, 30-40 years and above 40 years), gender (male/female), educational qualification (D. Pharm, B. Pharm, M. Pharm, Pharm. D).

Knowledge, attitude and practice:

Questionnaire had 19 questions (8, 5, and 6 in number for the assessment of KAP about OTC) respectively.

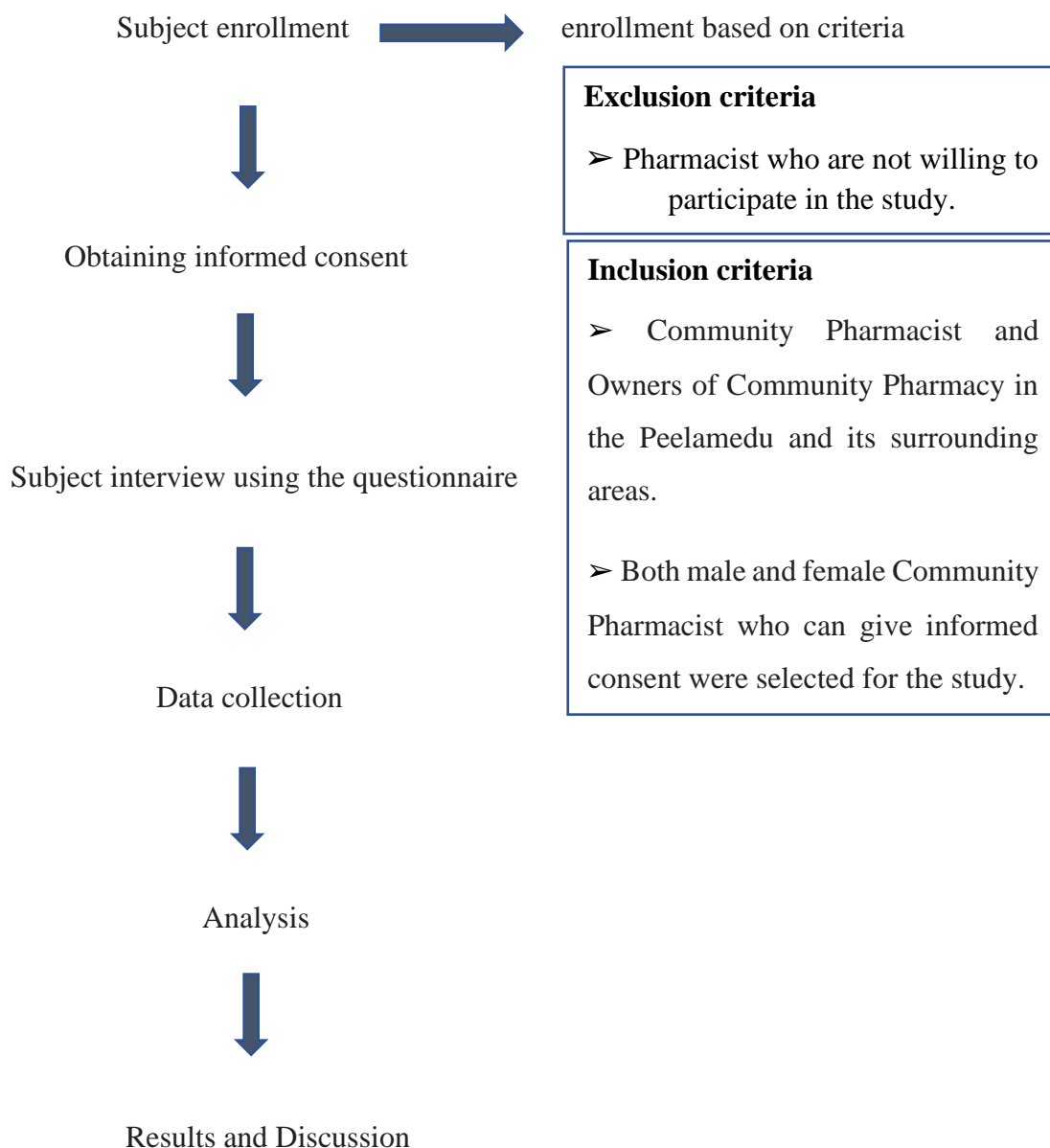
The questionnaires were handed over to the participants after explaining the purpose of the study. Any doubt regarding questionnaires was clarified by investigators. It was made clear to them that at no point of the study their identity will be revealed and it is not necessary to write their name. A 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.

STATISTICAL ANALYSIS:

All statistical analysis will be carried out using SPSS (Statistical Package for Social Sciences) software.

- Descriptive Statistics
- Odds ratio

METHODOLOGY FLOW CHART:



RESULTS

RESULTS

1.SOCIO – DEMOGRAPHICS

1.1: Gender wise Distribution

Among 160 study participants 129 (80.6%) were males and 31 (19.4% were females. Male participants are more compared to females. The [Table 1.1/ Fig 1.1] summaries the gender wise details of participants.

Table 1.1: Gender wise Distribution

GENDER	NO OF PARTICIPANTS	% (PERCENTAGE)
Male	129	80.6%
Female	31	19.4%

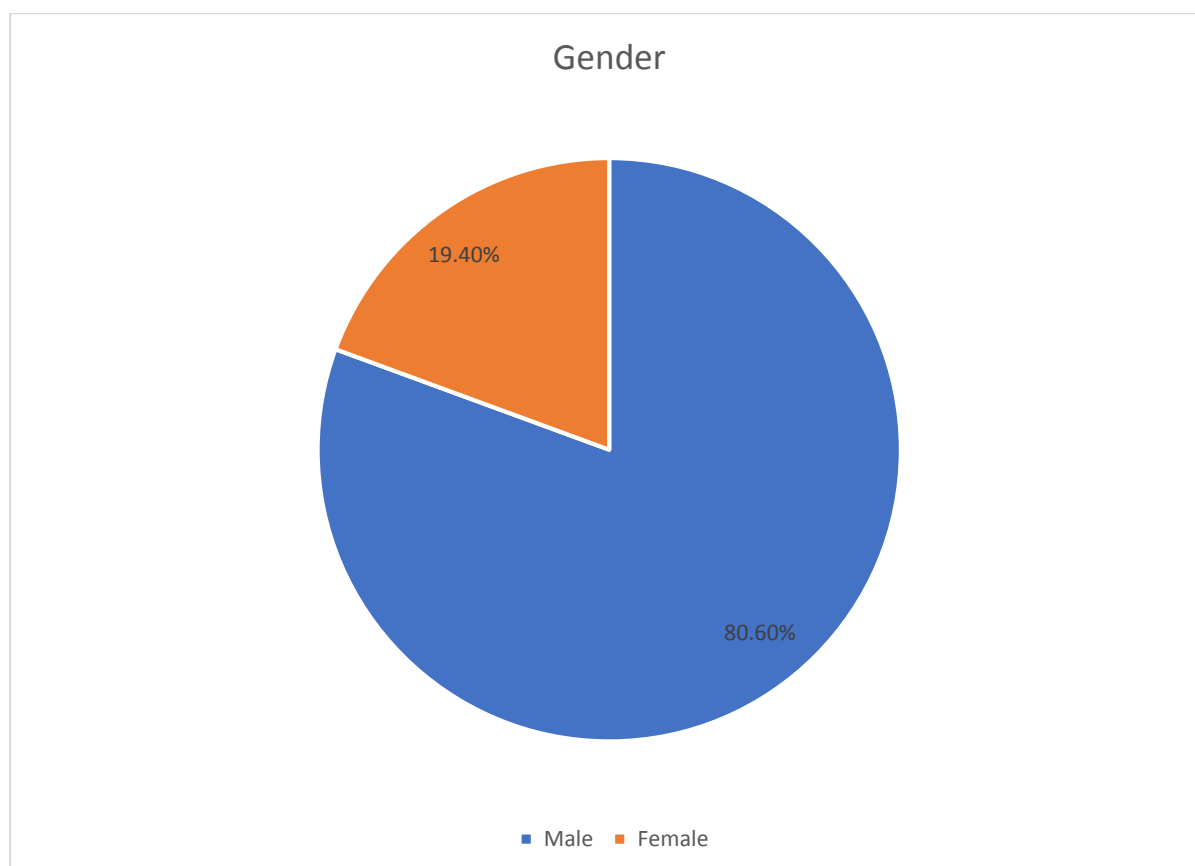


Figure1.1: Gender wise Distribution

1.2. Age wise Distribution

The age of participants in our study categorized into three groups such as 20-29 years (83.3%), 30-40 years (14.4%) and above 40 years (1.9%). 20 – 29 age group was more compared to other age groups. The [Table 1.2/Fig 1.2] summaries the age wise details of participants.

