World Journal of Pharmaceutical Science and Research
www.wjpsronline.com
Research Article
ISSN: 2583-6579
SJIF Impact Factor: 5.111
Year - 2025
Volume: 4; Issue: 4
Page: 803-811

A STUDY TO ASSESS THE KNOWLEDGE ATTITUDE AND PRACTICE ON OVER THE COUNTER (OTC) DRUGS AMONG CONSUMERS

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Article Received: 17 July 2025 | | ***Article Revised: 07 August 2025*** | | ***Article Accepted: 28 August 2025***

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DOI: https://doi.org/10.5281/zenodo.17011183

How to cite this Article: Dhinesh A., Ragul R. C., Rajarathishan R., Rajesh G., Ramakrishnan M. Sangameswaran B., Kannan S. (2025) A STUDY TO ASSESS THE KNOWLEDGE ATTITUDE AND PRACTICE ON OVER THE COUNTER (OTC) DRUGS AMONG CONSUMERS. World Journal of Pharmaceutical Science and Research, 4(4), 803-811. https://doi.org/10.5281/zenodo.17011183

ABSTRACT

Over-the-counter (OTC) drugs, which are sold without a prescription, are commonly used for self-management of minor health conditions like headaches, colds, and allergies. Although convenient and easily accessible, they can, if used inappropriately, cause adverse effects, drug interactions, and postponement of professional care. **Aim** to evaluate the public knowledge and attitudes towards OTC medication in Jambai and Bhavani, Tamil Nadu, and encourage safe use. **Methods:** This prospective observational study. Data were gathered from 249 participants over three months using structured questionnaires on demographics, usage patterns, knowledge, and attitudes. **Results:** Findings indicated that 58% reported having used OTC drugs, with users predominantly in the 26–35 years age group (43%) and mostly male (61%). Monthly (42%) and infrequent (32%) use were prevalent. There were knowledge gaps—49% only knew about OTC availability without a prescription, 22% thought they were completely safe, and 23% knew about interactions with prescription medication. Attitudinally, 48% wanted OTC use for minor illnesses more than seeing a physician, and only 32% thought pharmacists gave adequate advice. Practices like checking expiry dates infrequently (only 34% always did) and not taking medication once symptoms had improved (36% sometimes) were common Side effects such as headache (14%), vomiting (6%), and fever (5%) were encountered, but 20% of those affected did nothing remedial. Results underscore the importance of specific public health education to enhance knowledge of appropriate OTC use. **Conclusion:** Pharmacists can play an active role in patient counseling to identify myths, promote reading of labels, observe possible interactions, and ensure proper self-medication practices, thus enhancing community health benefits.

KEYWORDS: Over the counter, Self medications, Drug safety, People knowledge, Attitude assessment.

INTRODUCTION

Over-the-counter (OTC) medications are pharmaceutical drugs that can be purchased without a prescription and are widely used for the self-treatment of minor health conditions such as headaches, colds, allergies, and gastrointestinal discomfort. With increased accessibility and affordability, OTC medications play a crucial role in modern healthcare by empowering individuals to manage their health independently. However, the widespread availability of these drugs also raises concerns about misuse, overuse, and the potential for adverse effects, particularly when used without proper knowledge or guidance. Public knowledge and attitudes toward OTC medication significantly influence patterns of usage.

A well-informed population is more likely to use OTC medications safely and effectively, while a lack of awareness or poor attitudes can lead to inappropriate self-medication, drug interactions, delayed treatment, and other health complications. Therefore, understanding the level of knowledge and prevailing attitudes among various groups—such as students, the elderly, or the general public—is essential for developing strategies to promote responsible self-care. This study (or report) aims to assess the current state of knowledge and attitudes regarding OTC medication use, identify potential gaps or misconceptions, and suggest ways to improve public awareness and safe usage practices Over-the-counter (OTC) medications are medications that can be obtained from pharmacies or internet websites without the need for a prescription from a health care professional [1]. OTC medications are necessary for treating and/or preventing minor medical ailments such as muscle discomfort, headaches, allergies, and heartburn.[2]

