



Self-Medication Practice Among Community Pharmacies after Covid-19

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KEYWORDS

Self-medication, misuse, OTC medicines, pandemic, community practice.

ABSTRACT:

Background

Self-medication refers to the utilization of medications without a prescription for self-diagnosed disorders, symptoms, or ongoing use of prescribed drugs for chronic symptoms. Several factors influence self-medication, including education, family background, community environment, medicine availability, and exposure to public medical advice or advertisements.

Objective

The objective of this study is to access the perception of community pharmacists regarding the practice of self-medication after pandemic.

Methodology

A cross-sectional survey study was conducted in various community pharmacies located in the Chengalpattu and Chennai Districts of Tamil Nadu. The study spanned a period of 6 months and involved the collection of samples from medical shops/ community pharmacies in both urban and rural care settings in Chengalpattu and Chennai districts.

Results

In this study, males were higher in number than females with 60% and the most commonly reported age was 18 to 35 years with 44%. Antihistamines were used very commonly with 97% Gastric issues such as acidity, indigestion, heartburn were most common with 95%. Next to that pain, headache was considered as the most common ailment with 91% followed by diarrhoea, UTI infections, and respiratory problems with 89%, 80%, and 76% respectively.

Conclusion

The study is concerned about a rise in the percentage of people using antipyretics and anti-inflammatory medications for self-medication. According to the findings, Indians self-medicate with various medicines such as antibiotics, diclofenac, and paracetamol at a significant rate during the current pandemic

Introduction

The World Health Organization (WHO) has provided a definition for self-medication (SM) as the use of medication without a prescription from a healthcare professional to address self-identified symptoms. Self-medication involves the use of drugs without a

prescription to treat self-diagnosed disorders, or symptoms, or the continuous use of prescribed drugs for chronic symptoms. Several factors, such as education, family background, community influences, medicine availability, and exposure to medical advice or advertisements, contribute to self-medication practices.



Following the COVID-19 pandemic, there has been an increase in people's interest in self-medication. Advice regarding self-medication practices has been sought from friends, neighbours, and various media sources. In India, antibiotics like azithromycin, doxycycline, and ciprofloxacin, as well as other drugs such as chloroquine and ivermectin, have been commonly used for self-medication without a prescription to prevent COVID-19, despite reports from the FDA cautioning against the unsafe use of hydroxychloroquine and chloroquine. The uncertainty surrounding the etiology and rational treatments for COVID-19 has led to a rise in the practice of self-medication with antimicrobials and other drugs. Self-medication involves the practice of taking medicines, herbs, or home remedies based on personal initiative or the advice of others, without consulting healthcare professionals.

Objectives

The objective of this study is to access the perception of community pharmacists regarding the practice of self-medication after the pandemic.

Methodology

The present study was conducted in various community pharmacies located in the Chengalpattu and Chennai Districts of Tamil Nadu. It was designed as a cross-sectional survey study with a duration of 6 months. The sample for the study was collected from medical shops and community pharmacies situated in both urban and rural care settings within Chengalpattu and Chennai districts. The sample size for the study was determined using the Rao soft online sample size calculator, aiming

for a target sample size of 75 community pharmacists with a confidence level of 95%. A convenient sample of community pharmacists from different pharmacies in Chengalpattu and Chennai districts was surveyed. Pharmacies were selected based on their central location and the availability of multiple choices for pharmacy services to patients. A regional map was used to identify pharmacies in each municipality, ensuring convenience and representing different types of pharmacies (such as retail pharmacies and chain pharmacies). To access face validity, participants were asked to complete the questionnaire scale and provide open-ended comments regarding the clarity and relevance of the questions to their practice. In order to achieve the targeted sample size, 125 community pharmacies were approached, out of which 35 refused to participate and 15 pharmacies were excluded. A stratified sample of 75 registered community pharmacists from across the regions of Chengalpattu and Chennai districts was randomly selected to respond to the survey. The study duration spanned over 2 months, during which a questionnaire, translated into both English and the local language (Tamil), was administered.

Inclusion criteria

- ✓ Pharmacists working in Community pharmacies.
- ✓ Pharmacists working in Chain pharmacies.