Table 1.2: Age wise Distribution

AGE	NO OF PARTICIPANTS	% (PERCENTAGE)
20 – 29	134	83.8%
30 – 40	23	14.4%
40 and above	3	1.9%

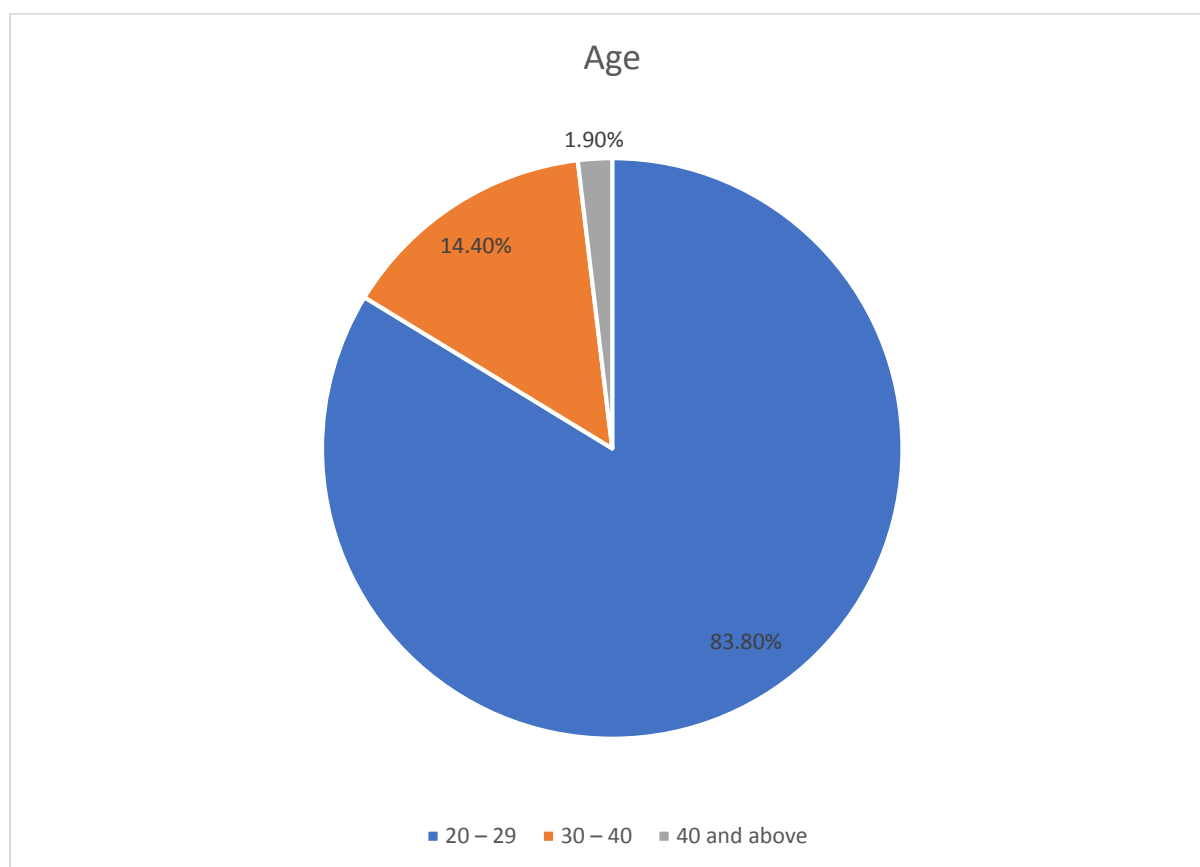


Figure 1.2: Age wise Distribution

1.3: Education wise Distribution

In our study among all participants having a qualified pharmacy degree [D. Pharm (15.0%), B. Pharm (66.9%), M. Pharm (15.0%), Pharm. D (3.1%)]. B. Pharm was higher compared to other pharmacy programs. The [Table 1.3/ Fig 1.3] summaries the education wise details of participants.

Table 1.3: Education wise Distribution

EDUCATION	NO OF PARTICIPANTS	% (PERCENTAGE)
D. Pharm	24	15.0%
B. Pharm	107	66.9%
M. Pharm	24	15.0%
Pharm. D	5	3.1%

