DETERMINING THE PREVALENCE OF SELF MEDICATION PRACTICE IN GENERAL POPULATION: A CROSS SECTIONAL STUDY

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ABSTRACT

Self-medication is a common healthcare behaviour in developing countries. The purpose of this study was to determine the prevalence of the use of over-the-counter medications (OTC) among the general population Methods. This cross-sectional study was conducted in Districts of Salem and Namakkal during the period from April to July 2024. The collected data were entered into an Excel spreadsheet for Windows 2010 and analyzed using SPSS version. Results. The results indicate that a considerable proportion of individuals opt for self-medication due to factors such as convenience, perceived minor nature of illness, and cost-effectiveness compared to formal healthcare services. The study underscores the need for enhanced public health education on the safe use and the importance of consulting healthcare professionals before initiating treatment. Moreover, policymakers should consider regulating the availability of certain medications and promoting awareness campaigns to mitigate the risks associated with self medication use. Further research is recommended to explore the specific drivers of self medication and to develop targeted interventions to ensure safe and effective healthcare practices within the population.

KEYWORDS: Self medication, Over the Counter, Cross sectional study, Community Pharmacies.

INTRODUCTION

Commonly, people engage in self-medication as a form of health self-care. Self-medication involves individuals selecting and using medications or herbs to address self-diagnosed or self-recognized medical or mental issues[1] In the past, this involved following the advice of others without consulting a doctor, and included using medications, herbs, or other home treatments based on personal discretion.[2,3]

Both industrialized and developing nations frequently engage in self-medication. However, this practice is more prevalent in developing countries due to the increasing availability of over-the-counter medications.[4] As a result, the global incidence of self-medication has risen.[5]

The significance of self-medication has garnered considerable attention from medical professionals, especially when pharmaceuticals transition from prescription-only status to being available over-the-counter (OTC). Self-medication is widely recognized as playing an important role in the treatment of minor illnesses.[6,7]

The prevalence of antibiotic misuse is notably higher in low-income countries. Research indicates that common reasons for self-medication with antibiotics include fever, the common cold, sore throat, and diarrhoea. Many individuals may take analgesics to address pain and inflammation without consulting their primary care physician, as these medications are easily accessible. This practice often occurs without awareness of the potential side effects of frequent self-medication.

The inappropriate and excessive use of antibiotics in the community, primary care settings, and hospitals results from a complex interplay of factors. These include the prescribing practices of doctors, patients' attitudes, beliefs, and knowledge about antibiotics, and the tendency for self-medication. Patient-physician interactions also play a significant role. Therefore, reducing antibiotic misuse requires a multifaceted approach involving informed healthcare professionals, pharmacists, health authorities, and consumers.[8,9]

Self-medication has gained widespread acceptance within the healthcare system, driven by the recognition of individual responsibility for personal health and the understanding that professional care for minor ailments may often be unnecessary. Improved general knowledge,

education levels, and socioeconomic status in many countries provide a solid foundation for successful self-medication practices.[10]

Governments should play a crucial role in regulating responsible self-medication by ensuring the availability of safe drugs and providing clear usage instructions, while encouraging consultation with healthcare professionals when necessary.[11] Both developed and developing nations commonly utilize self-medication for managing minor illnesses.[12] In developing countries particularly, where access to affordable healthcare services is limited, self-medication serves as a significant method of treatment.[13] The prevalence rates of self-medication are alarming, standing at 38.8% in Asia and 75.7% in Africa.[14] This trend is largely driven by the inappropriate use of antibiotics, including self-medication and inadequate dosage, leading to a significant rise in antibiotic resistance. This issue poses a severe global health concern, necessitating comprehensive population-level assessments of self-medication practices.[15]

Self-medication is a pervasive issue across developing nations, particularly in South Asia (e.g., Pakistan, India, Nepal, Afghanistan), as well as in countries like Sudan, Trinidad and Tobago, and Brazil. In these regions, antibiotics and potentially addictive medications are readily available over-the-counter in pharmacies, without requiring a prescription. This accessibility contributes to the emergence and spread of new forms of antibiotic-resistant pathogens, often referred to as "nightmare bacteria." These pathogens pose a catastrophic threat worldwide, transcending national borders and affecting populations universally.[16]

