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PREVALENCE AND DETERMINANTS OF SELF - MEDICATION PRACTICE IN AN URBAN AREA OF KANCHEEPURAM DISTRICT, TAMILNADU

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ABSTRACT

The main aim of the current study is to determine the prevalence of self medication among people residing in an Urban community in Kancheepuram district, TamilNadu. To determine the prevalence of self medication among the study group residing in an Urban community. To determine the association between socio-demographic characteristics &Self medication practice among study population. Over all an effective awareness and health education about the advantage and disadvantage of self medication and its consequences is essential to reduce the self medication practice and a healthy life style.

Keywords
self medication, alcohol, sickness and tobacco

Introduction

Self medication or non- prescription of drug is an individual' s medical behavior towards self care that can do potential wellness and also be harmful 1.The use of medications without previous medical consultation with regard to the indications, dose , and duration of treatment is referred to as self -medication. In most of the episodes of illnesses; self medication comes as the first option which makes it a common practice worldwide 2. "The Self- care practices done in the form of self medication is nearly universal among all individual. Almost 75 percent and above of health care is undertaken without any professional interventions or guidances. However without self- care, any health care system would be swamped off .The most critical limitations in self- care functioning starts from the knowledge, motivation, custom and competency of the individual 2.

In the West, selfcare and self-medication were regarded as potentially even unhealthy, unnecessary practice in early 1960' s 3. This approach to medicine, supported by health care system is short sighted. It does not prevent illness while i t primarily treats only the sickness . This remains as a familiar aspect of healthcare system in many countries till date. Though the healthcare profession retains an important role it mainly provides "sickness services. Thus as a result, over the last 40 years there is a push-back against the domain model of health, towards a more individual approach involving self- care and responsible self-medication with nonprescription medicines. A responsible method of using the self- care products involves, using the right product for the right illness (indication) at the right time and in the right way. Self-medication is widely practiced and an vital component of self- care. The biggest challenge for government authorities and health care professionals is to have an appropriate framework in place for responsible self -medication 3.

Thus the concept of self-medication has gained universal recognition and acceptance as it encourages an individual to treat minor illnesses with simple and effective remedies . It is also encouraged so as to have self-belief in curative, preventive, and rehabilitative care. Self-medication a double edged sword can potentially do well and also harm the people. This is especially

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In developing countries, the medicines which are available only on prescription of the qualified medical practitioners are easily available over the counter.2 Hence Self medication has become a serious public health problem in developing countries like India5 , 6 , 7 , 8 .
William Osler has said that "A desire to take medicine is the great feature which distinguishes man from animals" This desire, may turn against a person, when he begins to take medicines on his own, neglecting the fact that all drugs have toxic effects and their reasonable use in therapy is based only on an estimated risk.
In the developing countries like Pakistan, India, Bangladesh and Nepal, the rate of self-medication is high. More than 50% people are taking drugs without a doctor's advice. In order to tackle this problem, the governments of all the developing countries have promulgated guidelines to prevent self medication . Each and every drug that is registered to the concerned drug authorities must be strictly monitored for sale and prescription. Health department and drug regulatory authority should follow the WHO guidelines for drug prescription and dispensing 9.

Even in spite of strict guidelines to discourageself medication, in some places, availability and selling of drugs without prescription is happening . In this background t he present study was carried out to investigate the problem and factors responsible for Self medication in Urban area of Kancheepuram district in Tamil Nadu.

MATERIALS AND METHOD

Study Area:

The study was conducted in Anakaputhur, an Urban field practice area of SreeBalaji Medical College and Hospital in Kancheepuram district, Tamil Nadu.

Study design:

A Community based cross sectional descriptive study

Study Period:

The study was conducted between June 2017 to May 2018.

Study Participants:

According to the 2011 census, Anakaputhururban field practice area had a total population of 48,050 of which 24,158 were males, 23 ,892 were females. Total number of houses in Anakaputhur is 12 ,146. The study was done among the people residing Anakaputhur area with age limit 15 years and above people were residing in the study area permanently at the time of the study.