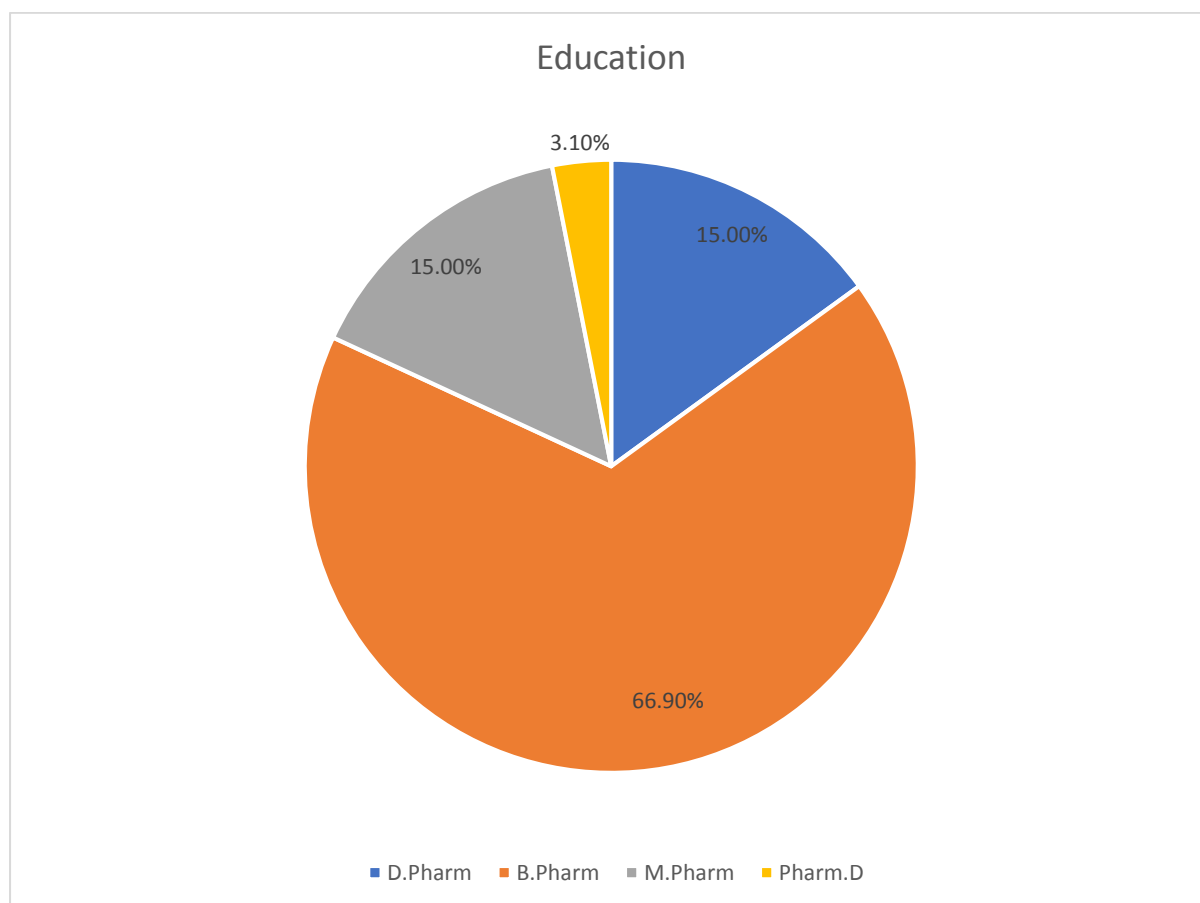


Figure 1.3: Education wise Distribution

2.COMMUNITY PHARMACIST KNOWLEDGE ABOUT OTC DRUGS

Responses pertaining to knowledge by the participants are depicted in Table 2.1/ Fig 2.1.

Table 2.1: Response to Knowledge based questions

S.NO	KNOWLEDGE RELATED QUESTIONS	CORRECT RESPONSE	%(PERCENTAGE)
1.	In medical parlance acronym OTC stands for over the counter	158	98.8%
2.	OTC drugs can be given only with prescription of a registered medical practitioner	105	65.6%
3.	Prescription only drugs can be given only with prescription of a registered medical practitioner	153	95.6%
4.	There is no legal recognition of OTC in India	66	41.3%
5.	Schedule H deals with drugs, which can be sold without prescription	135	84.4%
6.	Patient can buy morphine OTC	139	86.9%
7.	Paracetamol toxicity can cause liver damage	148	92.5%
8.	Aspirin is useful in gastritis	119	74.4%

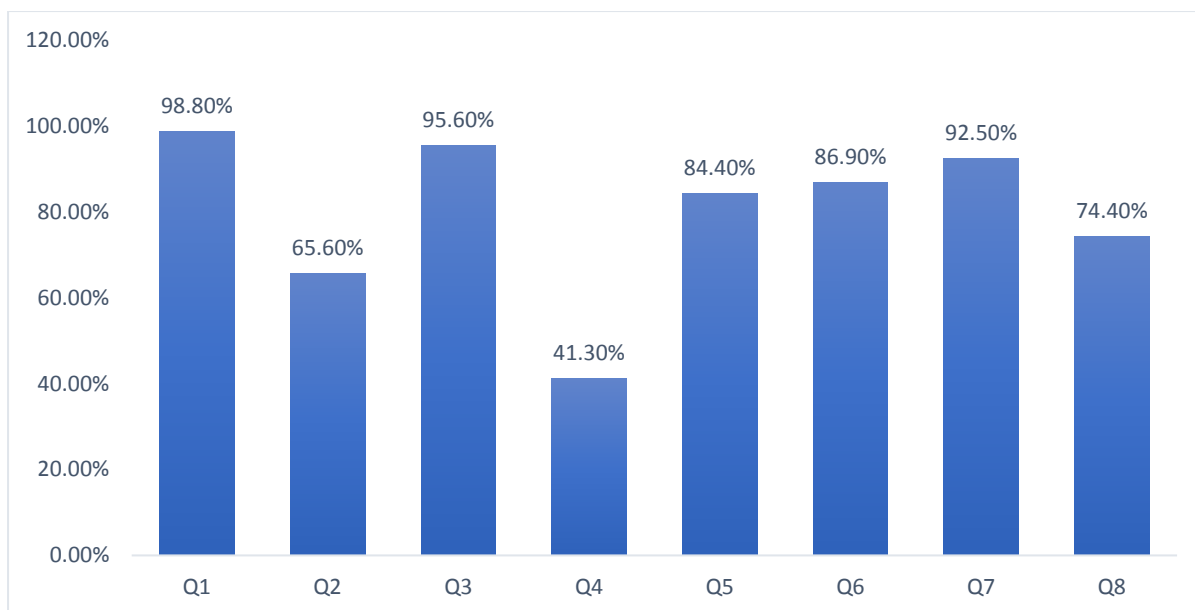


Figure 2.1: Correct response for Knowledge based questions

3.COMMUNITY PHARMACIST ATTITUDE ABOUT OTC DRUGS

Responses of participants regarding questions related to attitude are depicted in Table 3.1/ Fig 3.1.

Table 3.1: Response to Attitude based questions

S.NO	ATTITUDE RELATED QUESTIONS	CORRECT RESPONSE	% (PERCENTAGE)
1.	Do you think antibiotics should be available as OTC?	91	56.9%
2.	Do you think OTC drugs encourage self-medication among patients?	117	73.1%
3.	Should there be an age restriction for obtaining OTC?	86	53.8%
4.	Do you think it is necessary to periodically update information regarding OTC?	149	93.1%
5.	Are you concerned about the misuse of OTC?	140	87.5%

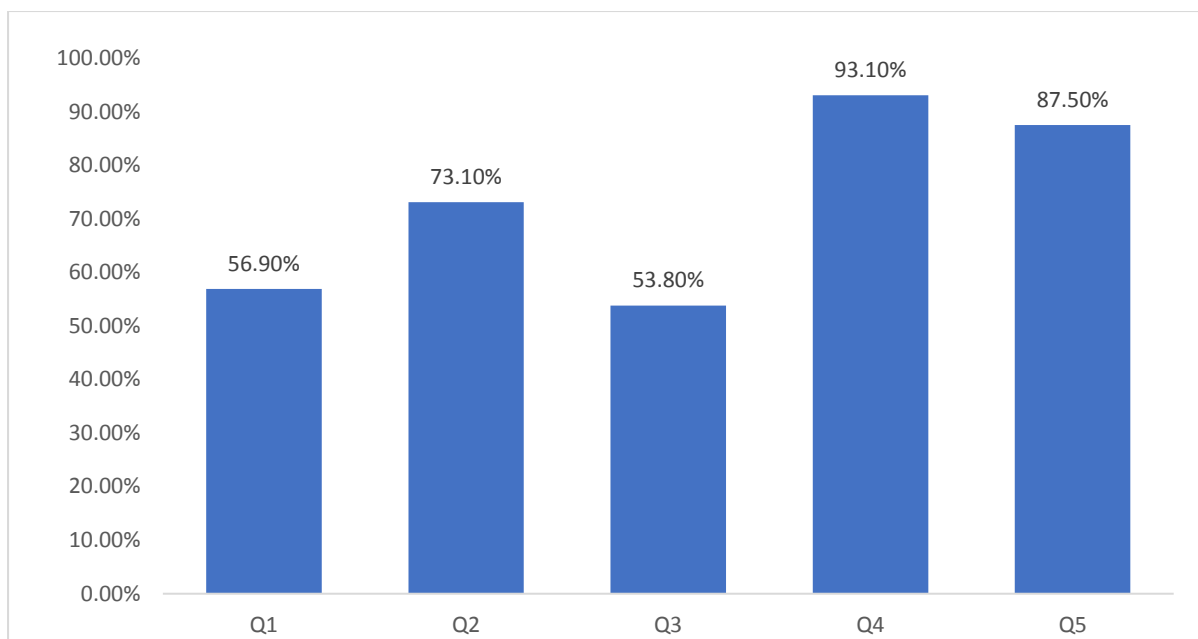


Figure 3.1: Correct response for Attitude based questions

4.COMMUNITY PHARMACIST PRACTICE ABOUT OTC DRUGS

Response of participants regarding questions related to practice are depicted in Table 4.1/ Fig 4.1.

