

## A Prospective Cross-Sectional Analysis of Most Commonly Dispensing Over the Counter (Otc) Drugs in Community Pharmacies.

Jeslin Mary A, Kannathasan G, Majid Sidheek Thalappil, Muhammed Ashfak T.P, Arun Kumar M, Aaradana K\*  
*Sree Abirami College of Pharmacy, Coimbatore-21*

Submitted: 15-15-2023

Accepted: 25-12-2023

### ABSTRACT:

Over-the-counter (OTC) drugs are drugs that can be sold to consumers without a prescription from a registered physician. The use of over-the-counter (OTC) medications has steadily increased in recent years. Misuse of over-the-counter medications can lead to health and other drug-related problems. The presence of unregulated or unrestricted over-the-counter drugs on the market increases the risk of drug resistance, side effects and human-drug interactions. Over-the-counter medications are used as self-treatment for symptoms such as fever, pain, and cold. This article assesses knowledge of non-prescription drug use among consumers in selected community pharmacies. Interacted with consumers to learn about intended use of over-the-counter medications and collected necessary patient data using patient data entry forms. Patients receive information about the use of non-prescription drugs to guide them in good medical practices and prevent drug-related problems. Final data analysis was performed using MS Excel Office. Analgesics, antipyretics, and antiallergy medications for cough, cold, and fever were the most commonly used OTC medications in the population. To prevent repeated use of OTC drugs, increasing public awareness of OTC drugs and identifying common diseases play an important role in reducing OTC drug problems. Therefore, our study assesses the need for survey-based studies to assess the most common OTC medications in community pharmacies.

**KEY WORDS:** OTC Drugs, Awareness, Rational Drug Usage.

### I. INTRODUCTION:

Over-the-counter (OTC) medications can be purchased without a prescription. It is often used to prevent and treat a variety of conditions, including colds, headaches, musculoskeletal pain, and heartburn. Although it is beneficial for patients,

it is not safe to use. These risks may include patient misunderstanding of the underlying condition, incorrect dosing, dependence or addiction, side effects, and drug interactions. Unlike prescription drugs, OTC drugs are safe when used as directed, but they also have the potential for misuse and abuse. Substance abuse refers to the improper use of over-the-counter drugs for medical purposes, such as taking more than recommended doses. But abuse means using drugs for non-medical reasons, such as health reasons. Pharmacists in society are often the main connections of patients who are required by OTP Pharmaceuticals, so that they can solve information, solve information, reliable information, trusted information and use clinical technologies to solve active actions. In the patient. (One) But in pharmacists, there are some difficulties in identifying and managing patients. For example, it is difficult to identify and manage patients, such as lack of access to the drug. Unlike other countries, over-the-counter drugs in Saudi Arabia are not available in supermarkets or grocery stores, and distribution is limited to local pharmacies. Many studies have been conducted on public attitudes toward over-the-counter drugs. Community pharmacists assessed consumer behavior and attitudes and used structured questionnaire techniques to identify misuse and abuse. Advising customers on the correct use of medicines, offering safer alternatives and discontinuing product sales were among the most common actions taken by pharmacists to address abuse/misuse. Pharmacists suggested several strategies to reduce the risk of over-the-counter drug misuse/abuse, but considered switching from over-the-counter to prescription drugs with potential for abuse to be the best option. Recently, self-treatment using non-prescription drugs sold in pharmacies or stores is increasing. In addition, restrictions on over-the-counter purchases have been relaxed for several products. The process of

deregulation is supported by the pharmaceutical industry, the pharmacy community and health care decision makers, who believe that patients want a greater role in their treatment choices. Self-medication also has benefits for the health system, as it helps make better use of pharmacists' clinical skills, increases access to medicines, and reduces prescription drug costs associated with publicly funded health programs.

