International Journal of Community Medicine and Public Health
Gowthaman R et al. Int J Community Med Public Health. 2020 Jan;7(1):132-137
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: http://dx.doi.org/10.18203/2394-6040.ijcmph20195842

Original Research Article

Prevalence and pattern of self-medication among urban population Chidambaram: a cross-sectional study

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Received: 20 February 2019
Revised: 07 November 2019
Accepted: 12 December 2019

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ABSTRACT

Background: Self-medication as the selection and use of medicines by the individuals to treat self-recognised illness or symptoms. Self-medication is recognised as a part of self-care. The objectives of this study was to find out the prevalence of self-medication in an urban Chidambaram, Tamil Nadu, to find out the pattern of self-medication with regard to its practice and to find out the reasons favoring the practice of self-medication.
Methods: The cross-sectional study was carried out in the month of September 2018 in a randomly selected urban field practice area of a tertiary care hospital. The sample size was calculated to be 360. Data was collected from all the houses in the selected field practice area. The data collected was entered into Microsoft excel spread sheet 2018 and analysis was done using SPSS version 21.
Results: Self-medication was practiced by 195 (48.75%) of the households and 215 (18.6%) of the study participants. 42.1% reported pharmacist as source of knowledge. Most common symptom/sign for which self-medication was practiced was fever (42%). Most commonly (57.9%) used self-medicament was non-steroidal anti-inflammatory agents. Antibiotics were used by 15.4% as self- medicament. Among the 195 households practising self-medication, 65 (33.3%) reported that accessibility to pharmacy was more than that of clinic as reason for practicing self-medication.
Conclusions: The usage of antibiotics as self-medicament and decreased awareness regarding the side effects of self-medicaments indicated decreased practice of responsible self-medication in the study area. More studies have to be conducted regarding the awareness, barriers and facilitators for practicing responsible self-medication.

Keywords: Self-medication, Pattern, Prevalence, Responsible self-medication

INTRODUCTION

Self-medication is defined as "the use of medication by a patient on his own initiative or on the advice of a pharmacist or a layperson instead of consulting a medical practitioner.[1] World Health Organisation (WHO) has defined self-medication as the selection and use of medicines by the individuals to treat self-recognised illness or symptoms. Self –medication is recognised as a part of self-care.[2] Self-medication not only involves over-the-counter medication but also prescription only medicines (POM), buying drugs by reutilizing/ resubmitting a previous prescription, taking medicines on advice of relative or others or consuming left over medicines already available at home.[3]

WHO had stated "responsible self-medication" as one where individuals treat their ailments and conditions with medicines which are approved and available without prescription and which are safe and effective when used

as directed. It requires usage of medicines with both proven safety, quality. efficacy and which are indicated for conditions that are self-recognisable and chronic or recurrent conditions.[2,4] Self-medication also aids in reducing the load on medical services, reducing the waiting time to see the physicians and saves cost especially in economically deprived countries.[3]

On the other hand it also have risks like incorrect and inappropriate use of products, delay in treating a serious medical condition, masking of symptoms by using a non-prescription product, polypharmacy, drug interactions and undermining of patient-physician relationship.[4] Self-medication patterns differ among different populations and also among different age groups, gender, income groups, expenditure pattern, attitude towards self-care etc.[3]

A review from Ethiopia reported that the reported prevalence of self-medication varied from 12.8% to 77.1%, with an overall prevalence of 36.8%.[5] A study from urban Puducherry in December 2012 to January 2013 reported the prevalence to be 11.7%.[6] No study was previously done in urban Chidambaram regarding self-medication.

Since no other studies have been done previously in the study region regarding self-medication. The present study was done to find out the prevalence of self-medication in urban Chidambaram, Tamilnadu, to find out the pattern of self-medication with regard to its practice and to find out the reasons favouring the practice of self-medication.