In many low-income countries, a significant proportion—ranging from 60 to 80%—of health issues are addressed through self-medication, often chosen for its affordability. This trend, particularly with antimicrobials, is gaining global significance.[17] The decision to use antibiotics without medical oversight is influenced by various factors, including unrestricted sales, economic pressures, time constraints, advice from peers and family, consumer beliefs, and media campaigns. Studies consistently highlight that inappropriate and excessive antibiotic use is the primary driver behind the emergence and spread of resistant bacteria. Consequently, antibiotic resistance poses a critical global health challenge, impacting public health and patient safety worldwide.[18]

In India, the prevalence of self-medication (SM) ranges widely from 8.3% to 92%[19,20] Many individuals opt not to consult medical professionals when they fall ill. Instead, they often purchase medicines from retail pharmacies or seek leftover medications from neighbours who have previously been ill.[21,22] Self-medication is prevalent in India because it provides a cost-effective option for managing health issues.

Over-the-counter (OTC) medications in India are not distinctively categorized; those not requiring prescriptions are typically marketed as such. Conversely, according to the International Pharmaceutical Federation (FIP), pharmacists are entrusted with ensuring that patients receive essential information for the safe and effective use of medications.[23,24]

Therefore, using over-the-counter medications (OTC) without the supervision of a licensed pharmacist or medical professional can lead to significant consequences. In India, research on social media (SM) has predominantly centered on its prevalence, perceptions, and contributing factors. Yet, there has been no study aimed at educating people about their use of medications via social media.[25]

DEFINITION
Self-medication can be defined as the use of drugs to treat self-diagnosed disorders or symptoms, or the intermittent or continued use of a prescribed drug for chronic or recurrent disease or symptoms. Self-medication involves obtaining medicines without a prescription, resubmitting old prescriptions to purchase medicines, sharing medicines with relatives or members of one's social circle, or using leftover medicines stored at home.

This approach often involves over-the-counter medications, herbal remedies, or leftover prescriptions. While self-medication can offer convenience and cost savings, it also carries risks. Misuse or overuse of medications can lead to adverse effects, drug interactions, or masking of underlying health issues that require professional attention. It's important for individuals to be informed about the medications they use, understand potential side effects, and seek medical advice when necessary to ensure safe and effective treatment.

AIM
To determine the prevalence of self-medication practices among the general population through a cross-sectional study.

OBJECTIVES
To assess the proportion of individuals in the general population who engage in self-medication.
To identify the common types of medications used for self-medication.
To evaluate the sources of information that individuals use to guide their self-medication practices.
To investigate the demographic factors (such as age, gender, education level, and socioeconomic status) associated with self-medication practices.
To analyze the reasons and conditions under which individuals choose to self-medicate rather than seek professional medical advice.

MATERIALS AND METHODS

2.1. Study Site & Period
This cross-sectional study was conducted in Districts of Salem and Namakkal during the period from April to July 2024, the sample was general population.

2.2 Study Design
The study was conducted by the following Questionaries
☐ An idea about Self- Medication
☐ Categories of Medication are mostly preferred for Self medication
☐ Reason for Self -Medication
☐ Consider while selecting the drug for self-medication
☐ Platform used for purchasing drugs
☐ Average number of the drugs that are using per month
☐ Usage of same prescription of your family member
☐ Drugs used for self medication are safe?
☐ Checking the expiry date?
☐ Have you ever experienced adverse or side effect

2.2 Data collection, sampling, and recruitment
The study only included participants who were willing to participate and were conveniently available for data collection. All persons who took self Medication during the last three months or any use of OTC drugs or medicine without medical prescription were also involved in the work. People who didn't feel comfortable providing information on the questionnaires or people with incomplete were also removed from the study.

2.3 Data analysis
The Statistical Package for the Social Sciences (SPSS) version were used to do statistical analysis after entering the obtained data into an Excel spreadsheet for Windows 2010 was created. Data is displayed as a mean.

RESULTS AND DISCUSSION
An idea about Self- Medication.