Noncompliance with prescription medications, behavior of medication sharing, and the phenomenon of self-medications (acquiring medications without communicating with healthcare experts) are all important aspects of medication consumer behavior.[3]

The use of OTC medications for self-medication is a global health care occurrence driven by social and economic factors and is acknowledged as a common practice by the world health organization (WHO) worldwide than prescription-only medications.[4–7] It demonstrates the importance for individuals to take ownership of their well-being and make their own decisions regarding which medication to take. OTC medications are a readily available type of self-care that allows a patient with symptoms to self-diagnose and treat promptly.[8]

METHODOLOGY

Study type: A cross-sectional

Study site: Community pharmacies in and around the areas of Jambai and Bhavani.

Duration: Three months was conducted **(**April 2025 to June 2025)

Sample size: 249 participants were collected.

Inclusion Criteria

- Depending on the study's focus, age ranges may vary. Studies focusing on specific populations may target adolescents, adults, or older adults.
- If childrens are included, parental consent is mandatory.
- Include patients only who are able to read and write and give therir consent

Exclusion Criteria

- Known Allergies or Contraindications
- Current Participation in Other Drug Trials
- Pregnancy and Breastfeeding

Study procedure

A cross-sectional study design was employed to assess the level of awareness and understanding of OTC among the rural population. The study was conducted over a period of three months, from April 2025 to June 2025.The research was carried out in Bhavani and surrounding villages in the Erode district, Tamil Nadu, India.

These areas were chosen based on their semi-rural setting and limited access to structured health education initiatives. Questionnaire was prepared to assess baseline knowledge, awareness, and misconceptions about OTC. It was designed in simple language to ensure clarity and ease of understanding for the general population. Questionnaire was prepared by gathering information from reliable and authoritative sources such as the World Health Organization.

The content was translated and printed in both Tamil and English to ensure accessibility. Draft pamphlets were reviewed by faculty members of the Department of Pharmacy Practice to ensure accuracy, completeness, appropriateness, and readability. Professionally questionnaires were distributed to the general public in the selected study sites. Each distribution event was documented, including the number of Questionnaire disseminated at each location.

Following distribution, feedback was collected from participants to assess comprehension, engagement, and the perceived usefulness of the educational material. This also allowed for preliminary evaluation of behavioral change and awareness improvement. The feedback and questionnaire data were compiled and statistically analyzed to determine the impact of the educational intervention on public understanding of OTC medicines. The data analysis focused on identifying improvements in knowledge, awareness, and intention to follow preventive practice.

OBSERVATION AND RESULTS

RESULTS

A total of 249 participants from Bhavani and Jambai took part in this study to assess knowledge and beliefs of OTC drugs.

Table 1: Age wise distribution among the participants.

AGE (In YEARS)	No of samples [N=249]	PERCENTAGE %
14-20	8	3.21
21-25	31	12.44
26-30	54	21.68
31-35	52	20.88
36-40	36	14.45
41-45	26	10.44
46-50	20	8.03
51-55	11	4.41
56-60	12	4.81

The largest number of respondents were in the age group of 26–35 years (43%) with a slightly higher percentage of males (61%) compared to females (39%). Out of the participants, 58% used OTC medicines and 42% had not used them. Monthly (42%) was the most prevalent, followed by rare (32%) and weekly (22%). Remedies for cold and flu (36%) and painkillers (23%) were the most commonly bought OTC medications. Knowledge survey indicated that a mere 49% knew OTC medications can be bought without a prescription, and only 22% thought they are totally safe. Approximately 43% knew that excessive use may cause health issues, and 23% knew about drug interactions. Attitudinal results indicated 48% favored using OTC products for minor issues rather than visiting a doctor. A mere 32% thought the pharmacist was providing adequate counseling, whereas 42% had confidence in selecting their own drugs. Generally, the research revealed moderate awareness, wide-ranging misconceptions, and unsafe behavior, pinpointing the critical requirement for enhanced awareness and education in the area of OTC use by pharmacists.