However, the increasing availability of over-the-counter medications can lead patients to believe that there is a drug treatment for every condition. In addition, the use of these products can delay/confuse the diagnosis of serious illness, increasing the risk of interactions and side effects and requiring self-treatment when medical assistance is needed. There is also the potential for misuse and abuse. of such products. The terms "abuse" and "maltreatment" are often used interchangeably, but have different meanings in this context. Abuse is defined as using an OTC product for a legitimate medical reason, but in higher doses or for a longer period of time than recommended. Take more pain relievers than recommended to treat your headache. Abuse is the non-medical use of non-prescription drugs. "High" or weight loss. Relatively little systematic research has been conducted on this topic due to the perception that

OTC drug abuse/misuse is not as problematic as other forms of drug abuse. Studies of abuse and misuse in Australia and the United Kingdom have focused primarily on the views of pharmacists and general practitioners, while public opinion studies of community pharmacy services have not investigated the inappropriate use of non-prescription medicines. Therefore, this survey sought to determine the attitudes of the general public toward over-the-counter drugs and their potential for misuse and abuse. Data is missing. Missing data were not imputed or used in analyses. Over-the-counter (OTC) drugs are drugs sold without a prescription from a registered physician. The word "OTC" is not legally recognized in India. All drugs not included in the list of "prescription drugs" are over-the-counter (or over-the-counter) drugs. Therefore, by "OTC drugs" we mean "over-the-counter" drugs, that is, drugs that pharmacists can legally sell without a prescription from a registered doctor. Prescription-only medicines are medicines listed in Schedules H and X of the Medicines and Cosmetics Regulations. The listed drugs (usually antihistamines) do not require a prescription for purchase, but require the following mandatory text on the label: "Caution: Use of this drug under medical supervision is dangerous" [3].

## II. REVIEW OF LITERATURE:

AUTHOR AND JOURNAL NAME	TITLE	OBSERVATION	INFERENCE
Manjushree Nagaraj et al., Journal of clinical and diagnostic research (2015)	A Study on the Dispensing Pattern of Over-the-Counter Drugs in Retail Pharmacies, Bangalore.	The study was conducted in 3 retail pharmacies in Sarjapur area, Bangalore East. The duration of the study was for a period of 10 days. The common complaints for which the patients frequented the pharmacies were observed and recorded. The investigator personally interviewed the patients near the respective pharmacies.	Most commonly dispensed OTC drugs were analgesics. The other categories of medications dispensed were antihistamines, antacids, antibiotics, antipyretics, Oral contraceptive (OC pills) and others. The most common complaint for the use of OTC drugs was pain.
Aluri Moura et al., Journal of drug delivery and therapeutics. (2018)	A survey on over-the-counter drug usage in the community.	A prospective and community-based study was carried out over 6 months of period. A validated questionnaire was used for the collection of data, given to a total of 774 persons and	The majority of participants practiced self-medication. The most commonly used drug was Paracetamol and the most common indication for self-medication was fever. Easy

		face to face interviews among the 774, aged 14-84yrs.	accessibility was the most common reason and source of information was friends/relatives. Awareness and dangers of misuse of OTC medications among all participants was less. Therefore, it is suggested that proper education should be imparted regarding illness where self-administration of OTC drugs to be employed.
S.D Senanayake et al., CINEC Academic Journal (2021)	Analysis of dispensing pattern of OTC drugs in community pharmacy outlets, Sri Lankan perspectives.	This research was conducted as a cross-sectional study. Data were collected from four community pharmacies. A data entry sheet was maintained which included the name of the drug, quantity/volume of the specific drug, disease condition, and the age of the patient. After the data collection, OTC drugs were categorized into 12 categories, and each was divided according to four age categories. Percentages of each dispensed OTC drug were calculated to determine the most frequently dispensed OTC drugs among four age categories.	According to the results they have obtained, the most dispensed OTC drug categories were analgesics and multivitamins. The most dispensed OTC drug was paracetamol which belongs to the category of analgesics. The age category below 25 years was identified with high consumption of OTC drugs.
M.Kupusaami et al., International journal of community medicine and public health (2022)	A study on OTC drugs used in community pharmacies	It was a cross - sectional 6 months study conducted in community pharmacies: 700 patients were evaluated for the use of OTC drugs through patient interviews and using questionnaires. Descriptive statistics was used for result analysis.	NSAIDS is the most often used OTC medications followed by antacids. The primary sources of information to purchase OTC medications were taken from community pharmacies. Recurrence of minor ailments is the major influencing factor for OTC drug purchase. As per the findings of the study OTC medication dispensing is prominent and there is a need for awareness program to ensure rational drug use.
Mayyada Wataniya,	Societal	Data were collected using a	This survey revealed that

