Original Article

Prevalence And Pattern Of Self Medication Among Adult Population In Chennai – A Cross Sectional Study

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Abstract

BACKGROUND: Self medication is the use of drugs to treat self diagnosed disorders or symptoms or continued use of a prescribed drug for chronic or recurrent diseases or symptoms. **OBJECTIVES:** To assess the prevalence of self medication among the adult population of urban Chennai and to measure the association between socio demographic factors and self medication among urban adult population. **MATERIALS AND METHODS:** A community based cross sectional study was conducted in the urban field practice area of ACS Medical College (Nerkundram) in Chennai, India during the month of June 2022 using a structured questionnaire among adult population. The study population included 290 people aged 18 years and above. Data was collected by house to house survey using a pre designed questionnaire and analysed using SPSS 25 version. Simple proportions were calculated and chi-square test was applied for statistical significance, p value less than 0.05 was considered as statistically significant. **RESULTS:** The prevalence of self medication was found to be 52.8% out of which 59.6% were males. Anti-pyretics (73.9%) and antibiotics (48.4%) were the most commonly used by the participants. Fever was the most common morbidity (34.4%), followed by common cold (24.8%) for which the study participants self-medicated. Gender, occupation and educational status are associated with self medication and were statistically significant. **CONCLUSION:**. Self-medication is an important public health problem in this study area. Regulation of pharmacies and health education of the public may help in limiting the self-medication practices.

KEYWORDS: self-medication, drugs, prescription, prevalence

INTRODUCTION:

The World Health Organization (WHO) defines self-medication 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 diseases or symptoms [1]. Self-medication may involve using over-the-counter (OTC) medications, prescription-only medicines, or complementary and alternative medicines [2]. In developing countries like India, where universal health care is yet to be achieved self-medication is one of the most common and preferred modes resorted by patients. Various studies reported that self-medication may lead to delay in care seeking which results in paradoxical economic loss due to delay in the diagnosis of underlying conditions and appropriate treatment. Also, self-medication can lead to interaction between drugs which would be prevented, had the patient sought care from a licensed medical practitioner. Practicing

self-medication for drugs like antibiotics might lead to drug resistance; and hence, there needs to be a check on these practices.[3-5] In majority of the hill, tribal regions, and other hard to reach areas where there is a huge shortage of human health work force, patients are still dependent on self-medication practices for minor symptoms.[6]

Few studies were conducted at community level in India to assess the magnitude of self-medication practices. Studies of such nature will provide useful insight on the reasons for which patients resort to this practice and might help the policy makers and regulatory authorities to streamline the process of drug regulations, updating the list of essential medicines, and safety issues of over the counter drugs.[7] Therefore this study was planned to find out the prevalence of self-medication and associated factors with self medication among adult population in our Urban field practice area in Chennai.

OBJECTIVES:

To Estimate the prevalence of self-medication among the adult population of urban Chennai in the last three months.

To measure the association between socio demographic factors and self-medication among the study population

METHODOLOGY:

A Community based Cross-sectional study carried out in Urban Field practice area of ACS medical college (Nerkundrum) during the month of April to June in 2022. A adult population aged 18 years and above who are residing in the study area were included in the study. Those people who are critically ill, mentally challenged, doctors, pharmacists and other healthcare workers with knowledge on medications were excluded. Sample size was calculated based on the previous study done by Nagarajaiah BH, et al [13] the prevalence was found to be 78.63%, with 95% confidence interval (CI) and 6% of relative precision calculated sample size was 290. In the study area the individuals were interviewed using a structured questionnaire. The questionnaire was designed by the research team. The questionnaire contained Socio demographic profile of the study participants, self-medication in the last 3months, type of medication, ailments of self-medication etc. The data was collected by trained individuals. First house in the study area was selected randomly and the subsequent houses were visited till the required sample size was achieved. After getting the informed consent the investigator, introduced themselves to the family members, and all the information that were obtained will be filled in the questionnaire in the same house and then move on to the next house. The data was entered in MS Excel and analysed by SPSS 25 version. Simple proportions were calculated and chi-square test was applied for statistical significance, p value less than 0.05 was considered as statistically significant.

OPERATIONAL DEFINITION:

Self-medication - According to WHO self-medication is 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 diseases or symptoms [1].