Table 4.1: Response to Practice based questions

S.NO	PRACTICE RELATED QUESTIONS	CORRECT RESPONSE	% (PERCENTAGE)
1.	Do you ask for prescription before dispensing drugs?	152	95%
2.	Do you update your knowledge regarding OTC?	124	77.5%
3.	Do you advice patients to consult a doctor when they come to you with any ailments rather than giving them medicine yourself?	149	93.1%
4.	Do you give an alternative brand when prescribed brand is not available with you without consulting prescribed physician?	96	60%

5.	Have you ever sold any injection or IV fluids without prescription?	150	93.8%
6.	Do you counsel the patients/customers if you suspect misuse/abuse of OTC?	149	93.1%

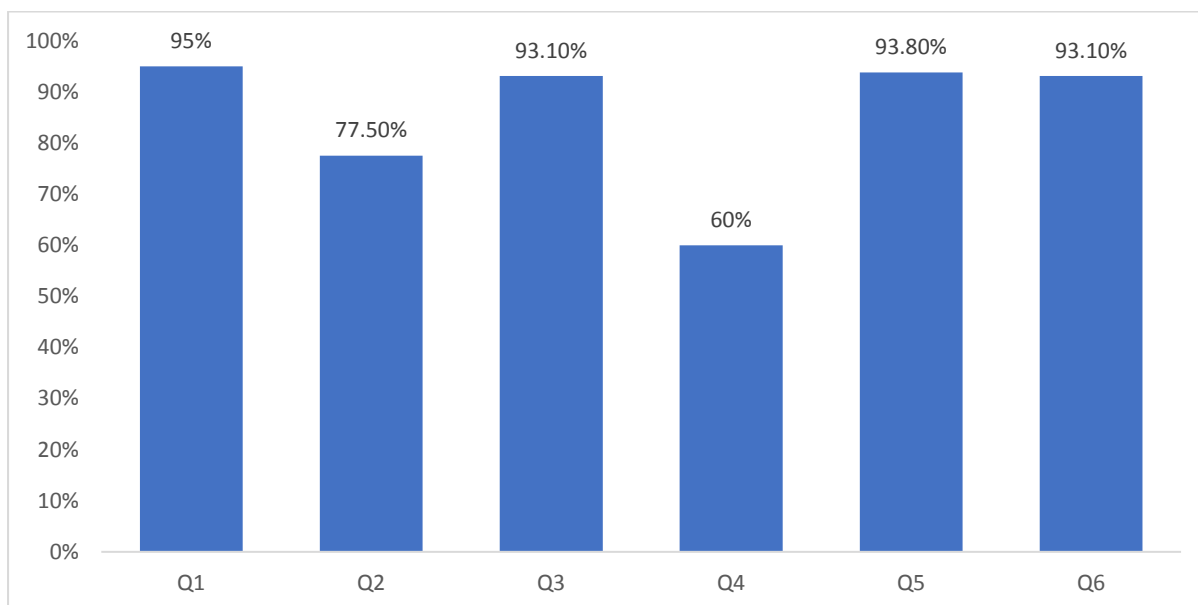


Figure 4.1: Correct response for Practice based questions

5.KAP SCORES

Overall KAP scores depicted in Table 5.1.

Table 5.1: Overall KAP scores

SCORE	GOOD	PERCENTAGE (%)	POOR	PERCENTAGE (%)
Knowledge	149	93.1%	11	6.9%
Attitude	93	58.1%	67	41.9%
Practice	85	53.1%	75	46.9%

6.COMPARISON OF KAP WITH AGE

Mean knowledge scores of community pharmacists age group such as 20-29,30-40 and 40 above was found to be 6.54 ± 0.09 , 5.52 ± 0.33 and 6.33 ± 0.88 respectively (Table 6.1). There was a statistically significant difference in the knowledge score between age groups and no significant difference in attitude and practice scores.

Table 6.1: Comparison of mean score between Age groups

SCORE (Mean± SEM)	Age			p-value
	20-29	30-40	40 and above	
Knowledge (Maximum score=8)	6.54 ± 0.092	5.52 ± 0.332	6.33 ± 0.882	0.0035
Attitude (Maximum score=5)	3.72 ± 0.079	3.22 ± 0.243	3.67 ± 0.667	0.0718
Practice (Maximum score=6)	5.14 ± 0.075	5.00 ± 0.141	5.33 ± 0.667	0.3426

7.COMPARISON OF KAP WITH EDUCATIONAL QUALIFICATION

Mean knowledge scores of Community Pharmacists educational qualifications such as D. Pharm, B. Pharm, M. Pharm and Pharm. D was found to be 6.17 ± 0.29 , 6.33 ± 0.12 , 6.79 ± 0.16 and 7.00 ± 0.32 respectively (Table 7.1). There was a statistically significant difference in the knowledge score between educational qualification of community pharmacists and no significant difference in attitude and practice scores.

Table 7.1: Comparison of mean score between groups of Educational Qualification

SCORE (Mean± SEM)	Educational Qualification				p-value
	D. Pharm	B. Pharm	M. Pharm	Pharm. D	
Knowledge (Maximum score=8)	6.17±0.293	6.33±0.119	6.79±0.159	7.00±0.316	0.0023
Attitude (Maximum score=5)	3.54±0.217	3.61±0.096	3.96±0.153	3.40±0.245	0.5918
Practice (Maximum score=6)	5.33±0.155	5.05±0.084	5.17±0.167	5.60±0.245	0.8281

8. RELATIONSHIP BETWEEN KNOWLEDGE AND ATTITUDE

Relationship between knowledge and attitude of community pharmacists are depicted in the Table 8.1.

Table 8.1: Relationship between Knowledge and Attitude of Community Pharmacists

SCORE	Good Response	Poor Response	p-value
Knowledge score	149	11	0.0145
Attitude score	93	67	

There was significant difference between knowledge and attitude among Community Pharmacists. Knowledge of OTC drugs among Community Pharmacists was positively correlated with attitude.

DISCUSSION

DISCUSSION:

Developing countries including India is beset with problems in healthcare delivery system. Lack of adequate doctors has been a major hindrance in providing quality healthcare to all people. Most of the people still depend on the pharmacists or other allied health workers for their primary healthcare need. Pharmacists working in community pharmacy have always played an important role in healthcare system^{10,14}.

A recent study done in a district of a South Indian state revealed that the proportion of the respondents who had practiced self-medication with OTC drugs is very high. The prevalence of self-medication with OTC drugs was found to be 72.87% and is nearly same in both rural and urban population¹⁵. Although, 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 OTC¹⁶.

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 behavior 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. There are few studies done to delve into the perception of dispensers/ pharmacists working in community pharmacies about OTC drugs^{17,18}.

Hence, we planned to assess the KAP of OTC drugs among Community Pharmacists working in the pharmacies. It was found that majority of participant knew the correct meaning of OTC drugs (98%) and prescription drugs (65%). Large numbers of participants in our study (87%) were concerned about the misuse of OTC. Some other studies under taken among pharmacist have also made similar observations¹⁹. 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 practice²⁰.

In this study, it was found out that, 84% respondents were aware that schedule H drugs can only be sold with a valid prescription from a registered medical practitioner but in a study done in Bengaluru, 50% participants had correct knowledge regarding schedule H¹⁶.

In this study, 60% of our participants said that, they changed the brand without consulting prescribed physician, when prescribed brand is not available with them. Almost similar observation was made in a study done by Hanumantharayappa NB, Siddaiah SN¹⁵. There are prescribed guidelines available regarding principle of generic substitution, because some time it could cause to enormous damage to patient's safety, but due to lack of strict enforcement, it is not followed stringently^{21,22}.