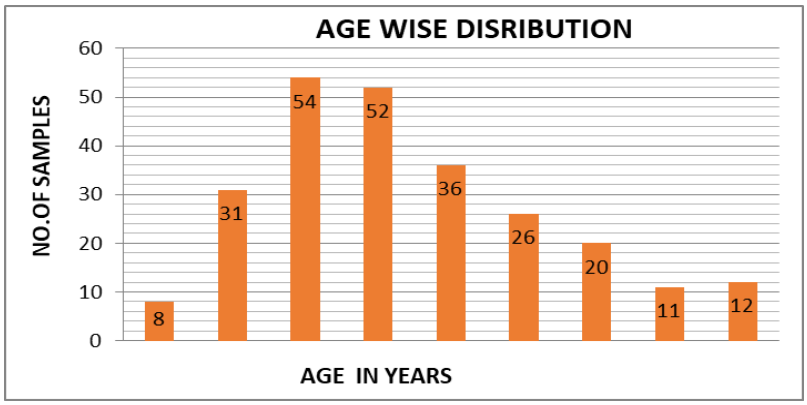

Figure 1: Distribution in the study population.

Shows that among 249 responses, the largest cohort is 26-30y (54), followed by 31-35y (52) and the lowest group falls under the age group of <50years (23)

Table 2: Gender wise distribution.

Gender	Count of gender [n=249]	Percentage %
Female	97	39
Male	152	61

From the above table shows that out of 249 responses men made up the majority response of (152) 61% while women shows (97) 39%

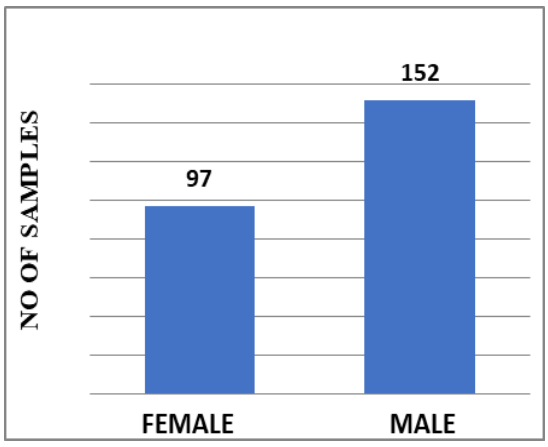

Figure 2: Gender wise distribution.

Table 3: Ever used otc medications?

Have you ever used otc medications?	Count of have you ever used otc medications? [n=249]	Percentage %
Yes	144	58
No	105	42

From the above table shows that most of the responders are aware about OTC drugs (249) 144 know about OTC and 104 were completely unaware of OTC drugs. This shows that OTC knowledge lags by 42% of responders.

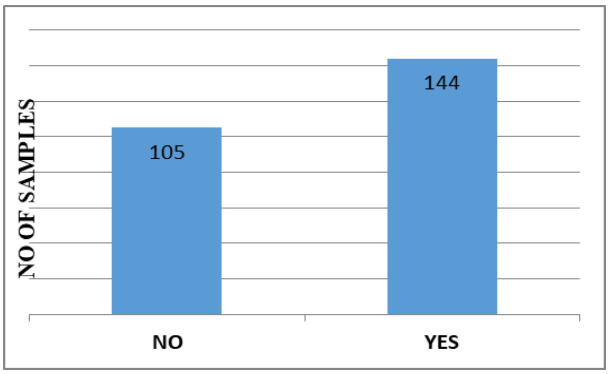

Figure 3: Have you hear about OTC drugs.

Table 4: OTC are safe and free of side effects.