<p>Eileen Shields et al., Published by Oxford University Press</p>	<p>perspectives on over-the-counter (OTC) Medicines.</p>	<p>survey administered to 1000 members of the public in 10 studies, using a structured interview technique. The questionnaire was divided into four sections addressing: (a) attitudes towards community pharmacy and patients' contact with pharmacies; (b) attitudes towards the use of OTC medicines.</p>	<p>the general public had a high level of awareness of the abuse potential of OTC medicines. These findings indicate that pharmacists could be more proactive in the management of inappropriate OTC drug use.</p>
<p>Mohammad Algarni 1 *, Zahraa Jalal 2, Frontiers in Pharmacology.</p>	<p>Community pharmacists' views and experiences toward over-the-counter medicines misuse and abuse in Saudi Arabia: A qualitative study</p>	<p>This qualitative study was to explore the views and experiences of the Saudi community pharmacists towards OTC medicines misuse and abuse, specifically aiming to identify the implicated medicines, reasons, and contributing factors, the role of pharmacists and potential risk-mitigating strategies.</p>	<p>This study has provided unique insights into community pharmacists' experiences and views regarding the misuse and abuse of OTC medicines. Pharmacists identified the commonly misused and abused OTC medicines amongst different sets of pharmacy customers besides the reasons and factors precipitating the problematic use.</p>
<p>Sheetal Rathor1, Chiranjib Bhattacharjee2. International Journal of Pharmacology and Clinical Research (IJPCR)</p>	<p>Hazards of OTC medication - a community pharmacy practice</p>	<p>The study observed as overall hazards of OTC medication faced in a community pharmacy practice. It involves over dose misuse of drugs etc..</p>	<p>According to the present survey the report can partially conclude that OTC medication has tremendous risk which may fatal for patients and chances of produce new complication due to misuse of drugs. So medication should be taken after diagnosis by register medical practitioner that will make a healthy society</p>
<p>Pranit P. Gayakar*, Rahul S. Adnaik, Amit D., Asian J. Pharm. Res. 2016; Vol. 6: Issue 4</p>	<p>The Survey of Knowledge about OTC Drugs among Pharmacy Background and Non-Pharmacy Community</p>	<p>To study the impact of knowledge and attitude on the usage of drugs among Pharmacy background people and general citizens on their purchase practices of OTC medicines in India</p>	<p>From the conducted survey it can be concluded that there is need of creating awareness about knowledge of OTC medications among various categories of community. Especially in the rural area the orientation programs are need to be conducted which can be helpful in reducing misuse and to elicit proper of use OTC medications.</p>

### III. AIM AND OBJECTIVES:

- To study the dispensing pattern of OTC drugs in community pharmacies.
- To study the demographic profiles (Age and Gender) of peoples those who are most commonly using OTC drugs.
- To study the commonly reporting illnesses among OTC users.
- To create awareness to the public in order to prevent the OTC drug associated problems.

### IV. METHADODOLOGY:

A prospective cross-sectional study was conducted in selected community pharmacies in Coimbatore, Tamil Nadu, India. It was conducted for a period of 1 month from October 15<sup>th</sup> 2023 to November 15<sup>th</sup> 2023. To evaluate the OTC drugs dispensed; 300 patients were interviewed using a patient data entry form. The questions included the demographic details, patient complaints, quantity of OTC drugs purchased by a patient and an awareness on OTC drugs consumption were given by the students.

#### Inclusion Criteria:

This study concentrated only on consumption of OTC drugs among consumers in selected community pharmacies.