In our study, large number of participants (93%) felt the need to periodically update the knowledge about OTC drugs but (77%) are doing that.

In this study, it was also observed that majority of Pharmacists (95%) asked for prescription before dispensing drugs, it is contrary to some other studies done in India and outside, where dispensing without prescription was quite high^{21,23}. It was reported in this study that, 93% of participants counselled the patients or their attendants regarding the adverse effects of misuse or over use of OTC drugs, if they suspected so. It is in accordance with the guideline of Good Pharmacy Practice (GPP). In study done by Ravichandran A and Basavareddy A, it was found out that approximately 52% pharmacist counselled the patients before dispensing the drug where as in another study voluntary counselling by pharmacists was not that encouraging^{17,18}.

In this study, I had observed that non-pharmacy graduates also working as drug dispensers. So, there should be a strict guidelines and its enforcement regarding mandatory educational qualification for drug dispensers.

The pamphlets were provided to community pharmacists to create the awareness about OTC drug dispensing in pharmacy. OTC drug abuse is a recognized problem worldwide but still it is understood incompletely. Hence, furthermore research is needed to quantify the scale of abuse and hazards associated with it. We must start acting as, it is high time to formulate strategies and interventions to overcome the OTC drugs misuse like; limiting the supplies, raising public and professional awareness about OTC misuse using existing services and Internet support groups and to implement few intervention strategies (like policy making) and regulating the same.

CONCLUSION

CONCLUSION:

The role of Community Pharmacist in healthcare system showed that many Community Pharmacists are aware about OTC drugs and had positive attitudes to periodically update information regarding OTC drugs but some of them were less enthusiastic to update their knowledge. They should be properly trained and regularly update about OTC drugs with respect to CDSCO.

There is need of awareness in drug usage and existing rules and regulation governed by Drugs and Cosmetic Act 1940 and rules 1945 followed in India established to minimize the risks by using OTC medications. Community Pharmacists should improve their knowledge, attitude and practices regarding OTC medications under auspices of regulatory authorities and maintain good liaison with healthcare professionals.

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ANNEXURE



Institutional Human Ethics Committee PSG Institute of Medical Sciences & Research

Recognized by The Strategic Initiative for Developing Capacity in Ethical Review (SIDCER, WHO)

POST BOX NO. 1674, PEELAMEDU, COIMBATORE 641 004, TAMIL NADU, INDIA

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EC-CT-2018-0055

Ref. No.: PSG/IHEC/2021/Aprr/Exp/164

July 08, 2021

To
Mr Thirumoorthy P
II Year M Pharm
Department of Pharmacology
PSG College of Pharmacy
Coimbatore
Guide: Dr Prudence A Rodrigues

Ref: Project No. 21/158

Dear Mr Thirumoorthy,

Institutional Human Ethics Committee, PSG IMS&R reviewed and discussed your application dated 26.04.2021 to conduct the research study entitled "*Knowledge, attitude and practice on over the counter (OTC) drugs among community pharmacists*" during the IHEC meeting held on 07.05.2021.

The following documents were reviewed and approved:

1. Project submission form
2. Study protocol (Version 2 dated 06.07.2021)
3. Informed consent form (Version 1 dated 26.04.2021)
4. Data collection tool (Version 2 dated 06.07.2021)
5. Current CVs of Principal investigator, Co-investigators
6. Budget

The following members of the Institutional Human Ethics Committee (IHEC) were present at the expedited review meeting held on 07.05.2021 between 10.00 am and 11.00 am:

Sl. No.	Name of the Member of IHEC	Qualification	Area of Expertise	Gender	Affiliation to the Institution Yes/No	Present at the meeting Yes/No
1	Dr Rajani Sundar (Chairperson, IHEC)	MD, DA	Clinician	Female	No	Yes
2	Dr S Karthikeyan (Member - Secretary, IHEC)	MD	Epidemiologist, Ethicist	Male	Yes	Yes
3	Dr A Jayavardhana	MD	Clinician, Paediatrics	Male	Yes	Yes
4	Mrs M Nirmala (All member-Secretary, IHEC)	M Sc	Nursing	Female	Yes	Yes

The study is approved in its presented form for the stated sample size. The decision was arrived at through consensus. Neither PI nor any of proposed study team members were present during the decision making of the IHEC. The IHEC functions in accordance with the New Drugs and Clinical Trials Rules, 2019. The approval is valid until one year from the date of sanction. You may make a written request for renewal / extension of the validity, along with the submission of status report as decided by the IHEC.

Proposal No. 21/158 dt.08.07.2021, Title: Knowledge, attitude and practice on over the counter (OTC) drugs among community pharmacists



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Institutional Human Ethics Committee PSG Institute of Medical Sciences & Research

Recognized by The Strategic Initiative for Developing Capacity in Ethical Review (SIDCER, WHO)

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EC-CT-2018-0055

Following points must be noted:

1. IHEC should be informed of the date of initiation of the study
2. Status report of the study should be submitted to the IHEC every 12 months
3. PI and other investigators should co-operate fully with IHEC, who will monitor the trial from time to time
4. At the time of PI's retirement/intention to leave the institute, study responsibility should be transferred to a colleague after obtaining clearance from HOD, Status report, including accounts details should be submitted to IHEC and extramural sponsors
5. In case of any new information or any SAE, which could affect any study, must be informed to IHEC and sponsors. The PI should report SAEs occurred for IHEC approved studies within 24 hours of the occurrence
6. In the event of any protocol amendments, IHEC must be informed and the amendments should be highlighted in clear terms as follows:
 - a. The exact alteration/amendment should be specified and indicated where the amendment occurred in the original project. (Page no. Clause no. etc.)
 - b. Variation in the proposed sample size
 - c. Alteration in the budgetary status should be clearly indicated and the revised budget form should be submitted
 - d. If the amendments require a change in the consent form, the copy of revised Consent Form should be submitted to Ethics Committee for approval
 - e. If the amendment demands a re-look at the toxicity or side effects to patients, the same should be documented
 - f. If there are any amendments in the trial design, these must be incorporated in the protocol, and other study documents. These revised documents should be submitted for approval of the IHEC and only then can they be implemented
 - g. Any deviation-Violation/waiver in the protocol must be informed to the IHEC within the stipulated period for review
7. Final report along with summary of findings and presentations/publications if any on closure of the study should be submitted to IHEC

Kindly note this approval is subject to ratification in the forthcoming full board review meeting of the IHEC.

Thanking You,

Yours Sincerely,

S. Karthikeyan 8/1/2021
 Dr S Karthikeyan
 Member-Secretary
 Institutional Human Ethics Committee



S. Karthikeyan
 Proposal No. 21/158 dt.08.07.2021, Title: Knowledge, attitude and practice on over the counter (OTC) drugs among community pharmacists

Page 2 of 2

OVER THE COUNTER DRUG AWARENESS



OVER THE COUNTER

As a pharmacist know about the rules and regulations that guide the sales and distribution of drugs in India (Chapter IV of Drugs and cosmetic Act 1940.)

Do not dispense the schedule drugs without a valid prescription.

Make sure you give the right drug to the patients, double check if required before dispensing.

If you have any doubts in prescription call the respected doctor before dispensing.

Sale only the approved OTC drugs without a prescription according to CDSCO.

Update yourself with current knowledge about OTC drugs with respect to CDSCO.

Be aware of drugs and fixed dose combination that are banned by CDSCO.

Advice patients about dosage instructions of the medication.

Do not let the patients to misuse certain drugs that are prone to be addictive (Eg: sleeping pills).