Self-medication includes the use of nonprescription drugs and range of different alternative medicines such as herbal remedies, food supplements and traditional products.

In the present study a 3-month recall will be used to estimate the prevalence of self-medication among the study participants.

ETHICAL CONSIDERATION:

Study was approved by Institutional Ethics Committee of ACS Medical College and Hospital, Chennai. Data collected was kept confidential and used for only research purpose. Informed written consent was obtained from all study participants.

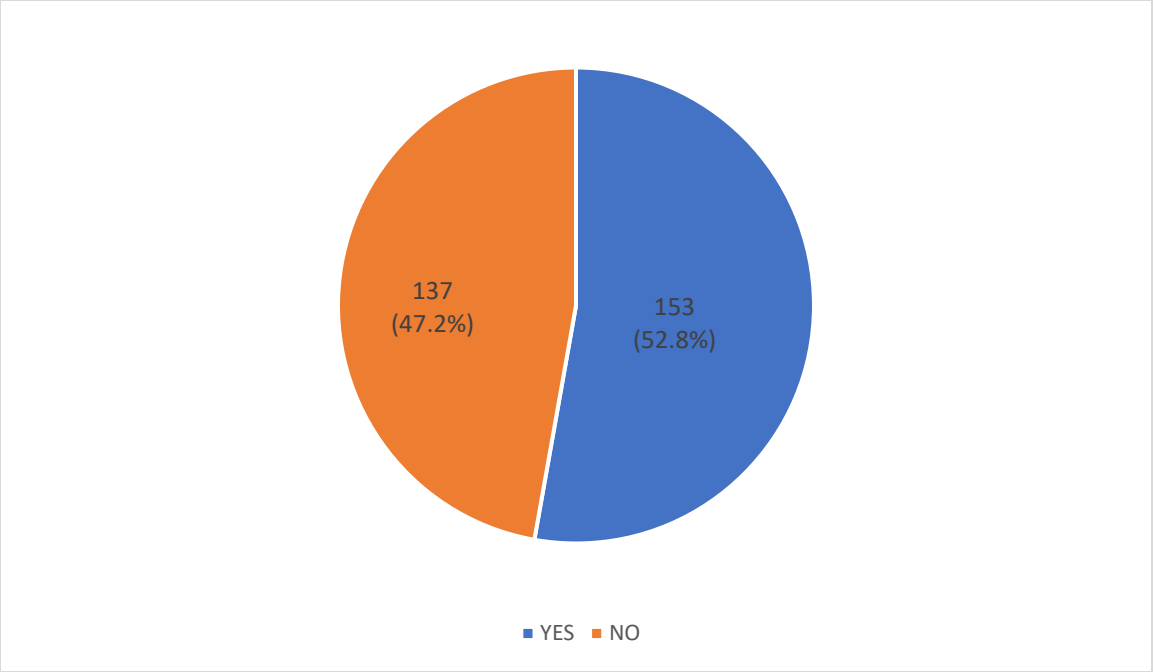
RESULTS:

TABLE NO.1 SOCIODEMO GRAPHIC PROFILE OF THE STUDY POPOULATION (n=290)

AGE GROUP	**FREQUENCY**	**PERCENTAGE (%)**
18-30	138	47.5
31-40	58	20.0
41-50	53	18.3
51-60	41	14.2
GENDER		
MALE	151	52.1
FEMALE	139	47.9
RELIGION		
Hindu	228	78.6
Christian	35	12.1
Muslim	27	9.3
LITERACY		
Illiterate	7	2.6
Primary School	15	5.2
Middle School	15	5.2
Secondary School	10	3.4
High School	13	4.2
Undergraduate	205	70.6
Postgraduate	25	8.8
OCCUPATION		
Employed	195	67.3
Unemployed	95	32.7
TYPE OF FAMILY		
Joint family	58	20.0
Nuclear family	217	74.8
Three generation family	15	5.2