Table 01
(n=202)

Idea about Self - medication	No of Responses	Percentage
Yes	118	58.4%
No	84	41.6%

Out of 202 patients, 118 (58.4%) responded 'Yes,' while 84 (41.6%) responded 'No' Categories of Medication are mostly preferred for Self medication.

Table 02
(n=202)

Categories of Medication	No of Responses	Percentage
Analgesics	28	13.9%
Anti Pyretic	37	18.3%
NSAIDs	45	22.3%
Anti Biotics	55	27.2%
Anti-Ulcer	18	8.9%
Others	19	9.4%

Out of the total patients, 28 (13.9%) responded to analgesics, 37 (18.3%) responded to antipyretics, 45 (22.3%) responded to NSAIDs, 55 (27.2%) responded to antibiotics, 18 (8.9%) responded to anti-ulcer medications, and 19 (9.4%) responded to other treatments.

3. Reason for Self -Medication
Table 03
(n=202)

Reason	No of Responses	Percentage
Doctor /clinic far from home	24	11.9%
High fees of doctor	55	27.2%
Save time	65	32.2%
Pharmacist advice	28	13.9%
I have old prescription	25	12.4%
Doctor is busy with many patient	5	2.5%

Among the patients, 24 (11.9%) indicated that the distance of the doctor or clinic from their home was a factor. Fifty-five patients (27.2%) cited high consultation fees as a reason, while 65 patients (32.2%) reported that saving time was their primary consideration. Twenty-eight patients (13.9%) followed the advice of a pharmacist, and 25 patients (12.4%) mentioned that they had an old prescription. Lastly, 5 patients (2.5%) stated that the doctor was too busy with many other patients.

4. Consider while selecting the drug for self-medication
Table 04
(n=202)

Consider while selecting the drug for self-medication	No of Responses	Percentage
Price	38	18.8%
Type of medicine	62	30.7%
Brand, if you select any specific brand	74	36.6%
Pharmaceutical company	28	13.9%

Out of the total respondents, 38 patients (18.8%) indicated that price influenced their decision, 62 patients (30.7%) responded that the type of medicine was a determining factor, 74 patients (36.6%) indicated a preference for a specific brand, and 28 patients (13.9%) cited the pharmaceutical company as a consideration.

5. Platform used for purchasing drugs
Table 05
(n=202)

Platform used for purchasing drugs	No of Responses	Percentage
Pharmacy shop	144	71.3%
Online shopping	12	5.9%
Primary healthcare center	8	4.0%
Medical representatives	20	9.9%

Friends / family	15	7.4%
Others	3	1.5%

Out of the 202 patients surveyed, 144 patients (71.3%) reported obtaining their medications from a pharmacy, 12 patients (5.9%) from online shopping platforms, 8 patients (4%) from a primary healthcare center, 20 patients (9.9%) through medical representatives, 15 patients (7.4%) relied on friends or family for their medications, and 3 patients (1.5%) used other sources. This data illustrates the distribution of sources from which patients acquired their medications, with the majority opting for traditional pharmacy shops.

6. Average number of the drugs that are using per month
Table 06
(n=202)

Average number of the drugs that you are using per month	No of Responses	Percentage
One	88	43.6%
Two	70	34.7%
More than Two	44	21.8%

Out of the selected 202 patients
88 patients (43.6%) responded to One, 70 patients (34.7%) responded to Two, and 44 patients (21.8%) responded to More than Two.

7. Usage of same prescription of your family member
Table 07
(n=202)

Usage of same prescription of your family member	No of Responses	Percentage
Yes	75	37.1%
No	127	62.9%

Out of the selected 202 patients
Out of the 202 patients selected, 75 patients (37.1%) responded affirmatively, while 127 patients (62.9%) responded negatively.

8. Drugs used for self medication are safe?
Table 08
(n=202)

Drugs used for self medication are safe?	No of Responses	Percentage
Yes	120	59.4%
No	82	40.6%

Of the 202 patients selected, 120 (59.4%) responded affirmatively, while 82 (40.6%) responded negatively.

9. Checking the expiry date?
Table 09
(n=202)

| Checking the expiry date?	No of Responses	Percentage
Yes	146	72.3%
No	56	27.7%

Of the 202 patients selected, 146 (72.3%) responded affirmatively, while 56 (27.7%) responded negatively.

