



# A Cross-Sectional Study on the Prevalence of Self Medication Practices and Associated Factors among Adults in Urban and Rural Field Practice Areas of Tertiary Medical Centres in Chennai

Dr. Arun Murugan S<sup>1</sup>, Dr. Yamuna Devi<sup>2</sup>, Dr. Niveditha S<sup>3</sup>, Dr. Saran N M<sup>4</sup>, Dr. Madhuvarshini A<sup>5</sup>

HOD, Department of Community Medicine, Omandurar Government Estate, Chennai, Tamil Nadu, India<sup>1</sup>

Associate Professor, Department of Community Medicine, Omandurar Government Estate, Chennai,  
Tamil Nadu, India<sup>2</sup>

Compulsory Rotatory Medical Intern (CRMI), Department of Community Medicine, Omandurar Government Estate,  
Chennai, Tamil Nadu, India<sup>3</sup>

Compulsory Rotatory Medical Intern (CRMI), Department of Community Medicine, Omandurar Government Estate,  
Chennai, Tamil Nadu, India<sup>4</sup>

Compulsory Rotatory Medical Intern (CRMI), Department of Community Medicine, Omandurar Government Estate,  
Chennai, Tamil Nadu, India<sup>5</sup>

**ABSTRACT: Background:** Self-medication is a widespread practice and an emerging public health concern, especially in settings where medicines are easily available without prescription and health information is frequently obtained from non-clinical sources. While often used for minor ailments, inappropriate self-medication can lead to adverse drug effects, delayed diagnosis, and antibiotic misuse.

**Objective:** To assess the prevalence of self-medication and its associated factors among adults in urban and rural field practice areas of tertiary care centers in Chennai, and to evaluate related knowledge, attitudes, practices, and eHealth literacy.

**Methods:** A community-based cross-sectional study was conducted among adults using a structured, pretested questionnaire. Information on self-medication practices, knowledge, attitudes, medication behaviors, and eHealth literacy was collected and analyzed using descriptive and inferential statistics.

**Results:** The prevalence of self-medication was 92.5%. Common indications included headache, fever, and cold/cough. Analgesics were the most commonly used drugs, and pharmacies without prescriptions were the main source. Despite awareness of potential risks, many participants considered self-medication acceptable and reported unsafe practices such as dose modification, sharing medicines, and delaying medical consultation. eHealth literacy levels were generally moderate to low.

**Conclusion:** Self-medication is highly prevalent and widely accepted despite known risks. Easy access to medicines, permissive attitudes, and limited eHealth literacy contribute to unsafe practices. Strengthening regulation, improving public awareness, and promoting responsible medicine use are essential.

### I. INTRODUCTION

Self-medication is the use of medicines without consulting a physician, and it has become a global phenomenon especially in developing countries like India because of easy access to drugs, convenience, prior experience with common illnesses, and the belief that minor symptoms do not need professional care. Although it can sometimes help with minor, self-limiting conditions, inappropriate self-medication may lead to side effects, delayed diagnosis, and treatment failure, especially when medicines are shared, reused, or taken without proper guidance. Antibiotic self-medication is of particular concern because it contributes to antimicrobial resistance and undermines appropriate treatment.[1][2][3][4][5]

The growing accessibility of online health information and pharmacy delivery apps has significantly influenced self-medication behaviors, but limited eHealth literacy can make it difficult for people to judge the quality of what they find on the internet and use it safely for health decisions. Previous studies in India have shown that self-medication is common across different populations and settings, highlighting the need to understand both the extent of the practice and the factors that sustain it. Therefore, this study aimed to assess the prevalence of self-medication practices and associated factors among adults in the urban and rural field practice areas of tertiary medical centres in Chennai.[2][6][7][8][9][1]