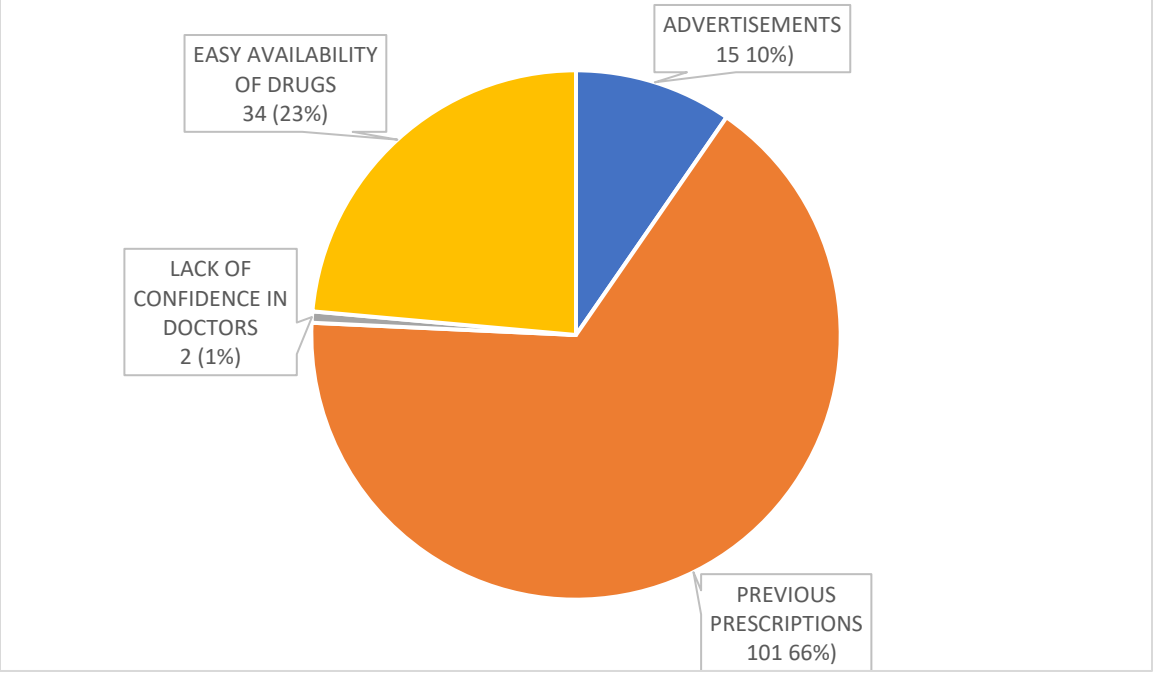
Table number 1 explains Out of 290 paricipants interviewed, most of the study participants (47.5%) belongs to the age group of 18-30. Majority of the participants (78.6%) belong to the Hindu religion. Majority of the study population were also undergraduates (70.6%). 67.3% were employed and 74.8% belonged to nuclear families.

Fig.no 1: PREVALENCE OF SELF MEDICATION AMONG THE STUDY PARTICIPANTS (n=290)



It is evident from figure 1 that 52.8% of the total study population follow self-medication.

Figure no.2 SOURCES OF INFORMATION REGARDING SELF MEDICATION (MULTIPLE RESPONSES)



Major source of information for self-medication comes from previous prescriptions (66%). Easy availability of drugs (23%) and advertisements (10%) also play a role in self-medication by patients.

TABLE NO 2: LIST OF SYMPTOMS TREATED BY SELF MEDICATION (MULTIPLE RESPONSES):

INDICATION	FREQUENCY	PERCENTAGE
SLEEP	5	3.3
CONSIPATION	4	2.6
COUGH	47	30.7
DIARRHOEA AND VOMITTING	11	7.2
SKIN AND WOUNDS	3	2.0
FEVER	112	73.2
COMMON COLD	106	69.3
BODY ACHE	64	41.8

Table no 2 shows that the most common indication for self-medication is fever (73.2%) followed by common cold (69.3%) and cough (30.7%)

TABLE NO 3: PROCUREMENT OF SELF MEDICATED DRUGS (MULTIPLE RESPONSES):

	Frequency	**Percentage%**
Pharmacy	152	99.3
Online	7	4.6
Medical Reps	2	1.3
Family & friends	4	2.6

Table no 3 shows that majority of the study population got their drugs from pharmacies (99.3%)

TABLE NO. 4 COMMONLY USED SELF MEDICATION (MULTIPLE RESPONSES)

Drugs	**Frequency**	**Percentage %**
Antipyretics	113	73.9%
Antibiotic	74	48.4
Cough suppressants	59	38.6
Antihistamines	53	34.6

