

Prevalence and determinants of self medication use among the adult population residing in a sub urban areas near Chennai, Tamil Nadu

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ABSTRACT

Background: Self-medication in urban population seems to increase but the available information is scarce. It is essential to generate evidence regarding the burden and determinants to plan for a public health intervention to address this problem. Our study is an attempt to ascertain the research may show the prevalence and determinants of self-medication among adults population of urban Tamil Nadu. **Methods:** A community-based cross sectional study was conducted among 408 adults residing in a sub urban areas near Chennai, Tamil Nadu. Probability proportionate to size of sampling technique (PPS) was used to decide the number of adults to be included in the study. House to house interview was done using a predesigned, pretested questionnaire. Informed written consent was obtained from the participants. **Results:** Around 132 out of 406 of our study population (32.5%, 95% CI: 27.9, 37.06) reported that they are using self-medication at least once in the past 6 months. It was found that males are 1.5 times more likely to use self-medication than females (OR: 1.58, 95% CI: 1.05, 2.39, *P* value: 0.036) and younger adults (age <30 years) are 55% less likely to use self-medication than the adults greater than 30 years (OR: 0.45, 95% CI: 0.28, 0.72, *P* value: 0.001). **Conclusion:** Increasing prevalence of self-medication use qualifies it to be considered as the public health problem. Gender discrimination and lack of prioritizing geriatric health care needs in a routine health system are some of the other problems identified. These problems have to be addressed by the public health planners and policy makers to provide equitable and quality health care.

Keywords: Prevalence, self-medication, sub urban areas

Introduction

According to WHO's definition, self-medication is "The selection and use of medicines by individuals to treat self-recognized illnesses or symptoms".^[1] Self-medication includes the use of nonprescription drugs and a range of different alternative medicines such as herbal remedies, food supplements, and traditional products. In most illness episodes, self-medication is

the first option which makes self-medication a common practice worldwide.^[2]

Inappropriate self-medication results in irrational use of drugs, wastage of resources, increased resistance of pathogens, entails serious health hazards such as adverse reactions and prolonged suffering.^[3] A number of reasons could be enumerated for the rise of self-medication like rise in chronic diseases, urge of self-care, feeling of sympathy toward family members in sickness, lack of health services, poverty, ignorance, misbelieves, extensive advertisement, use of drugs from informal sectors such as open markets and quacks, illegal purveyors of drugs (nonlicensed sellers in the market), etc.^[4] Some authors are of the view that

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self-medication can be practiced and they consider it appropriate for short-term relief of symptoms where accurate diagnosis is unnecessary, uncomplicated cases of some chronic and recurrent disease (medical diagnosis having been made and advice given).

There is a lot of public and professional concern about the irrational use of drugs. In developing countries like India, easy availability of a wide range of drugs coupled with inadequate health services result in increased proportions of drugs used as self-medication compared to prescribed drugs.^[5] Although, OTC (over the counter) drugs are meant for self-medication and are of proved efficacy and safety, their improper use due to lack of knowledge of their side effects and interactions could have serious implications, especially in extremes of ages (children and old age) and special physiological conditions like pregnancy and lactation. There is always a risk of interaction between active ingredients of hidden preparations of OTC drugs and prescription medicines, as well as increased risk of worsening of existing disease pathology.^[6] Self-medication is associated with risks such as misdiagnosis, use of excessive drug dosage, prolonged duration of use, drug interactions, and poly-pharmacy.^[5,7]

Self-medication in urban population seems to increase but the available information is scarce. It is essential to generate evidence regarding the burden and determinants to plan for a public health intervention to address this problem. Our study is an attempt to ascertain the prevalence and determinants of self-medication among adult population of urban Tamil Nadu.

Methods

A community-based cross sectional study was conducted in the Maraimalai nagar Municipality, Kancheepuram District, Tamil Nadu. This area was selected for our convenience as it is a Field practice of area of UHTC (Urban Health and Training Centre) belongs to Department of Community Medicine, SRM Medical college and Research center, Approved and date of approval is 20-06-2013 and approval number is 447.

The study was conducted for the period of one year (August 2013 to July 2014). We included all the adults (above 18 years) residing in Maraimalai nagar area and excluded the adults who are mentally challenged.

From the previous literature,^[8] it was found that the prevalence of self-medication usage among urban residents was 31.3% and with the relative precision of 15% and with 95% Confidence Interval, Calculated sample size was 406. We were able to achieve the sample size.

Probability proportionate to size of sampling technique (PPS) was used to decide the number of adults to be included in the study. Total population of the study area is 16648 and the area is divided into 3 blocks, they are block I (ward 4 and 5) number of households 2178, block II (ward 6 and 7) consist of 965

houses, block III (ward 8) consists of 1019 houses. Systematic random sampling was used to select the households from each ward. Every 10th house was selected for the study; lot method was used to select the participant from the house, if more than one adult is present in the house during visit one among them selected. Around 213, 94, and 99 participants were selected from the block I, II, and III, respectively.

House to house interview was done by the researcher. Informed written consent was obtained from the participants. A predesigned, pretested questionnaire was administered to each adult to collect data on socio demographic profile, use of self-medication and its determinants. two follow-up visits of locked houses were done and data was obtained. Data entered in MS-Excel spreadsheet and analyzed using SPSS version 20 (Trial). The study was initiated after getting approval from the Institutional Ethical Committee. Descriptive statistics like means and proportions were calculated. Chi square test was used to determine the association between selected factors and self-medication use. *P* value less than 0.05 was considered to be statistically significant.