Otc medication are completely safe and free of side effects	Count of otc medication are completely safe and free of side effects [n=249]	Percentage %
Not Sure	74	28
False	125	50
True	50	22

From the above table shows that 50% of people were aware of OTC and 22% people were unaware about its side effects.

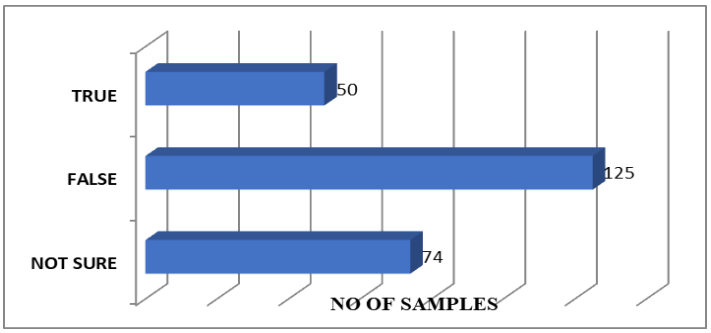

Figure 4: Can OTC medications are completely safe and free of side effects?

Table 5: Treatment for minor ailments.

I prefer using otc medication rather than visiting a doctor for minor ailments	Count of i prefer using otc medication rather than visiting a doctor for minor ailments [n=249]	Percentage %
Agree	119	48
Disagree	32	13
Neutral	83	33
Strongly Agree	11	4
Strongly Disagree	4	2

From the above table shows that from among the 249 samples 119 were answered agree (49%) and 32 were answered disagree (13%) and 83 were answered neutral (33%) and 11 were answered strongly agree (4%) and 4 of them were answered strongly disagree (2%).

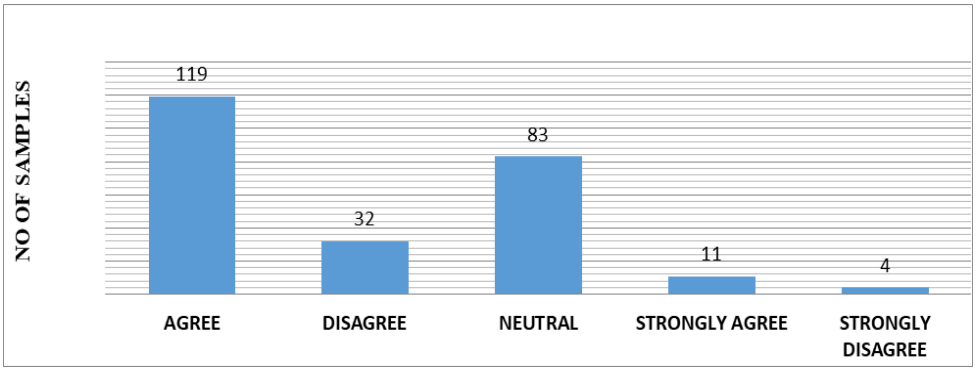

Figure 5: Can you prefer using otc medication rather than visiting a doctor for minor ailments?

Table 6: Confidence of choosing right otc medication for themselves.

I feel confident choosing the right otc medication for myself	Count of i feel confident choosing the right otc medication for myself [n=249]	Percentage %
Agree	92	37
Disagree	38	15
Neutral	96	40
Strongly Agree	14	5
Strongly Disagree	9	3

From the above table shows that among the 249 samples 92 were answered agree (37%) and 38were answered disagree (15%) and 96 were answered neutral (40%) and 14 were answered strongly agree (5%) and 9 were answered strongly disagree (3%).