10. Have you ever experienced adverse or side effect.
Table 10
(n=202)

Have you ever experienced adverse or side effect	No of Responses	Percentage
Yes	56	27.7%
No	146	72.3%

Out of the 202 patients selected, 56 (27.7%) were categorized as "Yes," while 146 (72.3%) were categorized as "No."
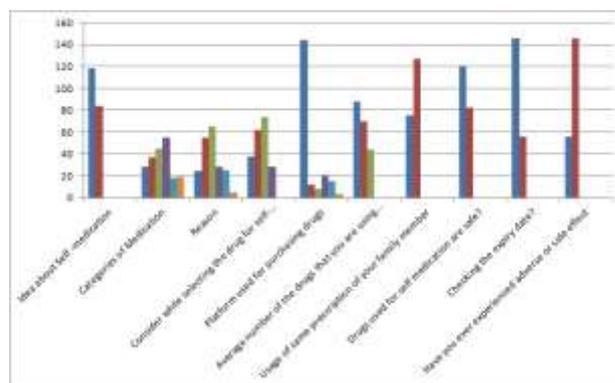
11. Types of dosage forms
Table 11
(n=202)

Types of dosage form	No of Responses	Percentage
Solid dosage form	125	61.9%
Liquid dosage form	30	14.9%
Semi Solid dosage form	29	14.5%
Others	18	8.9%

Out of 202 patients, 125 patient (61.9%) responded to solid dosage forms, 30(14.9%) reponded to liquild dosage form, 29(14.5) responded to semisolid dosage forms, 18(8.9%) responded to others. Solid dosage form are most commonly used dosage form.

12. Any knowledge of the drug
Table 12
(n=202)

Knowledge of the drug	No. of Responses	Percentage
Yes	100	49.5%
No	102	50.5%

Out of 202 respondents, 100 patient (49.5%) were responded and lack of knowledge about the drug, 102 patient (50.5%) were responded and knowledge about the drug.

13. Spell the correct name of medication of Non prescription
Table 13
(n=202)

Spell the correct name of medication	No of Responses	Percentage
Yes	95	47.0%
No	107	53.0%

Among the 202 patients, 95 patients (47%) responded that correctly spell the name of medication, 107 patients (53.0%) responded that did not correctly spell the name of the medication.

14. Selection of brand
Table 14
(n=202)

Selection of brand	No of Responses	Percentage
recommended by Pharmacist	67	33.2%
Old prescription of doctor	46	22.8%
Used by peers – friends / family	25	12.4%
Advertisement	9	4.5%
My previous experience	25	12.4%
Other. Explain	30	14.9%

Out of 202 patients, 67 patient(33.2%) responded to recommended by pharmacist.46 patient(22.8%) responded to old prescription doctor, 25 patient(12.4%) responded to used by peers family /family, 9 patient(4.5%) responded to Advertisement, 25 patient(12.4%) responded to my previous experience, 30patient(14.9%) responded to other (explain).

15. Suggestion
Table 15
(n=202)

suggestion	No of Responses	Percentage
Yes	120	59.4%
No	82	40.6%

Out of the 202 patient, 120 patient (59.4%) were responded 'yes' for suggestion, 82 patient (40.6%) were responded 'No' for suggestion.

16. SOURES of Information
Table 16
(n=202)

Sources of information	No of Responses	Percentage
Media	58	28.7%
Friend	50	24.8%
Family	34	16.8%
Chemist	60	29.7%

Out of 202 respondents, 58 patient (28.7%) selected media source, 50 patient (24.8%) selected friend, 34

patient (16.4%) selected family, 60 patient (29.7%) selected chemist. Most source of information by chemist to the patients.

17. Impact of advertisement or electronic media.

Table 17
(n=202)

Impact of advertisement or electronic media	No of Responses	Percentage
Yes	47	23.3%
No	155	76.7%

Among the 202 patients, 47 patient (23.3%) were selected negatively, while 155 patient(76.7%) were selected affirmatively to impact of advertisement or electronic media.