Results

A cross sectional study was conducted among 406 sub urban residents near Chennai, Tamil Nadu. Majority of the study population were females (58.6%) and most of them (91.9%) belong to the age group between 20 and 59 years [Table 1]. Figure 1 depicts that 32.5% (132 out of 406) of our study population reported that they were using self-medication at least once in the past 6 months [Figure 1]. 95% Confidence interval for the prevalence of self-medication use is 27.94 to 37.06. It was found that males are 1.5 times more likely to use self-medication

Table 1: Socio demographic details of the participants (n=406)

Variables	Frequency n (%)
Gender	
Male	168 (41.4)
Female	238 (58.6)
Age	
<20 yrs	14 (3.4)
20-29 yrs	103 (25.4)
30-39 yrs	97 (23.9)
40-49 yrs	113 (27.8)
50-59 yrs	60 (14.8)
>60 yrs	19 (4.7)
Religion	
Hindu	324 (79.8)
Muslim	46 (11.3)
Christian	36 (8.9)
Education	
Illiterate	27 (6.7)
Literate	379 (93.3)
Family income per month in Rs	
<10000	223 (54.9)
10000-19999	136 (33.5)
>20000	47 (11.6)

than females (OR: 1.58, 95% CI: 1.05, 2.39, *P* value: 0.036) and younger adults (age <30 years) are 55% less likely to use self-medication than the adults greater than 30 years (OR: 0.45, 95% CI: 0.28, 0.72, *P* value: 0.001). Other factors like education, occupation, and income were not found to be a significant factor influencing self-medication use [Table 2].

Discussion

The present cross sectional study was carried out among 406 adult participants residing in a suburban area near Chennai, Tamil Nadu with the objective to estimate the prevalence and determinants of self-medication. We found that one third of the study population (32.5%) used self-medication at least once in past six months. The prevalence was almost comparable with the prevalence of 31.3% in the study conducted by Lal V *et al.* among residents of urban resettlement colony, New Delhi.^[8] While a

lower prevalence of 12% was reported by Kalaiselvi Selvaraj *et al.* in Puducherry.^[9] The observed differences in prevalence might be attributed to the differences in study area and the differences in the operational definition used to measure self-medication use.

We found that the males are more likely to use self-medication than females; our finding was reflected in other studies also.^[8,10] Self-medication practices are usually opted for simple health problems, for which our women usually use home remedies. In a patriarchal society like our nation, the social position of women disables them to express their own health problems and acts as a barrier for their access to health system. The observed difference in self-medication use among males and females are reflection of gender discrimination in level of education, financial autonomy and decision making power in our society. Younger adults are relatively healthier than the adults greater than 30 years reflected in their self-medication use i.e., younger adults are less likely to use self-medication than older adults. Lack of emphasis in geriatric health care in our routine health system might also be the reason for increased self-medication use by the older adults.

The present study being a cross sectional study carries the inherent limitations of cross sectional studies, thereby disabling the understanding of true temporal relationships between self-medication and factors influencing self-medication. There may be some recall bias about the use of self-medication. We conveniently selected our field service area as our study area questions the validity of generalisation of our study results. However, availability of family health survey data and sampling methods we used made us to get a representative sample from the study population can be considered as the strength of our study.

Increasing prevalence of self-medication use qualifies it to be considered as the public health problem. Gender

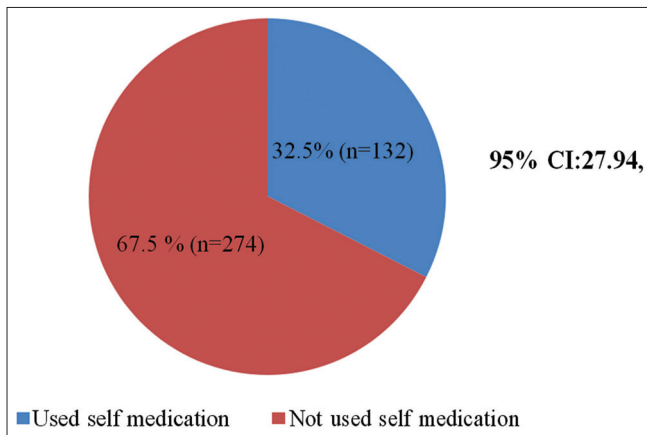


Figure 1: Prevalence of self-medication use among the study population (N = 406)

Table 2: Factors determine the self medication use among the study population (n=406)

Variables	Self-medication use		Odds ratio	95% CI of Odds ratio	P
	Yes n (%)	No n (%)			
Gender					
Male	70 (41.6)	98 (58.4)	1.58	1.05, 2.39	0.036
Female	74 (31.1)	164 (68.9)			
Age					
<30 yrs	34 (18.7)	148 (81.3)	0.45	0.28, 0.72	0.001
>30 yrs	66 (34.4)	126 (65.6)			
Religion					
Hindu	109 (34.7)	215 (65.3)	1.30	0.76,2.21	0.333
Others (Muslim & Christian)	23 (28)	59 (72)			
Education status					
illiterate	7 (25.9)	20 (74.1)	0.71	0.29,1.72	0.450
Literate	125 (33)	254 (77)			
Family income per month in Rs					
<=20000	120 (31.8)	257 (68.2)	0.66	0.30,1.42	0.290
>=20001	12 (41.4)	17 (58.6)			
Employment status					
Employed	90 (34.6)	170 (65.4)	1.31	0.84,2.03	0.227
Unemployed	42 (29.2)	104 (70.8)			

discrimination and lack of prioritizing geriatric health care needs in a routine health system are some of the other problems identified. These problems have to be addressed by the public health planners and policy makers to provide equitable and quality health care.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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