Inclusion criteria:

All participants who were 15 years and above [24] and willing to participate in the study were selected.

Exclusion criteria:

Those who were not willing to participate in the study were excluded.

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Psychiatric patients, pregnant mother, severlyill patients were excluded from the study.

Study area:

Kancheepuram district is one among the 32 districts of Tamil Nadu. According to the census of India 2011, Kancheepuram district covers an area of 4433sq.km with a population of 39. 98 lakhs comprising of 20.12 lakhs males and 19.8 lakhs females.Kancheepuram, the temple town is the headquarterso f the district for administrative reasons, the district has been divided into 4 revenue divisions comprising of 11 taluks with 1137 revenue villages.
Anakaputhur is a Municipality city in the district ofKancheepuram, Tamil Nadu. It is divided into 18 wards for which elections are held every 5 years. The study was conducted in Anakaputhur which is the urban field practise area of Department of Community Medicine of SreeBalaji Medical College and Hospital (SBMCH), located at a distance of 7 kilometers from the institution with an area covering approximately 16 sq. Kilometers. (Annexure - II)

Sample size:

Sample size was calculated based on the study done by " Pushpa R Wijesinghe" in the year 2013 in Srilanka which recorded the prevalence of self medication practice of 34%. 23 Using this study prevalence as reference the sample size was calculated by using 4pq / [L] 2 formula Adding 10% refusal rate the sample size obtained is 394 which is rounded up to 400. The sample collected during the study period was 424.

Ethical approval:

The study was approved by Institutional Ethical Review Committee of SreeBalaji Medical college and hospital , Chennai . **Ref No : 002 / SBMC / IHEC / 2017 / 1013 (ANNEXURE I)**

Data collection method:

Data were collected by interview method using structured pretested questionnaire which was administered to the study participants in the Urban field practicing area attached to the medical institution. Prior written informed consent was obtained from the study subjects. Data on socio demographic details (age, gender, education, occupation, and income), practice of self - medication, and reasons for use of self- medication were collected. In case the respondent had more than one time use of self - medication, further details were recorded for the last episode.
Respondents who reported self-medication were further probed for their attitude regarding self-medication. Questions in this domain included the respondent's perception about harm caused due to self-medication, whether one is likely to use the same strategy for own use/ or recommend to others in future.

Statistical Analysis:

Data entry was done and analysedusing SPSS software version 22

The current study was carried on as a cross sectional study about prevalence of Self medication practice and its determining factors among people residing in urban area of Kancheepuram district Tamil Nadu over a period of 6 months (June 2017 to December 2017)

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RESULTS

Back ground characteristics:

The Back ground characteristics of the participants are described in table 1.

Table 1: Back ground characteristics of study participants.

Sl.No	VARIABLES	FREQUENCY N=424	PERCENTAGE %
1	**AGE GROUPS**		
	< 20 years	10	2.4
	21- 30 years	70	16.5
	31- 40 years	92	21.7
	41- 50 years	66	15.6
	51- 60 years	84	19.8
	61- 70 years	82	19.3
	>70 years	20	4.7
2	**SEX**		
	Male	144	34
	Female	280	66
3	**EDUCATION**		
	Illiterate	170	33
	Primary school	192	45.3
	Secondary school	36	8.5
	Higher secondary school	56	13.2
4	**OCCUPATION**		
	Professional	18	4.2
	Skilled	38	9
	Semi skilled	142	33.5
	Unskilled	26	6.1
	Housewife	170	40.1
	Unemployed	30	7.1
5	**PER CAPITA INCOME**		
	Upper class	16	3.8
	Upper middle class	126	29.7
	Middle class	194	45.8
	Lower middle class	82	19.3
	Lower class	6	1.4
6	**MARITAL STATUS**		
	Married	408	96.2
	Unmarried	16	3.8
7	**NO. OF FAMILY MEMBERS**		
	≤ 4 members	336	79.2
	> 4 members	88	20.8
8	**RELIGION**		

Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 1, 2021, Pages. 2811 - 2821
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	Hindu	368	86.8
	Christian	32	7.5
	Muslim	24	5.7

Age distribution:

The current study involves 424 study populations. In this study majority of the participant were female 66% (n=280) and 34% (n=144) of them were male. The study population belong to the age group of 20 to 70 years. About 21. 7% (n=92) of them were between 31 -40 years, 19. 8 % (n=84)of them 51 - 60 years and 19.3% (n=82) of them belonged to 61 -70 years. A minimum of 2.4% (n=10) of the population below 20 years and 4.7%(n=20) of them were above70 years of age.

Majority 45 .3 %(n=192) of them have completed primary school education , 33% (n= 170) of them were illiterate, 13. 2% (n=56) have completed higher secondary education and 8.5% (n=36) have completed secondary school education.

Majority of the study population 40.1% (n=170) was a home maker. 33. 5%(n=142) of them was semiskilled worker. 9% (n=38) was skilled worker, 7.1% (n=30) was unemployed. A minimum of 4.2% (n=18) was professional by occupation.

Table 2: .Personal habits of study participants

Sl.No	**VARIABLES**	**FREQUENCY N=212**	**PERCENTAGE %**
1	**SMOKING**		
	Present	24	5.7
	Absent	400	94.3
2	**TOBACCO USE**		
	Betel nut	06	1.4
	Paan	10	2.4
	Gutka	06	1.4
3	**ALCOHOL CONSUMPTION**		
	Present	40	9.4
	Absent	384	90.6

Majority 94. 3% (n=400) of the study population were not a smoker about 5.7 % (n=24) of them were a smoker. About 9. 4% (n=40) of the study population consumed alcohol. Majority 90 .6% (n=384) of the study population was not on habit of smoking. About 1. 4% (n=6) of the study population were a betel nut chewer, 2.4 %(n= 10) used paan and 1. 4% (n=6) used Gutka.

Table3: **Duration of illness** :

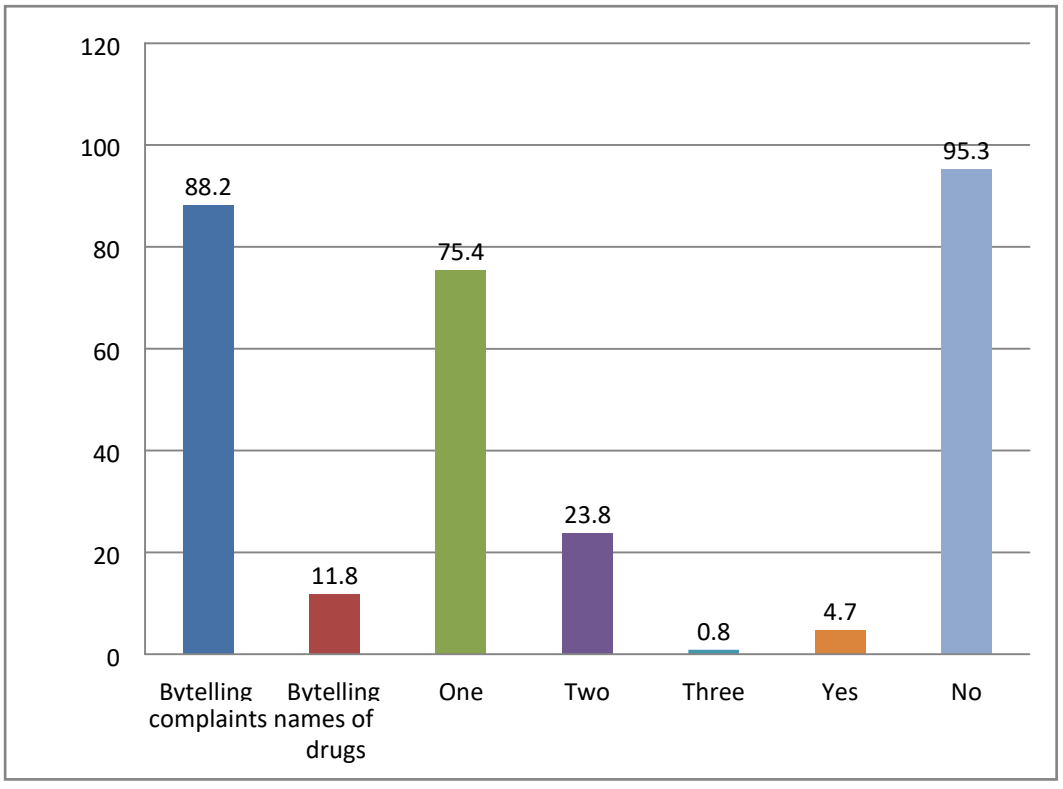
Sl.No	**VARIABLES**	**FREQUENCY N=424**	**PERCENTAGE %**
1	**ILLNESS IN PAST 6 MONTHS**		
	Present	424	100
2	**DURATION OF ILLNESS**		

Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 1, 2021, Pages. 2811 - 2821
Received 15 December 2020; Accepted 05 January 2021.

	< One week	320	75.5
	One to two weeks	92	21.7
	> Two weeks	12	2.8
3	**TREATMENT FOR ILLNESS**		
	Home remedy	24	5.7
	Sought medical care	146	34.4
	Over the counter medication	254	59.9

Among the study population all the participants had an episode of illness during the past 6 months. Majority 75.5% (n=320) of the study population had their illness duration less than one week. About 21.7 % (n=92) of them had one to two weeks of illness duration. A minimal of 2. 8% (n=12)of the study population suffered more than two weeks of illness period. Majority of the study population 75.4% (n=192) obtained a single dose for their illness and 23. 8% (n=60) of the study population obtained a single dose and 0. 8% (n=2) of them obtained three doses for their illness.

Figure 1 :Variables Related to over the counter medication



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About 39.4 % (n=100) of the study population used self medication for head ache. About 18.1% (n=46) of them used for fever, 16. 5% (n=42) of them used for body pain, 8.7% (n=22) used for URI , 7. 1% (n=18) for acidity and 3.1% (n=08) for abdominal pain,0 .8 % (n=02) for throat pain, wheezing, knee pain and head ache.

Table 4 :**Variables related to self medication**

Sl.No	VARIABLES	FREQUENCY N=254	PERCENTAGE %
1	**NOTGONEFORSELF MEDICATION**		
	Illness less than 1 week	208	81.9
	Gender	02	0.8
	Paediatric	40	15.7
	Chronic illnesses	04	1.6
2	**FACED PROBLEM DUETOSELF MEDICATION**		
	Yes	32	12.6
	No	222	87.4
3	Advice self medication to others		
	Yes	38	9.0
	No	386	91
4	**Harmful effects of self medication**		
	Drug reaction	06	1.4
	Delay in care seeking	96	22.6
	Delay in diagnosis	248	58.5
	No expert opinion	74	17.5
5	**Steps to be taken to stop self medications**		
	Rules and regulations	12	2.8
	Ban	56	13.2
	Awareness	146	34.4
	Availability	210	49.5

Table 5 :Variables related to follow up and non-follow up to General Physician

Sl.No	VARIABLES	FREQUENCY	PERCENTAGE %
1	**FOLLOW UP(N=200)**		
	Yes	105	52.5
	No	95	47.5
2	**REASONS FOR NON- FOLLOWUP(N=95**)		
	Cured	53	55.8
	Economic issues	12	12.6
	No time	12	12.6
	Loss of wages	18	19.0

Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 1, 2021, Pages. 2811 - 2821
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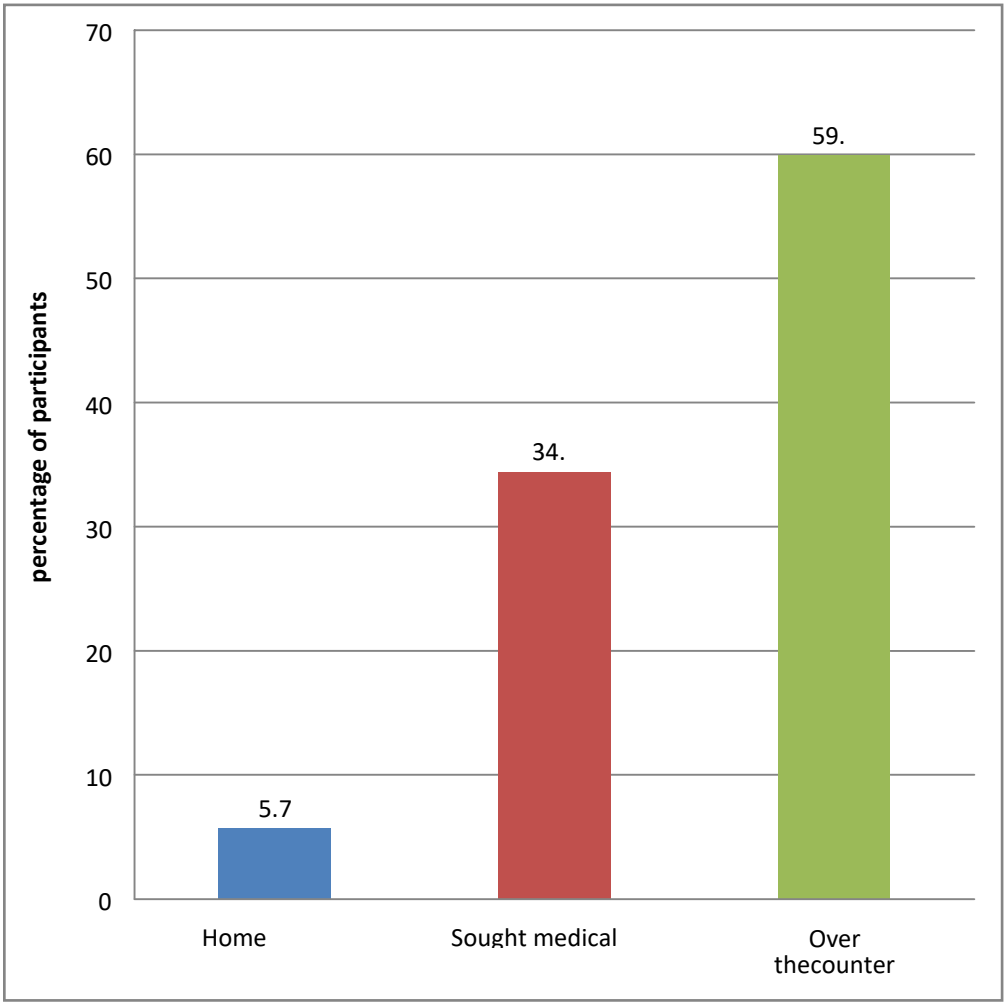
3	**DURING LOSS OFFOLLOWUP, MANAGED THEILLNESSBY (N=95)**		
	Continuing same medications	54	56.9
	Used left over old medications	41	43.1

Table 5 shows the follow up practices of the study population. Among the study population(n=424) about 224 of them were on self medication and 200 of them went for prescribed medicine Reason for no follow up were , 53 of them got cured, 12 of them ha economic issues, 12 of them had no time to turn over and 18 of them did not turn over due to loss of wage. During the loss of follow up among the study population who were on prescribed medicine (n=95) 54 of them revealed that they were continuing the same medication and 41 of them used the left over old medicines.

Among those suffering a duration of more than 2 week of illness were 12 in which 6 followed medical advice and 6 of them were on self medication.