Multivitamin	49	32
Laxatives	4	2.6%
Sleeping pills	4	2.6%

Table no 4 shows that the majority of the self medicated drugs used were anti- pyretic (73.9%) followed by antibiotics (48.4%)

TABLE NO 5: ASSOCIATION BETWEEN SOCIO DEMOGRAPHIC FACTORS AND SELF MEDICATION (N=290)

SOCIO DEMOGRAPHIC FACTORS	FREQUENCY		P VALUE
	YES (%)	NO (%)	
AGE			0.853
18-30	72 (52.2)	66 (47.8)	
31-40	33 (56.9)	25 (43.1)	
41-50	25 (47.2)	28 (52.8)	
51-60	14 (58.3)	10 (41.7)	
>60	9 (52.9)	8 (47.1)	
GENDER			0.018
Male	90 (59.6)	61 (40.4)	
Female	63 (45.3)	76 (54.7)	
EDUCATIONAL STATUS			0.005
Illiterate	5 (45.5)	6 (54.5)	
Primary school	5 (26.3)	14 (73.7)	
Secondary school	43 (61.4)	27 (38.6)	
Graduate and above	100 (52.6)	90 (47.4)	
OCCUPATION			0.000
Employed	129 (61.4)	81 (38.6)	
Unemployed	24 (30)	56 (70)	
INCOME			0.218
Upper class	76 (47.8)	83 (52.2)	
Upper middle class	59 (60.2)	39 (39.8)	
Middle class	12 (50)	12 (50)	
Lower middle class	4 (57.1)	3 (42.9)	
Lower class	2 (100)	0 (0)	
RELIGION			0.318
Hindu	122 (53.7)	105 (46.3)	
Muslim	16 (59.3)	11 (40.7)	

Christian	15 (41.7)	21 (58.3)	

Comparing Gender and self medication use it was found that male (59.6%) practice self medication more than females and the association was found to be statistically significant. Comparison of educational status and self medication use it was found that those who studied up to secondary school practice self medication more as comparedto primary school (26.3%) and the assciation was stastically significant. Comparing Occupation and self medication use it was found that employed (61.4%) practice self medication more as compared to Unemployed (30.0%) and the association was found to be statistically significant.

DISCUSSION:

There are many studies reported on prevalence of self-medicated drugs all over the country but the reasons for self-medication remains the same. In our study we found that the prevalence of self medication use was 52.8% .A study in Puducherry showed the prevalence as high as 71%.[8] A study in urban Delhi showed that prevalence of self-medication among those who had suffered some illness episode in the last 1 month was 31.3%.[9] A study in Nepal found that 59% of these respondents had taken some form of self-medication in the 6-month period preceding the study.[10] Prevalence of self-medication could not be compared effectively across different studies because the definitions used, recall period considered for definition, region selected, and methodology adopted were different.

In our study we found that 66% of the study population used previous prescriptions and 10% asked family and friends as source of information on self medication. In India people tend to resort to methods which require less time, effort, energy and most importantly money. Hence, they use previously prescribed medications, refer to the internet, newspapers or ask their friends and family when they fall sick for remedies or medications.

In our study 23% of the study population chose self-medication as the drugs were easily available to them. In India, drugs are very easily available without the need of a prescription. Unregulated sale of medications in India including easy access to even those medications which ideally cannot be sold without a valid prescription as per the government regulations is often the most important factor behind such a practice of self-medication in the country. All forms of medicines are easily available over the counter, with none to be held accountable due to a lack of adequate legal enforcements. This has allowed the population to get the drugs easily without the need of seeing the doctor first. This pattern has also been seen in our study as.

Majority of the participants got their drugs from pharmacies (99.3%) in our study. They also got their drugs online (4.6%), from medical representatives (1.3%) and from friends and family (2.6%). Similarly, self-medications was obtained mostly from pharmacies in studies from Vishakhapatnam and Puducherry (72.6% and 38.1% respectively).[12,7] Pharmacists served as a source for medical information for 43.52% of the respondents, followed by a previous prescription (27.16%), in a study done in Udaipur, Rajasthan.[11]

In our study Males (59.6%) were found to be self-medicating more when compared to females. Similarly a study done in Puducherry Selvaraj et al showed that prevalence for higher in males (17.6%).This could be due to the neglecting nature of mild illnesses by males and to avoid unnecessary loss of pay at work. [7]

This study reports the high prevalence of self-medication among illiterate (45.5%) and secondary school and above (61.4 %). Education plays an important role in our study as the educated can recall and remember better the names of the drugs etc. Illiterates self-medicate as they are unaware of the adverse effects the drugs can cause.