Exclusion criteria

- ✓ Pharmacists working in Hospital attached pharmacies.
- ✓ Pharmacists who are not willing to cooperate.

Table.1. Demographic variables

Variables		No's	%
Age	18-35	33	44
	36-50	22	29
	51-65	14	18
	>65	06	9
Gender	Male	45	60
	Female	30	40
Knowledge on self-medication	Yes	31	41
	No	44	59



Table 2. Frequently dispensed drugs as self-medication

S.no.	Frequently used drugs	Dispense without prescriptions			
		Yes		No	
		No's	%	No's	%
1.	Antibiotics	59	79	16	21
2.	NSAIDS	74	99	1	1
3.	Antacids, GIT drugs, Antiemetic's	73	97	2	3
4.	Anthelmintics	70	93	5	7
5.	Cardiac drugs	29	39	46	61
6.	Antidiabetics	26	35	49	65
7.	Cough syrups, respiratory medicines	55	73	20	27
8.	ENT products	44	59	31	41
9.	Controlled drugs	14	19	61	81
10.	Multivitamins	75	100	0	0
11.	Antihistamines	73	97	2	3
12.	Oral contraceptives	0	0	75	100
13.	Topical products	64	85	11	15
14.	Corticosteroids (oral, inhaled, topical)	59	79	16	21
15.	Herbal products	75	100	0	0
16.	Inhalers	60	80	15	20
17.	Others	75	100	0	0

Table 3. Frequently dispensed drugs for some minor ailments

S.no.	Common ailments	Dispense without prescriptions			
		Yes		No	
		No's	%	No's	%
1	Pain, Headache	68	91	7	9
2	Respiratory problems	57	76	18	24
3	Diarrhoea	67	89	8	11
4	Constipation	75	100	0	0
5	Wounds	75	100	0	0
6	Gastric issues	71	95	4	5
7	Vomiting	75	100	0	0
8	Skin problems	44	59	31	41
9	ENT problems	31	41	44	59
10	Menstrual issues	35	47	40	53
11	Fever	75	100	0	0
12	Urinary tract infections	60	80	15	20
13	Hair problems	59	79	16	21
14	Erectile dysfunction	75	100	0	0
15	Others	70	93	5	7

**Table.4. Perception towards antibiotics self-medication**

S.no.	Perception towards antibiotics self-medication	No's	%
Selection of antibiotics			
1.	Doctor's previous prescription	32	42.5
2.	Past experience	11	14.5
3.	Opinions from friends/ relatives	12	16
4.	Recommended by pharmacists	20	27
Reason for antibiotic self-medication			
1.	Convenience	19	25
2.	Illness is minor	21	28
3.	Lack of time	02	2.5
4.	Cost saving	33	44.5

Results

In this study, males were higher in number than females with 60% and the most commonly reported age was 18 to 35 years with 44%. Most of the participants were not having any idea about using self-medication, and they reported that they have been advised by friends, relatives, and by internet sources. Self-medication was used for various minor ailments such as constipation, vomiting, and wounds. Antihistamines were used very commonly with 97% followed by drugs for Gastric issues such as acidity, indigestion, and heartburn with 95%. Next to that pain such as headache was considered the most common ailment with 91% followed by diarrhoea, UTI infections, and respiratory problems with 89%, 80%, and 76% respectively. The most commonly used drugs were Multivitamins, herbal products with 100%. Next to that, NSAIDs were commonly used with 99% followed by gastro drugs such as antacids, proton pump inhibitors, etc. with 99% and 97%. Anthelmintic drugs such as albendazole, mebendazole were used as self-medication with 93%. Dispensing of Topical products such as ointments, creams, and gels were found to be more common with 85%. For respiratory problems such as asthma, and allergic rhinitis, physicians prescribed inhalers and nasal sprays with 80%. Cough syrups and other respiratory drugs such as bronchodilators were most commonly used as self-medication with 70%. Medicines for Chronic conditions such as Cardiac drugs, and antidiabetic drugs were not dispensed without prescriptions.