#### Exclusion criteria:

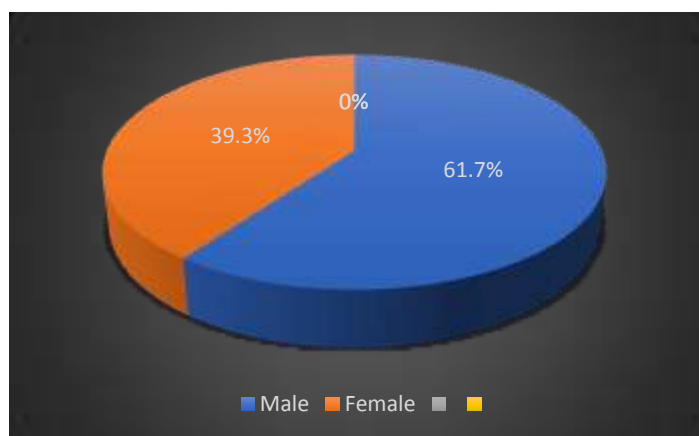
Patients unable to participate because of language barriers, having presented with an unstable medical illness and participants who have been prescribed with OTC drugs by the doctor for long term use and those who declining to give consent were excluded from the study.

Statistical Analysis: Data was analyzed by descriptive statistics using Microsoft excel.

### V. RESULT:

#### (A) Demography:

A total of 300 patients frequented the pharmacies during the study hours without prescription. Out of 300 patients, 61.7% were males and 39.3% were females.

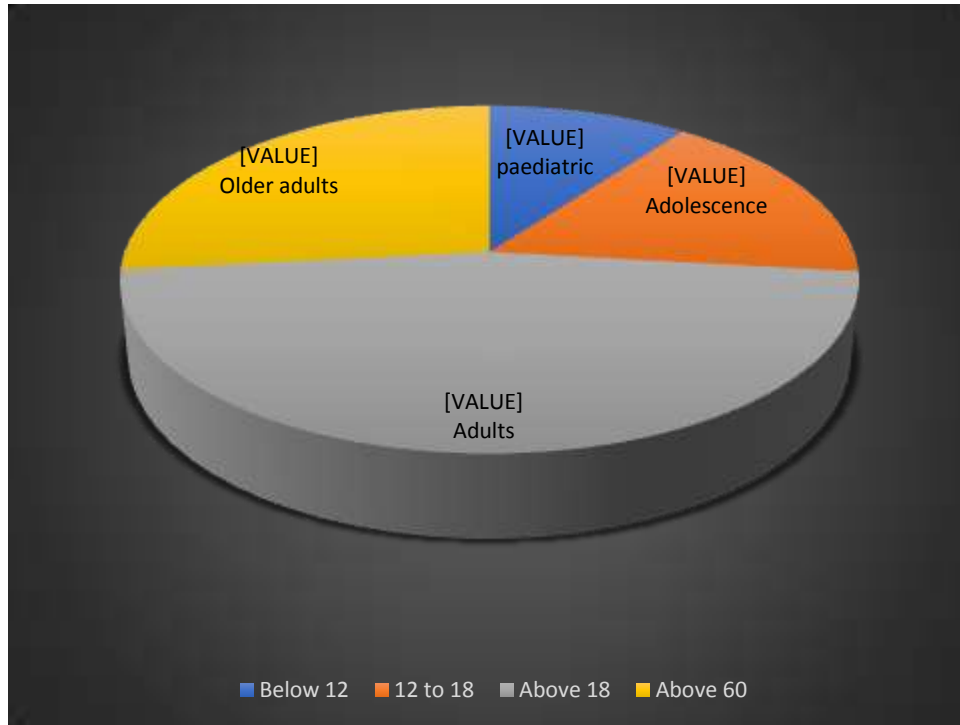


Gender wise distribution(n=300)

#### (B)Age:

A total of 300 patients frequented the pharmacies during the study hours without prescription. Out of 300 patients, 46.60% were

Adults, 26.60% were Older Adults, 16.60% were Adolescence and 10.20% were pediatrics.



Age wise distribution (n=300)