### II. METHODOLOGY

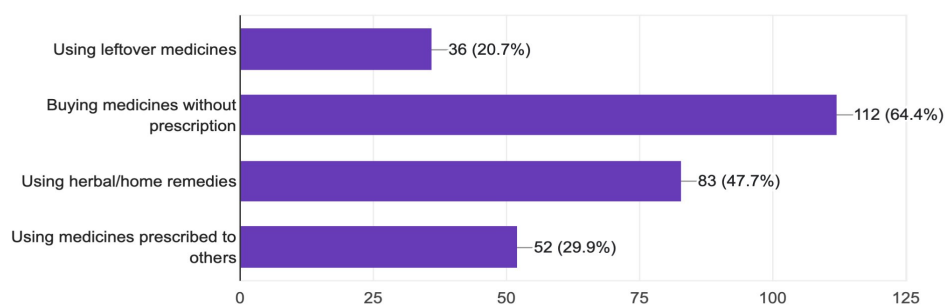
A cross-sectional study was conducted among adults aged >18 years in urban and rural field practice areas of tertiary medical centres in Chennai. Data were collected using a structured questionnaire through Google Forms about sociodemographic characteristics, knowledge and perceptions of self-medication, medicine-use practices, common symptoms prompting self-treatment, sources of medicines, safety behaviors, care-seeking delay, awareness strategies, and eHealth literacy responses. Statistical analysis was performed using SPSS v26.

### III. RESULTS

A total of 174 adults participated in the survey. The sample was predominantly female (55.7%), while 42.5% were male, and the remaining participants belonged to other gender categories. In terms of education, 34.0% were graduates, 23.6% had no formal education, 21.3% had secondary education, 11.5% had primary education, and 9.2% had postgraduate education. Awareness of self-medication was high, with 79.9% reporting that they knew about it. However, perceptions of safety were mixed, and a large proportion of respondents normalized the practice for minor illness. Overall, 92.5% reported having practiced self-medication at least once. Knowledge-related responses suggested partial understanding of self-medication. Buying medicines without prescriptions was the most commonly recognized form of self-medication (64.4%), followed by herbal or home remedies (47.7%), using medicines prescribed to others (29.9%), and using leftover medicines (20.7%). Similar studies have noted that familiarity with drugs and easy access to medicines are major drivers of self-medication in India.[3][1]

7. Which do you consider as self-medication? (multiple choices)

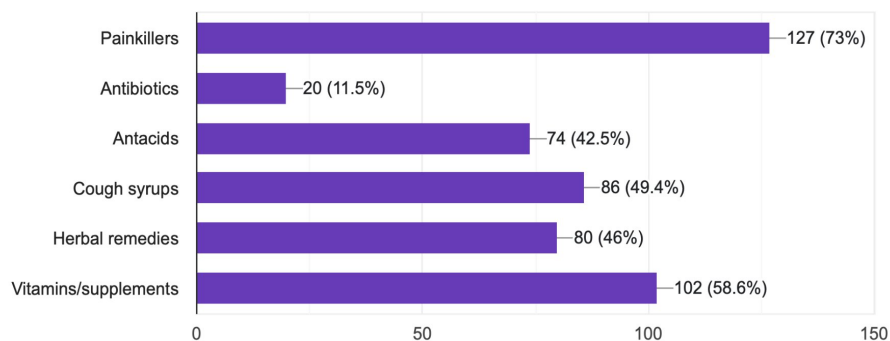
174 responses



Self-medication was most often practiced for headache or pain (80.5%), cold or cough (77.6%), and fever (73.6%). This pattern is consistent with Indian and regional studies showing that minor ailments are the most common triggers for self-treatment, especially for pain and respiratory symptoms.[4][1][3]

17. Which medicines do you self medicate with? (multiple choices)

174 responses



The most commonly used drugs were painkillers (73.0%), vitamins or supplements (58.6%), cough syrups (49.4%), herbal remedies (46.0%), and antacids (42.5%). Antibiotic self-medication was reported by 11.5% of respondents, which remains important because antibiotic misuse contributes to resistance and unnecessary exposure to adverse effects. Medicines were most often obtained from pharmacies without prescriptions (39.7%), followed by friends or family (28.7%), online sources (19.0%), and leftover medicines (12.6%).[2][5]

Safety behaviors varied. Only 17.2% always checked expiry dates, while 16.7% never did. Dose adjustment without advice was reported sometimes by 38.5% of respondents. Sharing prescribed medicines with others was common (69.5%), and 64.4% reported sometimes keeping leftover medicines for future use. These behaviors are concerning because they increase the risk of inappropriate dosing, treatment failure, and adverse outcomes.[1][2]