In our study it is also evident that people belonging to lower socio-economic class tend to self-medicate more (100%) as compared to the other classes. This is due to majority of them being housewives, unemployed or retired people and illiterates with low per capita income this might be due to quality health services not provided near their house at free of cost.

In our study we found that the employed (61.4 %) self-medicate more as they tend to have a lot of workplace pressure, lack of time to visit hospitals and do not have enough paid sick leaves.

CONCLUSION:

This study found self-medication to be a common practice among most of its study participants, with fever being the commonest cause and anti-pyretic as the most common class of medicines used. Indians are found to easily predispose themselves to self-medication, as is evident research articles from all over the country.

RECOMMENDATIONS:

Education plays a significant role in determining the tendency of our study participants towards self-medication practice. Seminars in schools and colleges may be arranged to make the population aware of the evils of self-medication at a young age. Awareness campaigns can be conducted by hospitals and NGOs. Setting up of free health camps for the people who cannot afford regular visits to the doctor could also be helpful. Conducting regular health checkups for employees at their workplaces could ease the stress at work and could stop the employed from self-medicating. Social media campaigns can be conducted to reach most segments of the Indian population, especially those belonging to the higher socio-economic class. Stricter implementation of existing laws that limit the availability of medicines over the counter, along with the adaptation of the community education strategy is, therefore, the need of the hour. Regular vigilance in the matter is also required to control this tendency.

REFERENCES:

1 World Health Organization, Guidelines for the Regulatory Assessment of Medicinal Products for Use in Self-Medication, World Health Organization, Geneva, Switzerland, 2000.

2 N. F. Torres, B. Chidi, L. E. Middleton, V. P. Solomon, and T. P. Mashaba-+ompson, "Evidence of factors influencing self-medication with antibiotics in low and middle-income countries: a systematic scoping review," Public Health, vol. 168, pp. 92–101, 2019.

3. Hughes CM, McElnay JC, Fleming GF. Benefits and risks of self-medication. Drug Saf 2001;24:1027-37. 4. Regional Strategy on Prevention and Containment of Antimicrobial Resistance, 2010-2015. Available from: http://www.searo.who.int/ entity/antimicrobial_resistance/BCT_hlm-407.pdf [Last accessed on 2013 Jun 24].

5. Ganguly NK, Arora NK, Chandy SJ, Fairoze MN, Gill JP, Gupta U, et al. Global antibiotic resistance partnership (GARP): India Working Group. Rationalizing antibiotic use to limit antibiotic resistance in India. Indian J Med Res 2011;134:281-94.

6. Chaturvedi HK, Mahanta J, Pandey A. Treatment-seeking for febrile illness in North-East India: An epidemiological study in the malaria endemic zone. Malar J 2009;8:301

7. Selvaraj K, S GK, Ramalingam A. Prevalence of self-medication practices and its associated factors in Urban Puducherry, India. Perspect Clin Res 2014;5:32-6.

8. Balamurugan E, Ganesh K. Prevalence and pattern of self medication use in coastal regions of South India. Br J Med Pr 2011;4.

9. Lal V, Goswami A, Anand K. Self-medication among residents of urban resettlement colony, New Delhi. Indian J Public Health 2007;51:249-51.

10. Shankar PR, Partha P, Shenoy N. Self-medication and non-doctor prescription practices in Pokhara valley, Western Nepal: A questionnaire-based study. BMC Fam Pract 2002;3:17.

11. Jain M, Prakash R, Bapna D, Jain R. Prevalence and pattern of self-medication practices in Urban area of Southern Rajasthan. Ntl J of Community Med 2015;6:474-7.

12. Rangari GM, Bhaisare RG, Korukonda V, Chaitanya YL, Hanumanth N. Prevalence of self-medication in rural area of Andhra Pradesh. J Family Med Prim Care 2020;9:2891-9.

13. Nagarajaiah BH, Kishore MS, Kumar NSS, Panchakshari P. Prevelance and pattern of self medication practises of three districts of South Karnataka. Natl J Physiol Pharm Pharmacol 2016;6:296-300