**The most commonly dispensed OTC Drugs:**

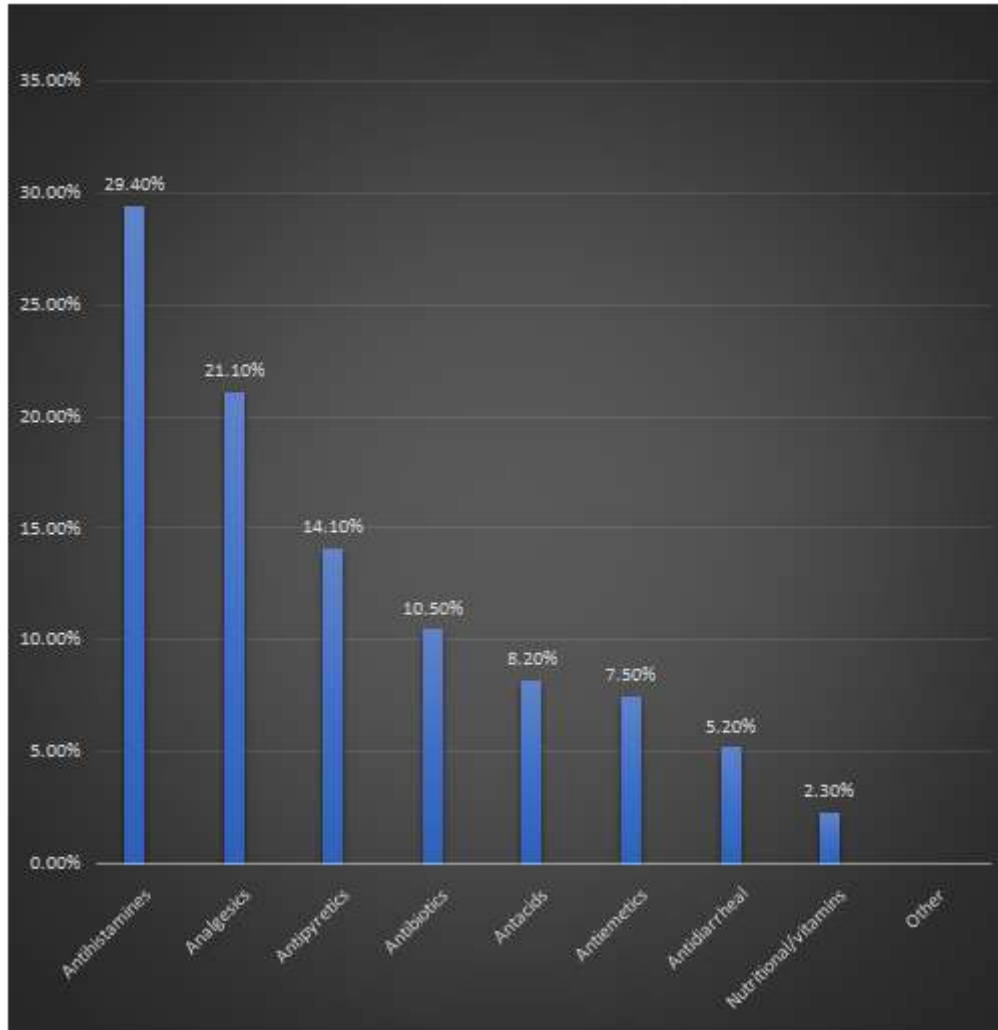
The most commonly dispensed OTC drugs were Antihistamines (29.4%). The other categories of medications dispensed were;

Analgesic (21.1%), Antipyretic (14.1%), Antibiotics (10.5%), Antacids (8.2%), Antiemetics (7.5%), Antidiarrheal (5.2%), Nutritional/vitamin supplements (2.3%), others (1.7%).

TABLE:

Drugs	Number of drugs	Percentage
Antihistamines	250	29.4%
Analgesic	180	21.1%
Antipyretic	120	14.1%
Antibiotics	90	10.5%
Antacids	70	8.2%
Antiemetic	60	7.5%
Ant diarrheal	45	5.2%
Others	15	1.7%