METHODS

This was a descriptive cross-sectional study carried out during the month of September 2018. The study participants included all the people residing in the urban field practice area under the urban health centre, Department of Community Medicine, Rajah Muthiah Medical College and hospital, Annamalai University, Chidambaram. Household were taken as the unit of study. The head of the household was interviewed using a pre-tested semi-structured questionnaire. If the head of the household is not present then the eldest person in the household was chosen for interview. The sample size was calculated using the formula,

$N = [Z^2 \times P\ (1 - P)]/e^2$,

where Z=1.96, P=11.9%, e=0.05. The sample size was calculated to be 150.[6] By adding the design effect which is 2 and non-response rate of 20%. The final sample size was calculated to be 360.

Of all the field practice areas under the urban health centre, one area was chosen randomly and all the households in the area were interviewed. The interview started from the left first house of a street and ended with the right last house in the street. Then the second street was chosen.

The data collected included the name and details of the informant, who are all the persons in the family, Socio-demographic characteristics of the members of the family, whether they have practiced self-medication in the past 3 months, what was the frequency of self-medication usage, For whom self-medication was practiced, From where the knowledge of self-medication have been obtained, awareness regarding side-effects, self-reported side effects of self-medication.

Self-medication is defined as the use of drugs without the consultation of physician within the past three months. Working population comprised of the age group between 15 to 55 years. More than 55 years were considered as elderly. Responsible self-medication is defined as usage of non-prescription only drugs as self-medicaments and increased awareness regarding side-effects for the self-medicaments used.

The data collected were entered into Microsoft excel spread sheet 2018 and analysed using SPSS version 21. Data were expressed using proportions and percentages. Diagram like pie-chart have been used.

RESULTS

Households that were surveyed were 400. 34.3% of the study participants belonged to the age group between 40 and 59 years followed by 20 to 39 years (28.6%). 51.1% of the study participants were females. Hinduism was followed by 88% of the study participants. 19.6% were under graduates followed by secondary and higher secondary education by 18.9% and 18.3%, respectively. 27.8% were home-makers, 22.8% were students and 17% were doing skilled occupation (Table 1).

Table 1: Socio-demographic characteristics of the study participants.

Variables		Frequency (N)	Percentage (%)
Age (in years)	<5	32	2.8
	5-19	206	17.9
	20-39	330	28.6
	40-59	396	34.3
	≥60	189	16.4
Sex	Males	564	48.9
	Females	589	51.1

Continued.

Variables		Frequency (N)	Percentage (%)
Religion	Hindu	352	88
	Muslim	41	10.3
	Christian	7	1.8
Education*	Illiterate	45	4.1
	Primary	82	7.5
	Middle	108	9.8
	Secondary	207	18.9
	Higher secondary	201	18.3
	Diploma	87	7.9
	Under graduate	215	19.6
	Professionals	64	5.8
Occupation	Skilled	196	17.0
	Semi-skilled	121	10.5
	Unskilled	78	6.8
	Dependent	74	6.4
	Student	263	22.8
	Unemployed	27	2.3
	Home maker	321	27.8
	Retired with pension	73	6.3
Total		1153	100

*only study participants more than 6 years were included.

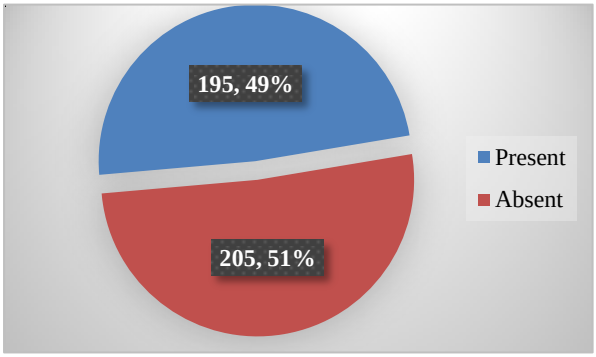

Figure 1: Distribution of households according to the practice of self-medication in the past three months (n=400).

