Research Article

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Prevalence of self-medication practices and its associated factors in rural Bengaluru, Karnataka, India

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ABSTRACT

Background: Self-medication is an important concern for health authorities at global level. In developing countries like India most episodes of illnesses are treated by self-medication because of easy availability of a wide range of drugs commercially. Inadequate health services results in increased proportions of drugs used as self-medication compared to prescribed drug.

Methods: Study design of it is a community based cross-sectional study. Study area of the study is rural field practice area, of Vydehi institute of medical sciences and research centre, Bengaluru. Study population is above the age group of 15 years. A total of 269 subjects in the rural area of Vydehi institute of medical sciences and research centre were selected by systematic random sampling method. Subjects were interviewed by using a pre-tested and semi-structured questionnaire after obtaining informed oral consent. Information regarding socio-demographic details, self-medication in the past one year and associated factors were collected.

Results: 26.8% of study population were aged between 26-35 years, out of which 49.4% were males and 50.6% were females, 39.8% had high school level of education, 44.2% were house wives,72.1% belonged to class I socioeconomic status, 97% belonged to Hindu community. Out of the total population, 109 (40.5%) were practicing self-medication. 38.2% were taking medication five or more times in a year.

Conclusions: Self-medication is an important health issue in this area. Health education of the public and regulation of pharmacies may help in limiting the self-medication practices. There may be a larger role for a training programme to empower people about safety and side effects of SM use, to achieve a greater sense of self control.

Keywords: Self-medication, Rural area, Prevalence, Practices

INTRODUCTION

Self-medication is an age old practice. Urge of self-care, feeling of sympathy towards family members in sickness, lack of health services, poverty, ignorance, misbeliefs, extensive advertisement and availability of drugs in other than drug shops are responsible for growing trend of self-medication. WHO is promoting practice of self-medication for effective and quick relief of symptoms without medical consultations and reduce burden on

health care services, which are often understaffed and inaccessible in rural and remote areas.¹

William Osler has said that a desire to take medicine is perhaps the great feature which distinguishes man from animals. This desire however may play havoc when a person starts taking medicines on his own, forgetting that all drugs are toxic and their justifiable use in therapy is based on a calculable risk.² It is said that every patient has at least two prescribers, his own doctor and himself,

while many have additional prescribers in the form of friends, well-wishers etc.

Self-medication can be defined as obtaining and consuming drugs without the advice of a physician either for diagnosis, prescription or surveillance of treatment.³ There is a lot of public and professional concern about the irrational use of drugs in self-medication. In developing countries like India most episodes of illnesses are treated by self-medication because of easy availability of wide range of drugs commercially coupled with inadequate health services.^{4,5}

Pharmacists and pharmacy attendants play an important role in fostering self-medication among the public.⁷ 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 correct dose, side effects, and interactions could have serious implications, especially in extremes of ages (children and old age) and special physiological conditions like pregnancy and location.^{8,9}

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. Combination preparations containing 'hidden' classes of drugs and food supplements or tonics of doubtful value were commonly used in India. Very few studies have been published regarding self-medication pattern in our community; therefore, self-medication is an important health issue in developing countries like India. 11,12

In developing countries, where universal access to health care is yet to be achieved, self-medication is one of the common and preferred modes resorted by the 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. ¹³⁻

Self-medication practices cannot be considered as entirely harmful. Drugs classified as over the counter can be purchased without prescription and many a times might save time and money for the patients. In majority of the hilly, 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.⁷

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 policymakers and regulatory authorities to streamline the process of drug regulations, updating the list of essential medicines, and safety issues of over the counter drugs. With this background, the present study was done to estimate the prevalence of self-medication for allopathic drugs and also to look for association between self-medication and socio demographic characteristics in an urban puducherry. This study also focused the attitude of people, who follow the practice of self-medication.

Objectives of the study are to study of prevalence of selfmedication at rural practice area and study of factors associated with self-medication practices.

METHODS

It is a community based cross-sectional study in the area of Kannamangala, Rural field practice area, of Vydehi institute of medical sciences and research centre, Bangalore. Males and females above the age group of 18 years. Males and Females aged above 15 years were included for study. Study period was from October 2014-December 2014 by using Systematic Random Sampling. The sample size is calculated by taking the prevalence rate of self-medication 55.92% at 95% confidence level and 15% error as 135.

Kannamangala rural field practice area of Vydehi institute of medical sciences and research centre, Bangalore was selected based on systematic random sampling method, 180 households were selected. Subjects interviewed by maintaining privacy and by obtaining oral informed consent.