About 24.7% reported side effects from self-medication, though 44.8% were unsure. Among those who experienced side effects, 53.4% consulted a doctor, 31.6% stopped the medicine, 9.2% ignored it, and 5.7% switched medicines. Delayed professional help because of self-medication was reported by 72.4%, which is a major concern because delayed care can worsen illness and increase complications.[2][3]

eHealth literacy responses were largely neutral, suggesting uncertain ability to locate, assess, and use internet-based health information. This matters because eHealth literacy is the ability to find, understand, appraise, and apply online health information appropriately, and weak performance in these skills can contribute to misinformation-driven self-care.[6][7]

The findings fit well with published evidence showing that self-medication is common in India and is often driven by familiarity with medicines, minor ailments, and access from pharmacies. The antibiotic-related responses are also important because studies from India have shown that self-prescribing antibiotics is common and may contribute to resistance, especially when access is easy and oversight is weak. The eHealth literacy pattern is consistent with the broader literature on eHEALS-type measures, where many people report some access to online health information but limited confidence in judging quality or using it for decisions.[5][7][3][6][1][2]

#### IV. DISCUSSION

This study demonstrates a very high prevalence of self-medication among adults in the study population. The overall rate of 92.5% is striking and suggests that self-medication has become a routine response to illness rather than an occasional behavior. This is much higher than commonly reported Indian estimates, which show self-medication to be

prevalent but not nearly universal (1,2,9). The finding may reflect easy access to medicines, familiarity with common symptoms, prior experience with similar illnesses, and the perception that consulting a doctor is unnecessary for minor complaints (2,4).

A major observation from the study is the clear gap between awareness and behavior. Although nearly 80% of participants reported that they knew what self-medication was, and many were aware that it can cause side effects or drug resistance, this knowledge did not prevent widespread use (1,8). In fact, most respondents believed self-medication was acceptable for minor illnesses and many said they would sometimes prefer it over a doctor visit (2). This suggests that self-medication is not being viewed as a risky act by many adults; instead, it is often seen as a practical and acceptable form of health management. Such attitudes can reduce the likelihood that people will seek timely professional care (4). The symptoms most commonly leading to self-medication were headache, fever, and cold/cough. These are typical self-limiting conditions, so their high frequency is understandable (2,9). People often use previously experienced remedies for these symptoms because they believe the condition is straightforward and easily managed (1). However, repeated self-treatment for common symptoms can still be unsafe if the underlying cause is not correctly identified, if the wrong medicine is chosen, or if the drug is taken for too long (4). For example, persistent headache or fever may sometimes signal a condition that requires medical evaluation rather than repeated symptomatic treatment.

The kinds of medicines used in this study reflect a pattern of symptom-based self-treatment. Painkillers were the most common, followed by vitamins or supplements, cough syrups, herbal remedies, and antacids (2,9). This suggests that respondents were more likely to self-medicate with products they perceived as harmless, familiar, or easily available (1). The reported use of antibiotics, although lower than painkillers, remains a concern because even limited misuse can contribute to antimicrobial resistance (3,5). The finding is important because many people may not fully recognize antibiotics as a special class of drugs that should generally not be used without proper medical advice (8).

The source of medicines also deserves attention. Pharmacies without prescriptions were the main source, followed by family or friends, online sources, and leftover medicines (2,4). This points to a permissive medicine-use environment in which obtaining drugs without a prescription is relatively easy (4). When medicines are accessible without adequate checks, self-medication becomes more likely and more frequent (3). The role of friends, family, and leftover medicines also suggests that medicines are often shared and reused informally, rather than being taken under structured guidance (1,2). This pattern can lead to inappropriate drug choice, incomplete courses, and use of expired or unsuitable medicines.

Unsafe medication behaviors were common in the study population. Many participants did not always check expiry dates, some adjusted doses independently, and a large proportion shared prescribed medicines with others (2,9). These are concerning findings because they increase the risk of adverse effects, underdosing, overdosing, and treatment failure (4). Sharing medicines is particularly problematic because another person's symptoms may look similar but require a different medication, dose, or duration (1). Keeping leftover medicines for future use can also encourage incomplete treatment and repeated unsupervised exposure to the same drug, which may reinforce self-medication habits over time (5).