Self-medication was practiced in 195 (48.75%) of the households (Figure 1). Out of the 1153 study participants, 215 (18.6%) study participants had consumed drugs bought without any prescription from the health practitioners. Self-medication was practiced at least twice in the past three months in 72.7% of the households and 6.7% households had practiced it for more than five times in that period. 42.1% obtained the self-medicaments after asking from the pharmacist. 40.5% used previous prescriptions for getting them. Only 32.3% were aware regarding the side-effects of self-medication. 46.2% reported that self-medication cured their illness. 1.5% of the study participants reported side-effects due to self-medication. Out of 215 self-medication practisers, 67.9% belonged to working population, 23.3% were elderly and 2.4% were under-five (Table 2).

Table 2: Distribution of study participants with regard to practicing self-medication.

Variables		Frequency (N)	Percentage (%)
Frequency of self-medication in the past three months.	Once	53	27.2
	Twice	61	31.2
	3-5	68	34.8
	>5	13	6.7
Person in the household for whom the self- medicaments were bought.*	Elderly	50	23.3
	Working population	146	67.9
	5-15 years	14	6.5
	Under five	4	1.9
	Infants	1	0.5
Source of knowledge regarding self-medication.	Pharmacy	82	42.1
	Previous prescriptions	79	40.5
	Relatives	19	9.7
	Friends	16	8.2
	Media	5	2.6

Continued.

Variables		Frequency (N)	Percentage (%)
Awareness regarding the side effect caused by self-medicament.	Present	63	32.3
	Absent	132	67.7
Self-medication cured their illness	Yes	91	46.2
	No	104	53.8
Self-reported side effects due to self-medication	Present	3	1.5
	Absent	192	98.5
	Total	195[&]	100

*Percentages are for 215 study participants practising self-medication, [&] Households practising self-medication.

Table 3: Distribution according to the symptoms or signs and type of drug bought for self-medication.

Variables		Frequency (N)	Percentage (%)*
Symptoms/signs/disease	Headache	75	38.5
	Fever	82	42
	Upper respiratory tract infection.	45	23.1
	Myalgia	35	17.9
	Stomach Pain	21	10.8
	Worm infestation	10	5.1
	Migraine	5	2.6
	Hypertension	5	2.6
	Diabetes	4	2.1
	Pre-menstrual syndrome	3	1.5
	Gastric ulcer	2	1
	Diarrhoea	2	1
	Vertigo	1	0.5
Drugs	NSAID	113	57.9
	Antacids	31	15.9
	Antibiotics	30	15.4
	Nutritional supplements	10	5.1
	Antihistamines	4	2.1
	Anti-asthmatics	3	1.5
	Cough syrup	2	1
	Anti-hypertensives	5	2.6
	Oral hypoglycaemic agents	4	2.1
	Others	6	3.1

*Out of 215 study participants practicing self-medication.

Table 4: Reasons for practising self-medication.

Reason		Frequency (N)	Percentage (%)*
Subjective	Suffering from mild illness	18	9.23
	Using the same drug for longer duration	17	8.71
	Self medicaments were effective	22	11.28
	Practising self-medication was comfortable	4	2.05
Objective	Pharmacy was more accessible than clinic	65	33.33
	Practising self-medication was cheaper	33	16.92
	Practising self-medication was time saving	36	18.46
	Self medicaments were easily available	22	11.28

*Out of 195 households practicing self-medication.

Most common symptom/sign for which self-medication practiced was fever (42%) followed by headache (38.5%). 45 (23.1%) had practiced self-medication to treat upper respiratory tract infections. 5 (2.6%) had taken self-medication against hypertension and migraine, respectively and 4 (2.1%) had taken self-medication for diabetes. Most commonly (57.9%) used self-medicaments belonged to non–steroidal anti-inflammatory agents (NSAIDS). 15.4% had used antibiotics as self-medicament.