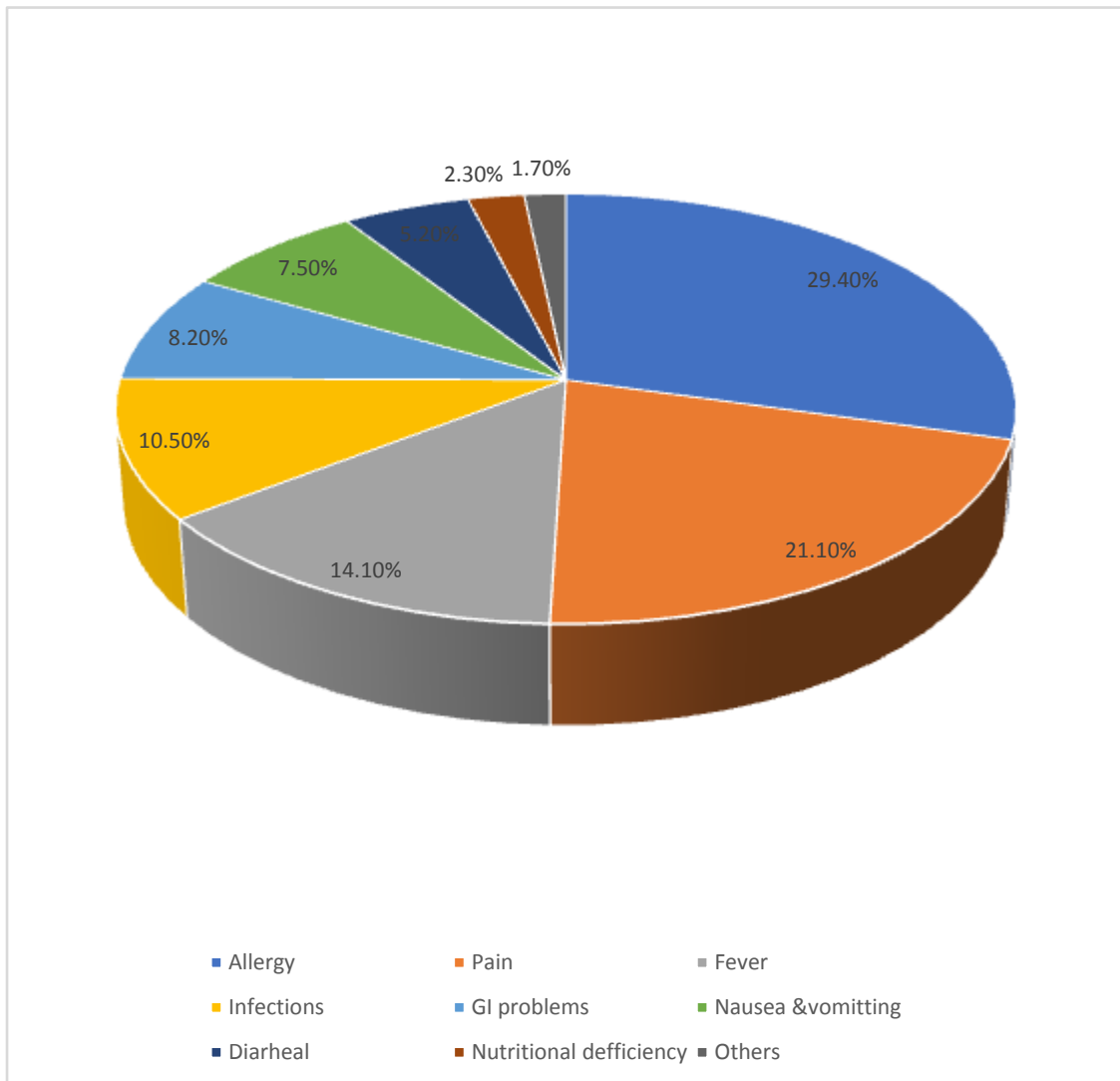
Graphical Representation



**The most common complaints for the use of OTC Drugs:**

The most complaints for the use of OTC drugs were Allergy(29.4%),pain (21.1%),fever

(14.1%), Infection (10.5%), GI problems (8.2%),Nausea & vomiting (7.5%),Diarrhea (5.2%),Nutritional / Vitamin deficiency(2.3%),Others(1.7%).



**AWARENESS GIVEN TO OTC CONSUMERS:**

Medications that can be acquired over-the-counter (OTC) do not require a prescription from a medical expert. To ensure OTC medications are safe and effective, it is critical that patients understand how to take them properly. Key points on the significance of awareness when using over-the-counter medications are as follows:

**Knowledge of Side Effects:** We have informed patients about the various bad reactions and side effects that may arise from over-the-counter medications. This knowledge can help patients make educated decisions and, if necessary, seek the right medical guidance.