Study Volunteer ID:
Study Volunteer Name:

**PSG Institute of Medical Science and Research, Coimbatore
Institutional Human Ethics Committee
INFORMED CONSENT FORMAT FOR RESEARCH PROJECTS**

(strike off items that are not applicable)

I, P. THIRUMOORTHY, am carrying out a study on the topic: " KNOWLEDGE , ATTITUDE AND PRACTICE ON OVER THE COUNTER (OTC) DRUGS AMONG COMMUNITY PHARMACISTS" as part of my research project being carried out under the aegis of the Department of: Pharmacology

(Applicable to students only): My / our research guide is: Dr. PRUDENCE A RODRIGUES

The justification for this study is:

1. The factors influencing OTC drugs dispensing without a prescription may differ in various developing and developed countries, and attempts in developing interventions need to address the context and focus on the root causes specific to the part of the world.

2. Although professional competency of community pharmacists in OTC drugs dispensing is essential, least number of studies have evaluated the knowledge and attitudes concerning OTC drugs dispensing.

The objectives of this study are:

1. To assess the community pharmacist's knowledge about OTC drugs dispensing.

2. Creating awareness among community pharmacists on knowledge and practices related to OTC drugs dispensing.

Sample size: 145

Study volunteers / participants are (specify population group & age group): Community Pharmacist and age 20-70.

Location: Peelamedu and its surrounding areas.

We request you to kindly cooperate with us in this study. We propose collect background information and other relevant details related to this study. We will be carrying out:

Initial interview (specify approximate duration): 15-20 minutes.

Data collected will be stored for a period of 5 years. We will not use the data as part of another study.

Health education sessions: Number of sessions: 1 . Approximate **duration** of each session: 15-20 minutes.

Clinical examination (Specify details and purpose): NA

Blood sample collection: Specify quantity of blood being drawn: NA

No. of times it will be collected: NA

Whether blood sample collection is part of routine procedure or for research (study) purpose:

1. Routine procedure 2. Research purpose

Study Volunteer ID:
Study Volunteer Name:

Specify **purpose**, discomfort likely to be felt and side effects, if any: NA

Whether blood sample collected will be stored after study period: Yes / No, it will be destroyed

Whether blood sample collected will be sold: Yes / No

Whether blood sample collected will be shared with persons from another institution: Yes / No

Medication given, if any, duration, side effects, purpose, benefits: NA

Whether medication given is part of routine procedure: Yes / No (If not, state reasons for giving this medication)

Whether alternatives are available for medication given: Yes / No (If not, state reasons for giving this particular medication)

Final interview (specify approximate duration): NA . If **photograph** is taken, purpose: NA

Benefits from this study: To improve knowledge , attitude and practices related to OTC drugs dispensing.

Risks involved by participating in this study: NA

How the **results** will be used: Publishing in journals,Presenting in conference.

If you are uncomfortable in answering any of our questions during the course of the interview / biological sample collection, **you have the right to withdraw from the interview / study at anytime**. You have the freedom to withdraw from the study at any point of time. Kindly be assured that your refusal to participate or withdrawal at any stage, if you so decide, will not result in any form of compromise or discrimination in the services offered nor would it attract any penalty. You will continue to have access to the regular services offered to a patient. You will **NOT** be paid any remuneration for the time you spend with us for this interview / study. The information provided by you will be kept in strict confidence. Under no circumstances shall we reveal the identity of the respondent or their families to anyone. The information that we collect shall be used for approved research purposes only. You will be informed about any significant new findings - including adverse events, if any, - whether directly related to you or to other participants of this study, developed during the course of this research which may relate to your willingness to continue participation.

Consent: The above information regarding the study, has been read by me/ read to me, and has been explained to me by the investigator/s. Having understood the same, I hereby give my consent to them to interview me. I am affixing my signature / left thumb impression to indicate my consent and willingness to participate in this study (i.e., willingly abide by the project requirements).

Signature / Left thumb impression of the Study Volunteer / Legal Representative:

Signature of the Interviewer with date:

Witness:

Contact number of PI:9788138874

Contact number of Ethics Committee Office: 0422 4345818

பு சா கோ மருத்துவக் கல்லூரி மற்றும் ஆராய்ச்சி நிறுவனம், கோவை
மனித நெறிமுறைக் குழு
ஒப்புதல் படிவம்

தேதி :

பெ.திருமூர்த்தி ஆகிய நான், பு சா கோ மருத்துவக் கல்லூரியின் / மருத்துவ மனையின் மருந்தியல் துறையின் கீழ் "சமூக மருந்தாளுநர்களிடையே OTC மருந்துகள் குறித்த அறிவு, அணுகுமுறை மற்றும் நடைமுறைகளை பற்றி அறிதல்" என்ற தலைப்பில் ஆய்வு மேற்கொள்ள உள்ளேன்.

என் ஆய்வு வழிகாட்டி (மாணவர்களுக்கு மட்டும்) : டாக்டர்.புருடன்ஸ் ஏ ரோட்ரிகஸ்

ஆய்வு மேற்கொள்வதன் அடிப்படை:

1.பரிந்துரை இல்லாமல் OTC மருந்துகளை விநியோகிக்கும் காரணிகள் பல்வேறு வளரும் மற்றும் வளர்ந்த நாடுகளில் வேறுபடலாம், மேலும் இடையூரு தரும் சூழலுக்கு தீர்வு காண வேண்டும் மற்றும் உலகின் குறிப்பிட்ட பகுதிகளுக்கு குறிப்பிட்ட மூல காரணங்களில் கவனம் செலுத்த வேண்டும்.

2.OTC மருந்துகளை விநியோகிப்பதில் சமூக மருந்தாளுநர்களின் தொழில்முறை திறன் அவசியம் என்றாலும், OTC மருந்துகள் விநியோகிப்பது தொடர்பான குறைந்த பட்ச அறிவு மற்றும் அணுகுமுறைகள் பற்றி மதிப்பீடு செய்யப்பட்டுள்ளது.

ஆய்வின் நோக்கம்:

1. OTC மருந்துகள் விநியோகம் குறித்து சமூக மருந்தாளுநர்களின் அறிவை மதிப்பீடு செய்வதற்கு.
2. OTC மருந்துகள் விநியோகம் தொடர்பான அறிவு மற்றும் நடைமுறைகள் குறித்து சமூக மருந்தாளுநர்களிடையே விழிப்புணர்வை ஏற்படுத்துதல்.
- 3.

ஆய்வில் பங்கு பெறும் நபர்களின் எண்ணிக்கை: 145

ஆய்வில் பங்கு பெறுவோர் மற்றும் வயது: சமூக மருந்தாளுநர்கள்

ஆய்வு மேற்கொள்ளும் இடம்: பீளமேடு மற்றும் அதனை சுற்றியுள்ள இடங்கள்.

இந்த ஆய்வில் எங்களுடன் ஒத்துழைக்குமாறு கேட்டுக்கொள்கிறோம். நாங்கள் சில தகவல்களை இந்த ஆய்விற்காக சேகரிக்க உள்ளோம்.

ஆய்வு செய்யப்படும் முறை:

முதன்மை நேர்காணல்: 15-20 நிமிடங்கள்

இந்த ஆய்வில் கிடைக்கும் தகவல்கள் 5 வருடங்கள் பாதுகாக்கப்படும். இந்தத் தகவல்கள் வேறு ஆய்விற்குப் பயன்படுத்தப்படும் / பயன்படுத்தப்பட மாட்டாது.