Another significant finding was that many participants delayed seeking professional help because of self-medication. This is one of the most important public health concerns in the study. When people self-treat first and consult later, they may postpone diagnosis and management of potentially serious illness (4). Delay can worsen disease outcomes, increase the need for more intensive treatment, and raise overall healthcare costs. It also suggests that self-medication is not always being used as a short-term bridge before formal care, but rather as a substitute for timely medical consultation (2).

The eHealth literacy findings provide additional insight into why self-medication may be widespread. Most respondents gave neutral answers to statements about finding, evaluating, and using online health information, indicating uncertainty rather than confidence (6,7). In the current setting, where many people search the internet before deciding how to manage symptoms, limited eHealth literacy can be risky (7). Individuals may encounter unreliable information, misleading advertisements, or unverified home remedies and then use those suggestions to justify self-treatment. In this way, low eHealth literacy can indirectly support unsafe medicine practices even when access to information is high. The

study also identified social media and television as the most preferred channels for awareness generation. This suggests that public health messages may reach the population more effectively through mass media than through traditional clinic-based education alone (2). However, awareness campaigns should not only warn against self-medication; they should also explain which conditions are safe for symptomatic care, which medicines should not be shared or reused, and when to seek medical help immediately. Messages about antibiotic use, side effects, expiry dates, and reading labels would be especially valuable (8).

Overall, the findings show a consistent pattern: self-medication is common, normalized, and supported by easy access to medicines and limited critical appraisal of health information (1,4). The study highlights the need for a multi-pronged response, including stricter control over non-prescription medicine sales, community-based education, counseling by pharmacists and healthcare workers, and improved digital health literacy (4,7). It also reinforces the importance of including antibiotic stewardship in public education efforts (3,5). Addressing self-medication requires not only increasing knowledge but also changing habits and the environment in which medicine use References

### V. CONCLUSION

Self-medication was highly prevalent among adults in the urban and rural field practice areas studied in Chennai. Although awareness of self-medication was relatively high, unsafe medicine-use practices, delayed care-seeking, and limited eHealth literacy were common. The findings support the need for stronger regulation, targeted health education, and practical interventions to promote safer medication behavior and reduce inappropriate self-treatment.

### VI. TABLES

Table 1: Sociodemographic profile

Variable	Category	n (%)
<b>Total participants</b>		174 (100)
<b>Gender</b>	Female	97 (55.7)
<b>Gender</b>	Male	74 (42.5)
<b>Gender</b>	Other	3 (1.8)
<b>Education</b>	No formal education	41 (23.6)
<b>Education</b>	Primary education	20 (11.5)
<b>Education</b>	Secondary education	37 (21.3)
<b>Education</b>	Graduate	59 (34.0)
<b>Education</b>	Postgraduate	16 (9.2)

Table 2: Knowledge and perceptions

Item	Response	n (%)
Knowledge of self-medication	Yes	139 (79.9)
Knowledge of self-medication	No	35 (20.1)
Considered self-medication as using leftover medicines	Yes	36 (20.7)
Considered self-medication as using leftover medicines	No	138 (79.3)
Considered self-medication as buying medicines without prescription	Yes	112 (64.4)
Considered self-medication as buying medicines without prescription	No	62 (35.6)
Considered self-medication as using herbal/home remedies	Yes	83 (47.7)
Considered self-medication as using herbal/home remedies	No	91 (52.3)
Considered self-medication as using medicines prescribed to others	Yes	52 (29.9)
Considered self-medication as using medicines prescribed to others	No	122 (70.1)
Do you think self-medication is safe?	Sometimes safe	131 (75.3)
Do you think self-medication is safe?	Not safe	25 (14.4)
Do you think self-medication is safe?	Don't know	12 (7.0)
Do you think self-medication is safe?	Always safe	11 (6.3)
Know self-medication can cause side effects/drug resistance	Yes	113 (64.9)
Know self-medication can cause side effects/drug resistance	No	61 (35.1)
Believe antibiotics can be used without consulting a doctor	Yes	28 (16.1)
Believe antibiotics can be used without consulting a doctor	No	73 (42.0)
Believe antibiotics can be used without consulting a doctor	Not sure	73 (42.0)
Self-medication acceptable for minor illnesses	Yes	126 (72.4)