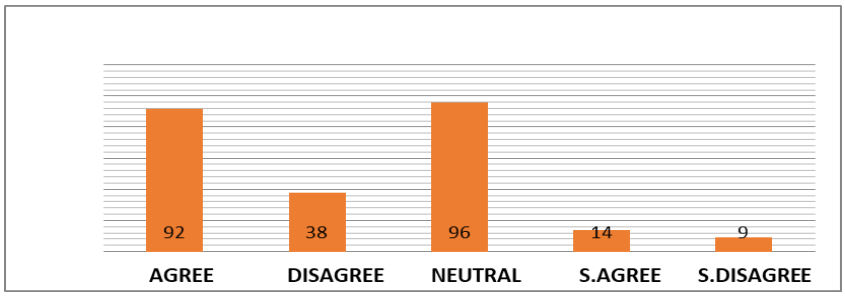

Figure 6: Do you feel confident choosing the right medications for my self?

Table 7: Once symptoms improve even recommended.

I stop taking otc medication once my symptoms improve even if the recommended course is longer	Count of i stop taking otc medication once my symptoms improve even if the recommended course is longer [n=249]	Percentage %
Always	35	14
Never	9	4
Often	48	19
Rarely	67	27
Sometimes	90	36

From the above table shows that 249 samples 35 were answered always (14%) and 9 were answered never (4%) and 48%were answered often (19%) and 67were answered rarely (27%) and 90 were answered sometimes (36%).

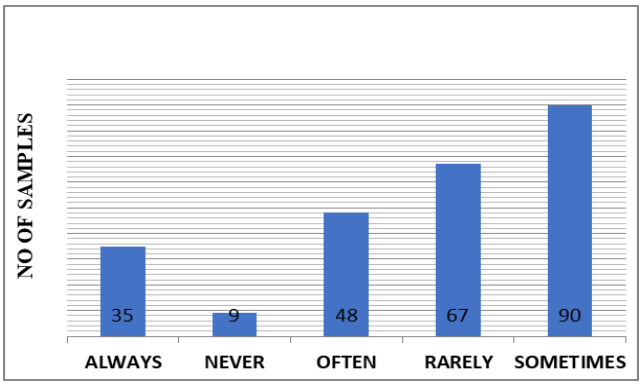

Figure 7: Can I stop taking OTC medication once my symptoms improve even if the recommended course is longer?

Table 8: Type of otc medications do you usually purchase?

What type of otc medications do you usually purchase?	Count of what type of otc medications do you usually purchase [n=249]	Percentage %
Antacid Allergy Medication	57	23%
Cold And Flu Remedies	91	36%
Others	18	8%
Pain Relivers	58	23%
Vitamin And Supplements	25	10%

From the above table shows that out of samples 57 were answered antacid allergy medication (23%) and 91 were answered cold and flu remedies (36%) and 18 were answered others (8%) and 58 were answered pain relivers (23%) and 25 were answered vitamin and supplements (10%).

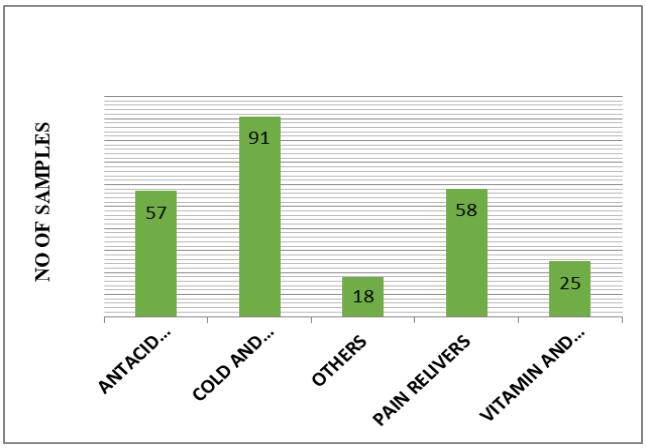

Figure 8: what type of OTC medications do you usually purchase?

DISCUSSION

Age-wise Distribution

In this study, the largest group of OTC drug users belonged to the 26–30 years (21.7%), followed closely by the 31–35 years (20.9%) age group. This trend aligns with studies by ***Bekele et al.*** who reported higher use of OTC medications

among young adults (university students), highlighting that younger populations are more inclined towards self-medication due to accessibility and awareness. Similarly, Kumar & Reddy noted that working-age adults (21–40 years) in rural and urban Tumkur were the primary users of OTC medicines. These findings suggest that self-medication is most prevalent in economically active age groups.