**Appropriate Usage:** We advised patients that they needed to know the right amount, how often, and how long to use over-the-counter medications. Using the medications according to the directions on the label and, if required, seeking medical advice can help guarantee that they are taken safely and successfully.

**Interaction with Other Medications:** We have informed the patients about the possibility of interactions between over-the-counter medications and other prescription treatments they may be taking. Specific over-the-counter medications may interfere with prescription prescriptions or be incompatible with specific medical conditions.



**Risks of Misuse:** Patients are aware of the potential consequences when over-the-counter medications are misused. When a drug is misused, it can be taken in excess of what is prescribed, used for longer than is indicated, or used for purposes that are not intended. Misuse can have negative consequences and even be dangerous to one's health.

**The Role of Pharmacists:** We are vital in teaching patients how to use over-the-counter medications safely. We can help patients choose the best over-the-counter medication, explain how to take it properly, and answer any worries or inquiries they may have.

## VI. DISCUSSION:

OTC drugs are generally safe, but when taken improperly, they can cause problems and unfavorable outcomes that are harmful to the general public's health. Because these medications are more readily available and simpler to obtain, they are taken either prior to or right after the onset of symptoms. During the study hours, a total of 300 patients visited the pharmacies without a prescription. 61.7% of the 300 patients were men and 39.3% were women. The main goal of this study was to evaluate the use of over-the-counter (OTC) drugs in community pharmacies. Secondary goals included researching and evaluating patient demographics, the most popular class of OTC drugs prescribed, the factors influencing OTC drug selection, and patient attitudes regarding OTC drug use. During the study hours, a total of 300 patients visited the pharmacies without a prescription. Among the 300 patients, adults made up 46.60%, older adults made up 26.60%, adolescents made up 16.60%, and pediatrics made up 10.20%. For minor illnesses like a cough, cold, allergies, pain, fever, acidity, diarrhea, and skin conditions, patients see a pharmacist instead of going to the doctor. Antimicrobial resistance is a concern because, despite being classified as prescription drugs in India, they are often given out without a prescription. The creation of a distinct category for over-the-counter (OTC) drugs that are lawfully sold over-the-counter was suggested by the Drug Consultative Committee (DCC). Antihistamines were the OTC medication prescribed the most frequently (29.4%). Antihistamines were the OTC medication prescribed the most frequently (29.4%). Analgesics (21.1%), antipyretics (14.1%), antibiotics (10.5%), antacids (8.2%), antiemetics (7.5%), antidiarrheal (5.2%), nutritional/vitamin

supplements (2.3%), and others (1.7%) were the other medication categories that were prescribed.

## VII. CONCLUSION:

Based on our findings, antihistamines were the most commonly prescribed over-the-counter drug category in a subset of community pharmacies. The age group Adolescence, defined as those over the age of 18, was found to consume OTC drugs at high rates. Medications that are sold to consumers over-the-counter (OTC) do not require a prescription from a licensed healthcare provider. Over-the-counter (OTC) medication use has been rising steadily in the last few years. When OTC drugs are used improperly, health problems and other drug-related issues may arise. The risk of negative drug reactions and drug interactions among individuals is increased by the unrestricted or unregulated availability of over-the-counter drugs in the market. OTC medications are used as self-medication for ailments such as colds, fevers, and pains. This study evaluates customers' knowledge about using over-the-counter medications in a subset of community pharmacies. Consumer interactions were conducted to find out why over-the-counter medications were being used, as well as to gather the necessary patient data using a patient data entry form. Patients were educated about the use of over-the-counter drugs in order to improve their medical practices and avoid any drug-related issues. The final data analysis was completed with Microsoft Excel Office. Generally speaking, people's go-to over-the-counter medications for fever, common colds, and cough were analgesics, antipyretics, and allergy medications. Reducing the problems associated with OTC drugs will largely depend on raising public awareness and identifying the illnesses that people report to the public on a regular basis. Therefore, our study recognizes the importance of carrying out survey-based research in order to assess the OTC medications that are most frequently prescribed in community pharmacies. This research will also help to determine which individuals report illnesses most frequently, as well as their demographic information, and it will raise public awareness of the need for rational drug use. These participants received enough counseling to help them improve their self-medication habits and to help them understand how doing so will enhance their quality of life and aid in better disease management.