Self-medication acceptable for minor illnesses	No	24 (13.8)
Self-medication acceptable for minor illnesses	Not sure	24 (13.8)
Prefer self-medication over doctor visit for minor symptoms	Sometimes	129 (74.1)
Prefer self-medication over doctor visit for minor symptoms	Always	17 (9.8)
Prefer self-medication over doctor visit for minor symptoms	Rarely	20 (11.5)
Prefer self-medication over doctor visit for minor symptoms	Never	8 (4.6)
Need stricter rules for medicine sales without prescription	Agree	91 (52.3)
Need stricter rules for medicine sales without prescription	Strongly agree	15 (8.6)
Need stricter rules for medicine sales without prescription	Neutral	60 (34.5)
Need stricter rules for medicine sales without prescription	Disagree	8 (4.6)

Table 3: Self medication practice patterns

Item	Response	n (%)
Ever practiced self-medication	Yes	161 (92.5)
Ever practiced self-medication	No	13 (7.5)
Frequency in last 6 months	Once	81 (46.6)
Frequency in last 6 months	2–5 times	70 (40.2)
Frequency in last 6 months	More than 5 times	14 (8.0)
Frequency in last 6 months	Never	9 (5.2)
Self-medicate for fever	Yes	128 (73.6)
Self-medicate for fever	No	46 (26.4)
Self-medicate for cold/cough	Yes	135 (77.6)

Self-medicate for cold/cough	No	39 (22.4)
Self-medicate for headache/pain	Yes	140 (80.5)
Self-medicate for headache/pain	No	34 (19.5)
Self-medicate for stomach upset/vomiting	Yes	64 (36.8)
Self-medicate for stomach upset/vomiting	No	110 (63.2)
Self-medicate for skin problems	Yes	48 (27.6)
Self-medicate for skin problems	No	126 (72.4)

Table 4: Medicine safety and use behaviours

Item	Response	n (%)
Check expiry dates	Always	30 (17.2)
Check expiry dates	Sometimes	90 (51.7)
Check expiry dates	Rarely	25 (14.4)
Check expiry dates	Never	29 (16.7)
Adjust dosages on own	Never	76 (43.7)
Adjust dosages on own	Rarely	31 (17.8)
Adjust dosages on own	Sometimes	67 (38.5)
Share prescribed medicines with others	Yes	121 (69.5)
Share prescribed medicines with others	No	53 (30.5)
Keep leftover medicines for future use	Sometimes	112 (64.4)
Keep leftover medicines for future use	Rarely	41 (23.6)

Keep leftover medicines for future use	Always	13 (7.5)
Keep leftover medicines for future use	Never	8 (4.6)
Read package inserts/labels	Sometimes	86 (49.4)
Read package inserts/labels	Rarely	41 (23.6)
Read package inserts/labels	Never	30 (17.2)
Read package inserts/labels	Always	17 (9.8)

Table 5: Side effects, help seeking and awareness preferences

Item	Response	n (%)
Experienced side effects from self-medication	Yes	43 (24.7)
Experienced side effects from self-medication	No	53 (30.5)
Experienced side effects from self-medication	Not sure	78 (44.8)
Action after side effects	Consulted a doctor	23 (53.4)
Action after side effects	Stopped medicine	14 (31.6)
Action after side effects	Ignored it	4 (9.2)
Action after side effects	Switched medicine	2 (5.7)
Delayed seeking professional help due to self-medication	Yes	126 (72.4)
Delayed seeking professional help due to self-medication	No	48 (27.6)
Best awareness method	Social media	64 (36.8)
Best awareness method	Television	51 (29.3)
Best awareness method	Community health program	30 (17.2)
Best awareness method	Doctors/pharmacists	18 (10.3)
Best awareness method	Schools/colleges	8 (4.6)