சுகாதாரக் கல்வி: அமர்வுகள்: 1 முறை ஒரு அமர்வுக்கான நேரம்: 15-20 நிமிடங்கள்

மருத்துவ பரிசோதனைகள்: தேவையில்லை பொருந்தாது

இரத்த மாதிரி சேகரிப்பு: _____ மிலி _____ முறை

இரத்த மாதிரி எடுப்பது வழக்கமான சிகிச்சைக்காகவா அல்லது இந்த ஆய்விற்காகவா?

1. வழக்கமான சிகிச்சைக்காக
2. குறிப்பிட்ட ஆய்விற்காக

இதனால் ஏற்படக்கூடிய அசௌகரியங்கள் / பக்க விளைவுகள்: இல்லை

இரத்த மாதிரிகள் ஆய்விற்குப் பின் பாதுகாத்து வைக்கப்படுமா?: ஆம் / இல்லை, அழிக்கப்படும் பொருந்தாது

சேகரிக்கப்பட்ட இரத்தம் விற்கப்படுமா?: ஆம் / இல்லை

சேகரிக்கப்பட்ட இரத்தம் வேறு நிறுவனத்துடன் பகிர்ந்து கொள்ளப்படுமா?: ஆம் / இல்லை

மருந்துகள் ஏதேனும் கொடுக்கப்படவிருந்தால் அவை பற்றிய விவரம் (கொடுக்கப்படும் காரணம், காலம், பக்க விளைவுகள், பயன்கள்):

மருந்துகள் கொடுக்கப்படுவது வழக்கமான சிகிச்சை முறையா?: ஆம் / இல்லை (இல்லை என்றால் கொடுக்கப்படும் காரணம்) பொருந்தாது.

கொடுக்கப்படும் மருந்துகளுக்கு மாற்று உள்ளதா?: ஆம் / இல்லை (ஆம் என்றால் இந்த குறிப்பிட்ட மருந்து கொடுக்கப்படும் காரணம்)

ஆய்வில் பங்கு பெறுவதால் ஏற்படும் பலன்கள்: OTC மருந்துகளை விநியோகம் தொடர்பான அறிவை மேம்படுத்துதல்.

ஆய்வில் பங்கேற்பதால் ஏற்படும் அசௌகரியங்கள் / பக்க விளைவுகள்: பொருந்தாது

ஆய்வின் முடிவுகள் எந்த முறையில் பயன்படுத்தப்படும்?

இந்த ஆய்வின் கேள்விகளுக்கு பதிலளிப்பதிலோ, இரத்த மாதிரிகள் அல்லது திசு மாதிரிகள் எடுப்பதிலோ உங்களுக்கு ஏதேனும் அசௌகரியங்கள் இருந்தால், எந்த நேரத்தில் வேண்டுமானாலும் ஆய்விலிருந்து விலகிக்கொள்ளும் உரிமை உங்களுக்கு உண்டு. எப்பொழுது வேண்டுமானாலும் ஆய்விலிருந்து விலகும் உரிமை உங்களுக்கு உள்ளது. ஆய்விலிருந்து விலகிக்கொள்வதால் உங்களுக்கு அளிக்கப்படும் சிகிச்சை முறையில் எந்த வித பாதிப்பும் இருக்காது என்று உங்களுக்கு உறுதியளிக்கிறோம். மருத்துவ மனையில் நோயாளிகளுக்கு அளிக்கப்படும் சேவைகளை நீங்கள் தொடர்ந்து பெறலாம். இந்த ஆய்வில் பங்கேற்க ஒப்புக்கொள்வதால் வேறு எந்த விதமான கூடுதலான பலனும் உங்களுக்குக் கிடைக்காது. நீங்கள் அளிக்கும் தகவல்கள் இரகசியமாக வைக்கப்படும். ஆய்வில் பங்கேற்பவர்கள் பற்றியோ அவர்கள் குடும்பத்தைப் பற்றியோ எந்தத் தகவலும் எக்காரணம் கொண்டும் வெளியிடப்படாது என்று உறுதியளிக்கிறோம். நீங்கள் அளிக்கும் தகவல்கள் / இரத்த மாதிரிகள் / திசு மாதிரிகள் அங்கீகரிக்கப்பட்ட ஆய்விற்கு மட்டுமே பயன்படுத்தப்படும். இந்த ஆய்வு நடைபெறும் காலத்தில் குறிப்பிடத்தகுந்த புதிய கண்டுபிடிப்புகள் அல்லது பக்க விளைவுகள் ஏதும் ஏற்பட்டால் உங்களுக்குத் தெரிவிக்கப்படும். இதனால் ஆய்வில் தொடர்ந்து பங்கு பெறுவது பற்றிய உங்கள் நிலைப்பாட்டை நீங்கள் தெரிவிக்க ஏதுவாகும்.

ஆய்வுக்குட்படுபவரின் ஒப்புதல்: இந்த ஆய்வைப் பற்றிய மேற்கூறிய தகவல்களை நான் படித்து அறிந்து கொண்டேன் / ஆய்வாளர் படிக்கக் கேட்டுத் தெரிந்து கொண்டேன். ஆய்வினைப் பற்றி நன்றாகப் புரிந்து கொண்டு இந்த ஆய்வில் பங்கு பெற ஒப்புக்கொள்கிறேன். இந்த ஆய்வில் பங்கேற்பதற்கான எனது ஒப்புதலை கீழே கையொப்பமிட்டு / கைரேகை பதித்து நான் தெரிவித்துக் கொள்கிறேன்.

பங்கேற்பாளரின் பெயர், முகவரி

பங்கேற்பாளரின் கையொப்பம் / கை ரேகை / சட்டபூர்வ பிரதிநிதியின்
கையொப்பம் :

தேதி :

ஆய்வாளரின் கையொப்பம் :

தேதி :

ஆய்வாளரின் தொலைபேசி எண்: 9788138874

மனித நெறிமுறைக் குழு அலுவலகத்தின் தொலைபேசி எண்: 0422 4345818

**KNOWLEDGE, ATTITUDE AND PRACTICE ON OVER THE
COUNTER (OTC) DRUGS AMONG COMMUNITY
PHARMACISTS**

(ANSWER ALL THE QUESTIONS)

SECTION:1		
SOCIO-DEMOGRAPIC INFORMATION		
1.	Name	
2.	Gender	
3.	Age	
4.	Qualification	
SECTION:2		
KNOWLEDGE RELATED QUESTIONS		
1.	In medical parlance acronym OTC stands for over the counter	<ul style="list-style-type: none"> • True • False
2.	OTC drugs can be given only with prescription of a registered medical practitioner	<ul style="list-style-type: none"> • True • False
3.	Prescription only drugs can be given only with prescription of a registered medical practitioner	<ul style="list-style-type: none"> • True • False
4.	There is no legal recognition of OTC in India	<ul style="list-style-type: none"> • True • False
5.	Schedule H deals with drugs, which can be sold without prescription	<ul style="list-style-type: none"> • True • False
6.	Patient can buy morphine OTC	<ul style="list-style-type: none"> • True • False
7.	Paracetamol toxicity can cause liver damage	<ul style="list-style-type: none"> • True • False
8.	Aspirin is useful in gastritis	<ul style="list-style-type: none"> • True • False
SECTION:3		
ATTITUDE RELATED QUESTIONS		
1.	Do you think antibiotics should be available as OTC?	<ul style="list-style-type: none"> • Yes • No
2.	Do you think OTC drugs encourage self-medication among patients?	<ul style="list-style-type: none"> • Yes • No
3.	Should there be an age restriction for obtaining OTC?	<ul style="list-style-type: none"> • Yes • No
4.	Do you think it is necessary to periodically update information regarding OTC?	<ul style="list-style-type: none"> • Yes • No
5.	Are you concerned about the misuse of OTC?	<ul style="list-style-type: none"> • Yes • No