Among the 195 households practising self-medication, 65 (33.3%) reported that accessibility to pharmacy was more than that of clinic as reason for practicing self-medication. 36 (18.5%) reported practicing self-medication was time saving. 33 (16.9%) reported practising self-medication was cheaper. 22 (11.3%) felt that self-medicaments were easily available and effective, respectively.

DISCUSSION

The present study looked into prevalence of self-medication from both household and individual perspective. Self-medication was practiced in almost one out of the two households visited. 18.6% of the study participants practiced self-medication. Selvaraj et al from Puducherry reported the prevalence to be 11.9%.[6] Pons et al did a study in urban areas of Brazil and reported a similar prevalence of 18.3%.[8] Ayalew in his review reported that the prevalence of self-medication varied from 12.8% to 77.1% with an average of 36.8%.[5] Prevalence could not be compared across various studies due to the difference in the definitions and the recall period used.[9] Among those practicing self-medication, 72.8% practiced it more than once in the past three months. Self-medication empowers patients with the responsibility of managing their own health.[7] It forms a part of a bigger self-care movement. In the latter the individuals are believed to undertake activities that could improve health, prevent disease, limit illness and restore health after injury or illness.[4]

Among those practiced self-medication, 67.9% belonged to working population, 23.3% were elderly and 2.4% were under-fives. The above pattern suggested that while procuring drugs for elderly and children there is hesitancy to practice self-medication. The latter is also the group were dose alterations are required and in developing country like India, seeking physician's help would be the correct one.

The knowledge regarding the self-medicament was obtained from a pharmacist in case of 42.1% of the self-medication practisers. Similar results were also obtained by Selvaraj et al from Pudhucherry.[6] 40.1% obtained self-medicaments based on previous prescriptions. Ayalew in his review reported that self-medicaments were more commonly suggested by pharmacy professionals.[5] Helal et al also reported a similar pattern where 69.9% had pharmacy as the source of information.[3]

Most common ailment for which self-medication was practiced was fever (42%) followed by headache (38.5%) and upper respiratory tract infections (23.1%). Keshari et al in his study reported that most common symptom for which self-medication was practiced was fever followed by pain and respiratory symptoms.[9] Kumar et al reported that the most common symptom to be cough followed by fever.[10] Afridi et al reported the pattern to be headache followed by fever.[11]

Most common drug procured as self-medicament was found to belong to class NSAIDS (57.9%) followed by antacids (15.9%) and antibiotics (15.4%). Similar to the present study Keshari et al and Kumar et al also reported that paracetamol was the most common self-medicament utilised.[9,10] The usage of antibiotics as self-medicament indicate that there is improper usage of antibiotics prevailing in the area. Only 32.3% of the self-medication practisers were aware of side effects caused by the self-medicament. Both indicated that the practice of responsible self-medication is low in the area surveyed.

In the present study increased accessibility to pharmacy, time and cost saved due to practice of self-medication, easy availability of self-medicaments and the perception that self medicaments were effective were the common reasons for the practise of self-medication. Similar results were obtained by Keshari et al, where he reported time, cost, convenience, perception of minor illness were the reasons for practising self-medication.[9]

The strengths of the study is that it had community based approach to self-medication and looked into the pattern of self-medication in the community from both household and individual perspective. Both recall bias and social desirability bias could have their effect on the results of the study. In order to avoid biases, most variables like the type of drug used were recorded after looking into the drug strips.

CONCLUSION

Self-medication was found to be practised in almost one of every two households. The pattern was found to be similar to many other studies. The usage of antibiotics as self-medicament and decreased awareness regarding the side effects of self-medicaments were the worrisome factors. More studies have to be conducted in the area regarding the awareness of responsible self-medication, the barriers and facilitators for practising responsible self-medication in the area studied.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

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Cite this article as: Gowthaman R, Ambayiram AV. Prevalence and pattern of self-medication among urban population Chidambaram: a cross-sectional study. Int J Community Med Public Health 2020;7:132-7.