18. Have you taken self-medication in last month
Table 18
(n=202)

Have you taken self medication in last month	No of Responses	Percentage
Yes	111	55.0%
No	91	45.0%

Out of the 202 patient, 111 patient (55.0%) responded "Yes" and 91 patient (45%) responded "No" for taken self medication in last month.

19. Have any disease in last three month
Table 19
(n=202)

Have any disease in last month	No of Responses	Percentage
Yes	48	23.8%
No	154	76.2%

Out of the 202 patient, 48 patient(23.8%) responded to " yes" while 154 patient (76.2%) responded to "No" for any disease in last month.
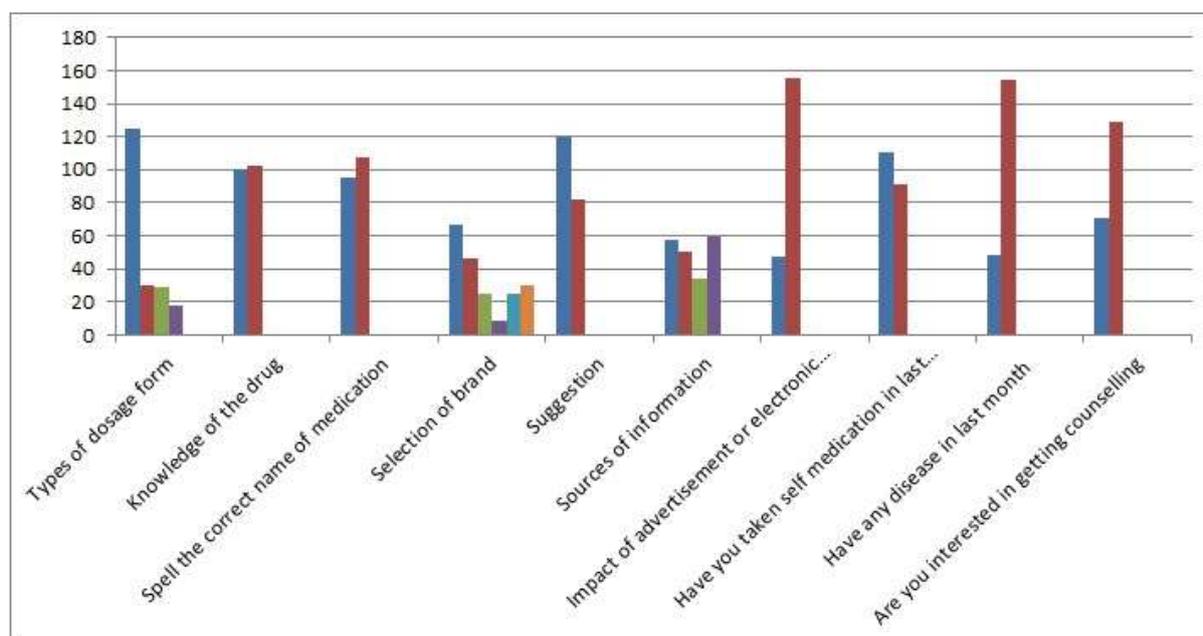
20. Are you interested in getting counselling
Table 20
(n=202)

Are you interested in getting counselling	No of Responses	Percentage
Yes	71	35.5%
No	129	64.5%

Out of 202 patient, 71 patient (35.5%) are interested in getting counselling, 129 patient (64.5%) are no interested in getting counselling.

CONCLUSION

This cross-sectional study aimed to determine the prevalence of self-medication practices within the general population, revealing a significant reliance on self-medication as a common healthcare behaviour. The findings indicate that a considerable proportion of individuals opt for self-medication due to factors such as convenience, perceived minor nature of illness, and cost-effectiveness compared to formal healthcare services. However, this practice carries inherent risks, including potential misuse of medication, incorrect self-diagnosis, and adverse drug interactions.

The study underscores the need for enhanced public health education on the safe use of over-the-counter medications and the importance of consulting healthcare professionals before initiating treatment. Additionally, policymakers should consider regulating the availability of certain medications and promoting awareness campaigns to mitigate the risks associated with self-medication. Further research is recommended to explore the specific drivers of self-medication and to develop targeted interventions to ensure safe and effective healthcare practices within the population.

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