SECTION:4 PRACTICE RELATED QUESTIONS		
1.	Do you ask for prescription before dispensing drugs?	<ul style="list-style-type: none">• Yes• No
2.	Do you update your knowledge regarding OTC?	<ul style="list-style-type: none">• Yes• No
3.	Do you advice patients to consult a doctor when they come to you with any ailments rather than giving them medicine yourself?	<ul style="list-style-type: none">• Yes• No
4.	Do you give an alternative brand when prescribed brand is not available with you without consulting prescribed physician?	<ul style="list-style-type: none">• Yes• No
5.	Have you ever sold any injection or IV fluids without prescription?	<ul style="list-style-type: none">• Yes• No
6.	Do you counsel the patients/costumers if you suspect misuse/abuse of OTC?	<ul style="list-style-type: none">• Yes• No

PSG மருத்துவக் கல்லூரி, கோவை
சமூக மருந்தாளுநர்களிடையே OTC மருந்துகள் குறித்த அறிவு, அணுகுமுறை
மற்றும் நடைமுறைகளை பற்றி அறிதல்
(அனைத்து கேள்விகளுக்கும் பதில் அளிக்கவும்)

பகுதி:1

சுயவிவரம்

1.	பெயர்	
2.	பாலினம்	
3.	வயது	
4.	தகுதி	

பகுதி-2

அறிவு சார்ந்த கேள்விகள்

1.	மருத்துவ ரீதியாக OTC என்பதன் விரிவாக்கம் ஓவர் தி கவுண்ட்டர் (Over The Counter)	<ul style="list-style-type: none"> சரி தவறு
2.	பதிவுப் பெற்ற மருத்துவர் தரும் மருந்துச் சீட்டு இருந்தால் மட்டுமே OTC மருந்துகளை தர வேண்டும்.	<ul style="list-style-type: none"> சரி தவறு
3.	பரிந்துரைக்கப்பட்ட மருந்துகளை ஒரு பதிவு செய்யப்பட்ட மருத்துவ பயிற்சியாளர் பரிந்துரை மூலம் மட்டுமே கொடுக்க வேண்டும்	<ul style="list-style-type: none"> சரி தவறு
4.	இந்தியாவில் OTC மருந்துகளுக்கு சட்டப்பூர்வ அங்கீகாரம் இல்லை	<ul style="list-style-type: none"> சரி தவறு
5.	செட்யூல் (schedule) H மருந்துகளை மருந்துச் சீட்டு இல்லாமல் தரலாம்.	<ul style="list-style-type: none"> சரி தவறு
6.	நோயாளிகள் Morphine மருந்தை OTCல் பெறலாம்.	<ul style="list-style-type: none"> சரி தவறு
7.	பாராசிட்டமால் நச்சுத்தன்மை கல்லீரலை பாதிக்கும்	<ul style="list-style-type: none"> சரி தவறு
8.	இரைப்பை அழற்சிக்கு ஆஸ்பிரின் பயனுள்ளதாக இருக்கும்	<ul style="list-style-type: none"> சரி தவறு

பகுதி:3

அணுகுமுறை சார்ந்த கேள்விகள்

1.	ஆன்டிபயாட்டிக் மருந்துகள் OTC மருந்து வகையைச் சேர்ந்தவையா	<ul style="list-style-type: none"> ஆம் இல்லை
2.	நோயாளிகள் தாமாகவே மருந்துகளை உட்கொள்ளும் முறையை OTC மருந்துகள் ஊக்குவிக்கிறதா	<ul style="list-style-type: none"> ஆம் இல்லை

3.	OTC மருந்துகளை வாங்க வயது வரம்பு உள்ளதா	<ul style="list-style-type: none"> ஆம் இல்லை
4.	OTC தொடர்பான தகவல்களை அவ்வப்போது புதுப்பிப்பது அவசியம் என்று நீங்கள் கருதுகிறீர்களா	<ul style="list-style-type: none"> ஆம் இல்லை
5.	OTCன் தவறான பயன்பாடு குறித்து நீங்கள் கவலைப்படுகிறீர்களா	<ul style="list-style-type: none"> ஆம் இல்லை

பகுதி:4

நடைமுறை சார்ந்த கேள்விகள்

1.	மருந்துகளை விநியோகம் செய்வதற்கு முன் நீங்கள் மருத்துவச்சீட்டு கேட்கிறீர்களா	<ul style="list-style-type: none"> ஆம் இல்லை
2.	OTC தொடர்பான தகவல்களை சரியான நேரத்தில் தெரிந்து கொள்கிறீர்களா.	<ul style="list-style-type: none"> ஆம் இல்லை
3.	நோயாளிகளுக்கு நீங்களே மருந்து கொடுப்பதை விட ஏதேனும் நோயுடன் உங்களிடம் வரும் போது ஒரு மருத்துவரை அணுகுமாறு நீங்கள் அவர்களுக்கு அறிவுரை சொல்வீர்களா.	<ul style="list-style-type: none"> ஆம் இல்லை
4.	பரிந்துரை செய்யப்பட்ட மருந்து பிராண்ட் இல்லாத போது வேறு பிராண்ட் மருந்துகளை மருத்துவரை அணுகாமல் தருகிறீர்களா.	<ul style="list-style-type: none"> ஆம் இல்லை
5.	நீங்கள் எப்போதாவது ஊசி அல்லது IV திரவங்களை மருந்துச் சீட்டு இல்லாமல் விற்று இருக்கிறீர்களா.	<ul style="list-style-type: none"> ஆம் இல்லை
6.	OTCன் தவறான பயன்பாட்டைப் பற்றி நீங்கள் சந்தேகித்தால் நோயாளிகளுக்கு ஆலோசனை வழங்குவீர்களா.	<ul style="list-style-type: none"> ஆம் இல்லை



The Organizing Committee of the
 “International Conference on Medicinal and Food Plant Research & 3rd Sino-CPLP Symposium on
 Natural Products and Biodiversity Resources”, 9-10th April 2021, Hanzhong, China

This is to confirm that

Thirumorthy P

*Attended the International Conference on Medicinal and Food Plant Research &
 3rd Sino-CPLP Symposium on Natural Products and Biodiversity Resources*

P. Y. ZHANG

Distinguished Professor at Shaanxi
 University of Technology
 Senior Researcher, CBMA, Univ. of Minho,
 Portugal
 Adjunct Professor, Univ. of Guelph, Canada



Professor at Department of Biology,
 University of Minho, Portugal

[Signature]

Distinguished Professor at State Key
 Laboratory of Quality Research in
 Chinese Medicine, University of
 Macau

National e-Conference on Drug Discovery for CNS Disorders

CERTIFICATE OF PARTICIPATION

This is to certify that

Mr. P. Thirumoorthy

has participated as a Delegate

in the National e-Conference on Drug Discovery for CNS Disorders held between 6 – 10 December 2021.


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This is to certify that Dr./ Mr. / Ms. P.Thirumoorthy
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actively participated in “International Pharma Webinar on Molecular Docking
with Autodock - An Easier Approach for Beginners” organised by MNR College of
Pharmacy on 10th June, 2020.


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Webinar on
Recent Advances in Drug Design: State of the Art Tools
for Drug Design and Drug Discovery

This is to certify that
THIRUMOORTHY P

has participated in the above mentioned webinar
 Organized by Pharmacy Education Unit &
 Department of Pharmaceutical Chemistry, JSS College of Pharmacy, Ooty
 in association with Schrödinger LLC, Bengaluru on **23rd June 2020.**


Dr S.P. DHANABAL
 Principal, JSSCP Ooty


Dr PRITESH BHAT
 Senior Scientist, Schrödinger LLC, Bengaluru


Dr R. RAGHU
 Vice President, Schrödinger LLC, Bengaluru