FIGURE 2 : TREATMENT FOLLOWED DURING ILLNESS



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Prevalence of self medication among the study population:

Over all the prevalence of self medication in the current study is59. 9%. This prevalence is comparable with the studies conducted by Khan et al 2014 was 54.9% and KalaivaniAnnadurai 8 et al in Puducherry 2014 was 53.43%. T Aqeel 1 et al in Pakistan 2014 was 61.2 %.

DISCUSSION

In the current study the age distributions of the study participant were between19 to 85 years with the mean age 47. Similar studies conducted by KalaivaniAnnadurai et al. Nellikuppam Village, Kancheepuram District, Tamil Nadu (2017) which recorded mean age is 36.43 years. In another study done by Saba HI et al. in Bangalore, the age of the participants ranges from 15 to 60 years and above and the mean age is 37.8 year s. Ahmad et al. in his study done in Uttar Pradesh 18 to 60 and above. A study done by M. IqbalAfridi, in Pakistan the study participants were 18 years and above 25 and the mean age is 33. 49 years.10-11

Majority of the study population in the present study belongs to (86. 8%) Hindu religion which is similar to study done by KalaivaniAnnadurai et al in Nellikuppam Village, Kancheepuram District, Tamil Nadu (2017) where 92% of participants were Hindus. In a study done by Saba HI et al 12 in Barabanki 97.0 %belonged to Hindu religion. In the presence study, 33% were illiterate, which is similar to the study done by Shyam sunder keshari et in Barabanki 2014, In which 38.7 % of the study participants were illiterate

The Prevalence of self medication is 59. 9% , in that 47.2% of them got drug from previous prescription , 26.8% got drugs from pharmacy by telling their complaints, 17.3% advise from friends

,relatives and neighbour and remaining 8.7% from advertisements, internet ect . This is similar to a study done by Balamurugan .E 13 et 21 .5 % of them got drug from previous prescription, 21% got drugs from pharmacy by telling their complaints ,12.5% advice from friends and remaining 5.5% from advertisements, in ternet etc. in another study done by YogendraKeche 5 et al 64.32% of them god drug from previous prescription, 23% got drug from pharmacy by telling their complaints, 5.63% advice from friends ,and remaining 7.04 % from advertisement and internet and DrPragatikaDadhich 13 et al, 45.26% got drug from previous prescription, 33.68% got drug from pharmacy by telling their complaints, 14.73% advice from friends , and remaining 6 .31% advertisement and internet.

About 96.2 % (n=408) of the study population were married and a remaining of 3.8% (n=16) were unmarried. Majority 79. 2% (n=336)of the stud y population family member had 4 members and below. About 20.8% (n=88) of them had more than 4 members in the family.13-15

Among the study population all the participants had an episode of illness during the past 6 months. Majority 75.5% (n=320) of the study population had their illness duration less than one week. About 21.7 % (n=92) of them had one to two weeks of illness duration. A minimal of 2. 8% (n=12)of the study population suffered more than two weeks of illness period. Majority 59. 9% (n=254) of the study population followed over the counter medication for their treatment remedy. About 34.4 % (n=146) went for a medical care and a minimal of 5.7% (n=24) took home remedies.16

Among the study population (n=320) those who suffered illness for a period of less than 1 week in which 18 of them followed home remedy, 110 went for medical advice and 192 were on self medication. Study population who were suffering from illness for a period of 1 to 2 week were totally 92 in which 6 of them followed home remedy , 30 followed medical advice and

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56 were on self medication. 17 Among those suffering a duration of more than 2 week of illness were 12 in which 6 followed medical advice and 6 of them were on self medication.

CONCLUSIONS

The study shows a significant association between age groups and self medication were the p value is 0.035, between occupat ion and subjects on self medication p=0.001, between education and self medication, per capita income and self medication p=0.000 sand marital status and self medication with a p value 0.000.

Over all an effective awareness and health education about the advantage and disadvantage of self medication and its consequences is essential to reduce the self medication practice and a healthy life style.

Funding: No funding sources

Ethical approval: The study was approved by the Institutional Ethics Committee

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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