Data collection

The present study was undertaken for a period of 3months from October 2014-December-2014. The data was collected by interviewing, using a predesigned and pretested proforma in local language, during home to home visit. Information was collected regarding age, education, occupation, religion, income and also about self-medication use.

The knowledge regarding self-medication and also the reasons for use were meticulously enquired. At the end of the interview, any misconceptions or queries regarding the self-medication were clarified and the respondent were thanked for extending co-operation.

Data analysis

To summarize the data, a descriptive analysis was done. Chi-square test was used to test the association between different factors and self-medication practices. The data analysis was done using statistical software IBM SPSS-version 21.

RESULTS

Basic demographic details

Among the total 269 participants 49.4% were male and 50.6% were female. Most of the participants (68.1%) were between 15-45 years of age, 78.8% were literate with majority (39.8%) of them having high school education and 44.2% were unemployed (Table 1).

Table 1: Basic demographic details.

Characteristics		N	%
Gender	Male	133	49.4
	Female	136	50.6
Age	15-25	54	20.1
	26-35	72	26.8
	36-45	57	21.2
	46-50	35	13.0
	51-60	17	6.3
	>60	34	12.6
Religion	Hindu	261	97.0
	Muslim	1	.4
	Christian	7	2.6
Education	Illiterate	57	21.2
	Primary	47	17.5
	Secondary	19	7.1
	High school	107	39.8
	Degree	39	14.5
Occupation	Professional	6	2.2
	Semi-professional	29	10.8
	Clerical	29	10.8
	shop/farmer		
	Skilled	39	14.5
	semi-skilled	15	5.6
	Unskilled	32	11.9
	Unemployed	119	44.2

Findings related to usage of self-medication

Overall, out of 269 participants, 40.5% of them reported that they had self-medication in the past.

Among self-medication user's majority were men (48.87%). Most of the users were aged between 26-35 years (40.28%). Many were having high school education (46.78%) and Unemployed people used more self-medication (31.19%).

Prevalence was more among men (48.87%), subjects between the age group of 51-60yrs (52.94%) were users. 47.66% of participants with high school education and 62.07% of clerical job workers were using self-medication (Table 2).

The frequency of self-medication use varied among the subjects with a minimum of at least one time to maximum of 5 times per year (Figure 1).

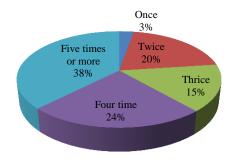


Figure 1: Frequency of usage in a year.

When the participants were asked about the reasons for self-medication, 32.1% stated previous good experience followed by multiple reasons and the use during emergency for minor illnesses.

Practice of self-medication was also due to various reasons like high cost of consultation of private doctors, poor quality of care in government hospitals, quick relief and loss of wages if they go to hospitals (Figure 2).

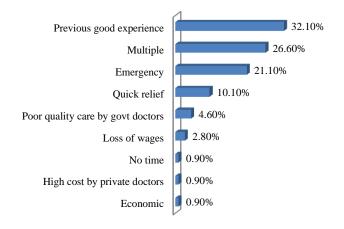


Figure 2: Reasons for taking self-medication.

In the present study the most common source of drug information (63%) found was, through multiple sources followed by doctor (14%), chemist (14%), friends (4%), advertisements (3%) and television (2%) (Figure 3).

The most common Source of Procurement was found to be by multiple methods (66.05%) followed by from Chemists by telling the symptoms (18.34%), old prescriptions (6.42%), drugs stored at home (4.58%) (Table 3).

The main indications for self-medication use were fever (78.89%), Diabetes (8.25%), headache (4.58%). (Table 4)Most common type of self-medications were Allopathic (87.15%) (Table 5).

The most widely used drugs were analgesics(59.63%) followed by multiple dugs (17.43%) and OHDs (12.84%)

(Table 6).

Table 2: Socio-demographic characteristics on self-medication use.

Socio-demographic	Use of self-medication			X ² value		
characters	Yes		No		(df)	P value
characters	N	%	N	%	(ui)	
Sex						
Female (n=136)	44	32.35%	92	67.64%	7.613	0.006
Male (n=133)	65	48.87%	68	51.12%	(df:1)	0.000
Age						
15-25 (n=54)	15	8%	39	72.22%		0.339
26-35 (n=72)	29	8%	43	59.72%		
36-45 (n=57)	25	43.86%	32	56.14%	5.674	
46-50 (n=35)	15	42.86%	20	57.14%	(df:5)	
51-60 (n=17)	9	52.94%	8	47.06%		
>60 (n=34)	16	47.06%	18	52.94%		
Education						
Illiterate (n=57)	19	33.33%	38	66.67%		0.268
Primary (n=47)	15	31.91%	32	68.09%	5.190	
Secondary (n=19)	7	36.84%	12	63.16%	(df:4.000)	
High school (n=107)	51	47.66%	56	52.34%	(u1.4.000)	
Degree (n=39)	17	43.59%	22	56.41%		
Occupation						
Professional (n=6)	2	33.33%	4	66.67%		0.001
Semi-professional (n=29)	15	51.72%	14	48.28%		
Clerical shop/farmer (n=29)	18	62.07%	11	37.93%	22.848	
Skilled (n=39)	23	58.97%	16	41.03%	(df:6.000)	
Semi-skilled (n=15)	8	53.33%	7	46.67%		
Unskilled (n=32)	9	28.12%	23	71.88%		
Unemployed (n=119)	34	28.57%	85	71.43%		