Gender-wise Distribution

Our study found males (61%) used OTC drugs more than females (39%). This is consistent with ***Alqahtani et al.*** in Saudi Arabia, who reported higher OTC use among men. However**, Latha et al.** Found no significant gender differences in self-medication practices. The higher male prevalence in our study may be due to sociocultural roles in Tamil Nadu, where men more frequently purchase household medications.

Awareness of OTC Drugs

We observed that 58% had used OTC medications, while 42% were unaware. A comparable level of awareness was noted by **Sharma & Sawant** (2024) among MBBS students, where nearly half had misconceptions about OTC availability. In Ethiopia**, Abay & Amelo** also reported inadequate awareness among health science students (only ~50% knew correct OTC use). Together, these findings show that knowledge gaps are widespread across populations.

Perception of Safety

About 22% of participants believed OTC drugs are completely safe, while 50% disagreed. This mirrors findings by Bennadi (2014), who emphasized misconceptions about OTC safety as a global issue. Likewise, Karadaş reported that patients with chronic conditions often underestimated risks, leading to potential misuse. Our results reinforce the urgent need for public health campaigns clarifying that OTC drugs can cause adverse effects if misused.

Preference for OTC vs. Doctor Visits

Nearly 48% preferred self-medication for minor ailments. Similar results were reported by Kumar & Reddy, where 45% of rural participants relied on OTC medicines before consulting physicians. In contrast**, Latha et al.** Found a slightly lower percentage (about 35%) preferring OTC self-care. This highlights how convenience and cost factors strongly influence patient behavior in semi-rural India.

Confidence in Choosing OTC

Around 42% (37% agree + 5% strongly agree) felt confident choosing OTC medicines. **Bekele et al.** Similarly found that ~40% of students were confident in self-selecting drugs, despite limited knowledge. This confidence, often based on experience rather than professional advice, can lead to irrational drug use if not corrected by pharmacist-led counseling.

Discontinuation after Symptom Relief

In our sample, 36% sometimes stopped OTC use once symptoms improved, and only 14% always completed the recommended course. Comparable findings were observed by Abay & Amelo, where premature discontinuation was a common unsafe practice. Similarly, Karadaş showed poor adherence to OTC use in chronic disease patients. This behavior increases risks of treatment failure and resistance, especially in antimicrobials.

Commonly Purchased OTC Drugs

Cold and flu remedies (36%) and pain relievers (23%) were most commonly used, followed by antacids (23%) and vitamins (10%). This trend is consistent with Bennadi and Sharma & Sawant, who also identified analgesics and cold medications as the top OTC drugs. In contrast, Alqahtani et al. Reported higher use of gastrointestinal medications in Saudi Arabia, suggesting that patterns vary regionally based on disease prevalence and cultural habits.

CONCLUSION

This research illustrates that despite the rampant use of OTC drugs among the people of Tamil Nadu's rural population, knowledge gaps, unsafe methods, and misconceptions persist. The results indicate a pressing need for educational programs to enhance drug safety awareness, interactions, and proper usage practices. Pharmacists, as the most readily available health professionals, can act as a vanguard in counseling patients, dispelling myths, and promoting rational self-medication. Enhancing pharmacist-conducted counseling and launching public health campaigns can eventually reduce risks linked to improper use of OTC and enhance community healthcare outcomes.

Ethics statement: This study was conducted in accordance with the ethical standard of the institution. Ethical approval for the study was obtained from the, SSM College of Pharmacy.

Informed consent was obtained from all individual participants included in the study. Participants were informed about the nature and purpose of the study, and their participation was entirely voluntary. Confidentiality and anonymity of the data were strictly maintained.

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