### BIBLIOGRAPHY;

- [1]. Mohammad Algarni<sup>1\*</sup>, Zahraa Jalal<sup>2</sup>, et al. 2022, Community pharmacists' views and experiences toward over-the-counter medicines misuse and abuse in Saudi Arabia: A qualitative study(1-2)vol 1
- [2]. Hughes CM, McElnay JC, Fleming GF et al... Benefits and risks of self medication. *Drug Safety* 2001; 24: 1027–1037.
- [3]. Hughes C. et al.. Monitoring self-medication. *Expert Opin Drug Saf* 2003; 2: 1–5.
- [4]. Bradley CP, Bond C et al... Increasing the number of drugs available over the counter: arguments for and against. *Br J Gen Pract* 1996; 46: 121–122.
- [5]. Hughes L, Whittlesea C, Luscombe D et al... Patients' knowledge and perceptions of the side-effects of OTC medication. *J Clin Pharm Ther* 2002; 27: 243–248.
- [6]. Hughes GF, McElnay JC, Hughes CM, McKenna P et al... Abuse/misuse of non-prescription drugs. *Pharm World Sci* 1999; 21: 251–255.
- [7]. Akram G et al... Over-the-counter medication: an emerging and neglected drug abuse? *J Substance Use* 2000; 5: 136–142.
- [8]. Ye M, Benrimoj SJ, Williams KA et al... Inappropriate use of nonprescription drugs for primary dysmenorrhoea. *Aust J Pharm* 1999; 80: 1286.
- [9]. De-Almeida-Neto AC, Benrimoj SJ, Gomel M, Fois R et al. Inappropriate self-medication practices: pharmacy-based intervention. *J Soc Admin Pharm* 1996; 13: 131–138.
- [10]. Paxton R, Chapple P et al... Misuse of over-the-counter medicines: a survey in one English County. *Pharm J* 1996; 256: 313–315.
- [11]. MacFadyen L, Eadie D, McGowan T et al... Community pharmacists' experience of over-the-counter medicine misuse in Scotland. *J R Soc Prom Health* 2001; 121: 185–192.
- [12]. Erwin J, Britten N, Jones R. et al.. General practitioners' views on over the counter sales by community pharmacists. *Br Med J* 1996; 312: 617–618.
- [13]. Hughes GF, Bell HM, McElnay JC et al... General practitioners' awareness of the appropriate and inappropriate use of over-the-counter products. *Pharm J* 1999; 263: R29.
- [14]. McElnay JC, Nicholl AJ, Grainger-Rousseau TJ et al... The role of the community pharmacist—a survey of public opinion in Northern Ireland. *Int J Pharm Pract* 1993; 2: 95–100.
- [15]. Tesfamariam S, Anand IS, Kaleab G, Berhane S, Woldai B, Habte E, Russom M. Self-medication with over-the-counter drugs, the prevalence of the risky practice and its associated factors in pharmacy outlets of Asmara, Eritrea. *BMC Public Health*. 2019;19(1):1-9.
- [16]. Subashini N, Udayanga L. Demographic, socio-economic and other associated risk factors for self-medication behavior among university students of Sri Lanka: a cross-sectional study. *BMC Public Health*. 2020;20:1-3.
- [17]. Damisie G, Hambisa S, Yimam M. Over-the-counter sale of antibiotics at drug stores found in Mizan-Aman Town, Southwest Ethiopia: a cross-sectional simulated client visit study. *J Pharm (Cairo)*. 2019;3510659.
- [18]. Marathe PA, Kamat SK, Tripathi RK, Raut SB, Khatri NP. Over-the-counter medicines: Global perspective and Indian scenario. *J Postgrad Med*. 2020;66(1):28.
- [19]. Ylä-Rautio H, Siissalo S, Leikola S. Drug-related problems and pharmacy interventions in non-prescription medication, with a focus on high-risk over-the-counter medications. *Int J Clin Pharm*. 2020;42(2):786.
- [20]. Wazaify M, Elayah E, Tubeileh R, Hammad EA. Assessing insomnia management in a community pharmacy setting in Jordan: A simulated patient approach. *PloS One*. 2019;14(12):e0226076.