Discussion

In this study, antibiotics were dispensed without a prescription for **79%** of the patients. This showed that community pharmacists dispensed the antibiotics based on the symptoms said by the patients. Non-steroidal anti-inflammatory drugs were dispensed to **99 %** of the participants without a prescription and few pharmacists refused to dispense the pain killers without a prescription for certain serious pain such as migraine headaches, severe traumatic pain, etc.⁵ Gastro drugs such as antacids, anti-ulcer drugs and antiemetic drugs with **97%** were mostly dispensed without prescriptions for minor ailments. Both Paracetamol and Diclofenac belong to the class of NSAIDs that are used as analgesic and anti-inflammatory agents and were found to be very familiar among the common people. In this study, most of the respondents reported that Sore throat, fever, cough, running nose, and nasal congestion were the most common conditions for which people seek self-medication. These results were consistent with similar studies conducted in Kerala.^{18, 19} Anthelmintics such as albendazole, and mebendazole were mostly dispensed for patients of all age groups with **93%**, and for children below 2 years, these drugs are not advisable. Cardiac drugs and antidiabetics were not given without a prescription. Cough syrups were mostly dispensed for minor ailments such as dry cough, URTI, LRTI, and other issues. Along with that some antiasthmatics and some bronchodilators were dispensed at regular intervals. ENT products were mostly not dispensed without prescriptions



and few eye drops were dispensed on the basis of symptoms. Controlled drugs and oral contraceptives were strictly not dispensed without a prescription. Most of the topical products, multivitamins were mostly dispensed. Herbal products meant for constipation, gastric issues, infections, anti-emetics, etc. were readily available in most pharmacies and dispensed at regular intervals. Inhalers such as ipratropium bromide, salbutamol, budesonide, etc. were dispensed to most of the patients. In this prospective study, it was found that pharmacies dispensing medicines for patients showing up with issues such as constipation, wounds, vomiting, fever, and erectile dysfunction without a prescription were relatively higher compared with other issues. In the instance of erectile dysfunction, it was noted that the dispensing pharmacist would counsel about the possible side effects owing to the consumption of such medications. For wounds, they would generally provide emergency first aid items and then antiseptic medicines which may be topical or oral according to the patient's preference. Patients with complaints of vomiting would be given drugs like domperidone unless it's for patients like pregnant women for whom doctor's advice would be sought if without a prescription. For fever, the pharmacists were found to be dispensing NSAIDs like paracetamol. For other issues like constipation, they would dispense drugs like bisacodyl, and for gastric issues drugs like pantoprazole or ranitidine would be given. The less common issues for which the pharmacist would dispense medicines without prescription were found to be mostly menstrual issues and ENT problems. The medicines they normally dispense for menstrual issues are only for pain such as dicyclomine and mefenamic acid combinations. Ear problems would normally be not given any medicines over the counter, rather the patient would be asked to consult a doctor for the appropriate medication.

Conclusion

It is crucial to emphasize the adverse effects of uncontrolled antibiotic use and the problems associated with antibiotic self-medication. These issues include obtaining antibiotics based on a previous prescription without a doctor's supervision, using antibiotics to treat minor ailments like sore throats, switching between different antibiotics during self-medication, and

discontinuing antibiotics once symptoms disappear. Specifically, health education should target graduates and professionals to raise awareness about these concerns. The study is concerned with the increased utilization of antibiotics, vitamins, and anti-inflammatory medications for self-medication. The findings reveal a significant rate of self-medication among Indians during the current pandemic, with individuals using various medicines such as antibiotics (penicillin, ciprofloxacin, azithromycin), diclofenac, paracetamol, hydroxychloroquine, and even antiretrovirals. Most of the patients restart these medications without seeking medical advice, regardless of their educational background or socioeconomic status. Paracetamol emerges as the most frequently consumed drug, but there is also considerable usage of antimicrobials and other medications. People consume these drugs with the assumption that they act as preventives for COVID-19, to treat suspected symptoms, or even after receiving a positive diagnosis for COVID-19. Continuous efforts to raise awareness and sensitize individuals about the risks associated with self-medication are essential to address this issue effectively.

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