Table 3: Source of procurement.

Source	n	%
chemist shop by symptoms	20	18.34
old prescription	7	6.42
other shops	2	1.83
stored drugs at home	5	4.58
others	3	2.75
multiple	72	66.05

Table 4: Indication for using self-medication.

Indication	n	%
Fever	86	78.89
Diabetes	9	8.25
Headache	5	4.58
others	4	3.66
Joint pain	3	2.75
Constipation	1	0.91
Diarrhoea	1	0.91

Table 5: Type of self-medication used.

Analysis of their monthly experience revealed that 45.9% of the respondents spend 11-15% of their income on self-medication (Figure 4). Present study also indicated lack of knowledge about generic drugs. Only 20.8% of participants were aware of generic drugs. 72.9% were aware of expiry of the drugs (Table 6).

Type	N	%
Allopathic	95	87.15
Ayurvedic	2	1.83
Multiple	12	11

Table 6: Drugs used as self-medication.

Drug	N	%
Analgesics	65	59.63
Antibiotics	5	4.58
Multivitamins	4	3.66
OHDs	14	12.84
Multiple	19	17.43
Antacids	2	1.83

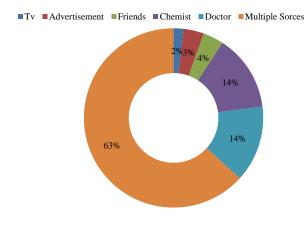


Figure 3: Source of information.

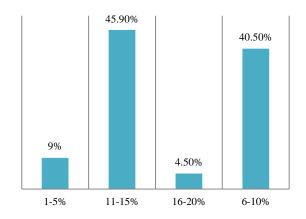


Figure 4: Average monthly expenditure on selfmedication.

DISCUSSION

Self-medication is more likely to be inappropriate if used by poorly informed people. The extent of depth of knowledge regarding OTC (over the counter) use in a community needs to be assessed.Previous studies have shown the prevalence of self-medication as 37% in urban population and 17% in rural population in India, where as 12.7% to 95% in other developing countries in contrast to 40.5% in the present study. ¹⁶⁻¹⁸

The frequency of self-medication use in our study ranged from a minimum of one time to a maximum of 5 times, this finding was in line with the findings of a study by Balamurugan E and Ganesh K.¹⁹In the current study participants reported self-medication use in a variety of conditions like headache, fever, joint pains, diabetes etc. These finding are comparable with those of Sontakke et al.²⁰

The reason for self-medication use may be multifactorial. Most of the respondents used allopathic medicines, a finding which was consistent with the results of study by R Sharmaet al.²¹ Paracetamol and analgesics were the most commonly used class of drugs, which is found to be similar to Arrias et al study. ²²

Symptomatic treatments may relieve only the discomfort and are likely to result in uncontrolled disease complications and hospital admissions due to uncontrolled disease pathology. This calls for a need to improve public health facilities in government settings, so that this income can be utilized for better nutrition & family welfare.

CONCLUSION

Prevalence of self-medication practices among the rural area dwellers, Bangalore is 40.5%. Prevalence was more among men (48.87%), in the age group 51-60 (52.94%). 47.66% of participants with high school education and 62.07% of clerical job workers were using self-medication.

There is need to ensure community education, safety and efficacy of OTC drugs, so that even after its improper use, they prove to be safe. Easy availability of OTC drugs is a major factor responsible for irrational use of drugs in self-medication as, thus resulting in impending health consequences like antimicrobial resistance, increase load of morbidity and economic loss. There is a need for concerned authorities to make existing laws regarding OTC drugs more stringent for their rational use. Also, specific pharmaco-vigilance is needed and the patient, pharmacist and physician must be encouraged to report any adverse events.

The need for promoting appropriate use of drugs in the health care system is not only for financial reasons, with which policy makers and managers are usually most concerned, but also for health and medical care of patients and the community. Periodic studies on the knowledge, attitude and practice of self-medication may give an insight into the pattern of drug use.

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