Table 6: eHealth literacy responses

Statement	Response	n (%)
Know what health resources are available on the internet	Strongly agree	20 (11.5)
Know what health resources are available on the internet	Agree	60 (34.5)
Know what health resources are available on the internet	Neutral	64 (36.8)
Know what health resources are available on the internet	Disagree	14 (8.0)
Know what health resources are available on the internet	Strongly disagree	16 (9.2)
Know where to find helpful health resources on the internet	Strongly agree	10 (5.7)
Know where to find helpful health resources on the internet	Agree	54 (31.0)
Know where to find helpful health resources on the internet	Neutral	76 (43.7)
Know where to find helpful health resources on the internet	Disagree	17 (9.8)
Know where to find helpful health resources on the internet	Strongly disagree	17 (9.8)
Know how to use the internet to answer health questions	Strongly agree	3 (1.7)
Know how to use the internet to answer health questions	Agree	50 (28.7)
Know how to use the internet to answer health questions	Neutral	84 (48.3)
Know how to use the internet to answer health questions	Disagree	17 (9.8)
Know how to use the internet to answer health questions	Strongly disagree	20 (11.5)
Know how to use online health information to help myself	Strongly agree	0 (0.0)
Know how to use online health information to help myself	Agree	33 (19.0)
Know how to use online health information to help myself	Neutral	90 (51.7)
Know how to use online health information to help myself	Disagree	27 (15.5)

Know how to use online health information to help myself	Strongly disagree	23 (13.2)
Have the skills needed to evaluate online health resources	Strongly agree	3 (1.7)
Have the skills needed to evaluate online health resources	Agree	30 (17.2)
Have the skills needed to evaluate online health resources	Neutral	85 (48.9)
Have the skills needed to evaluate online health resources	Disagree	25 (14.4)
Have the skills needed to evaluate online health resources	Strongly disagree	31 (17.8)
Can tell high-quality from low-quality online health resources	Agree	27 (15.5)
Can tell high-quality from low-quality online health resources	Neutral	95 (54.6)
Can tell high-quality from low-quality online health resources	Disagree	20 (11.5)
Can tell high-quality from low-quality online health resources	Strongly disagree	20 (11.5)
Feel confident using internet information for health decisions	Agree	32 (18.4)
Feel confident using internet information for health decisions	Neutral	72 (41.4)
Feel confident using internet information for health decisions	Disagree	31 (17.8)
Feel confident using internet information for health decisions	Strongly disagree	36 (20.7)
Able to use internet information to make health decisions	Agree	23 (13.2)
Able to use internet information to make health decisions	Neutral	74 (42.5)
Able to use internet information to make health decisions	Disagree	27 (15.5)
Able to use internet information to make health decisions	Strongly disagree	48 (27.6)

**REFERENCES**

1. Prevalence and Predictors of Self-Medication Practices in India. PMC. Available from : <https://pmc.ncbi.nlm.nih.gov/articles/PMC7579319/>
2. Prevalence, Pattern, and Reasons for Self-Medication: A Community-Based Study. PMC. Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC9936784/>
3. Self-prescribing of antibiotics by patients seeking care in Indian settings. PMC. Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC8082699/>
4. Drivers of inappropriate use of antimicrobials in South Asia. PMC. Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC10557824/>
5. Trends in Practices of Self-Medication with Antibiotics. PMC. Available from : <https://pmc.ncbi.nlm.nih.gov/articles/PMC9245917/>
6. Norman CD, Skinner HA. eHEALS: The eHealth Literacy Scale. J Med Internet Res. 2006;8(4):e27. Available from <https://www.jmir.org/2006/4/e27/>
7. eHealth Literacy Assessment Instruments: Scoping Review. J Med Internet Res. 2025;27:e66965. Available from : <https://www.jmir.org/2025/1/e66965>
8. Knowledge of antibiotics and antibiotic resistance, antibiotic use and misuse. PMC. Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC11551986/>
9. Self-medication prevalence and associated factors among adults. PMC. Available from : <https://pmc.ncbi.nlm.nih.gov/articles/PMC10964435/>



INTERNATIONAL  
STANDARD  
SERIAL  
NUMBER  
INDIA



# INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN SCIENCE | ENGINEERING | TECHNOLOGY

 9940 572 462  6381 907 438  [ijirset@gmail.com](mailto:ijirset@gmail.com)



[www.ijirset.com](http://www.ijirset.com)

Scan to save the contact details