

Research Journal of Pharmaceutical, Biological and Chemical Sciences

The Unresolved Urban Dilemma Of Self-Medication.

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ABSTRACT

Self-medication has become common in developing nations like India in recent years, which may be the cause of medication abuse and pathogen resistance. Without medical supervision, self-medication can result in improper or excessive therapy, a delay in necessary therapy, misdiagnosis, antibiotic resistance, drug abuse and increased morbidity. The community based analytical cross-sectional study was conducted in urban slum 400 Participants above 18 years of age interviewed by house visit. Data was collected by interviewing participants using predesigned pretested questionnaire. To determine the prevalence of self-medication and to study its association with various socio demographic factors among adults in urban slum. The prevalence of self-medication in the area was 51 % . The most frequently used drugs for self-medication were Analgesics 59.8% and Antacid 46.07%. Common ailments for which self-medication was used frequently were Body pain 60.29%, Headache 55.88%, fever 53.43% and cough 49.01%. There was significant association between self-medication and medical background in family ($p = 0.00001$) also with employed participants ($p = 0.009$). Prevalence of self-medication is found to be 51% in participants. And study participants are self-medicating for problems like body pain and headache which can result in analgesic abuse. Educating people on adverse effects of self-medication is needed.

Keywords: Self-medication, Medicine abuse , Pathogen resistance, Misdiagnosis

<https://doi.org/10.33887/rjpbcs/2024.15.2.11>

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INTRODUCTION

Self-medication is increasing rapidly in India become emerging health problem. According to WHO Self-medication are defined as the use of medications to treat illnesses or symptoms which are self-diagnosed or as the intermittent or ongoing use of prescribed drugs to treat a chronic or recurrent illness or its symptoms [1].

Prevalence of self-medication in world is ranging from 11.7% to 92% [2-4]. Because over-the-counter medications are easily accessible in nations like India, self-medication is a major issue here. Hence, its Prevalence in India is high, less knowledge about doses, efficacy, safety about drugs can be the reason for excessive and inappropriate use of medication leads to development of antibiotic resistance and also adverse health hazards leading to prolonged suffering [5]. Self-medication without medical supervision can cause inappropriate or excessive therapy, delay in needed therapy, missed diagnosis, and increased morbidity [6].

There are several reasons for self-medication like self-care, care for the loved ones, distance from health care facility, financial constrain, health problem felt not serious enough to seek physicians advice so to control this epidemic of self-medication reasons for it should be evaluated. Also several other reasons are there People might listen to advise from an non-medical person who is familiar with straightforward treatments for common illnesses or could consult a pharmacist since they are able to evaluate the symptoms and explain how to use the drug correctly or may purchase an over-the-counter medication based on online searches, doctor suggestions, and past personal experience [7].

The practice of self-medication has turned into a significant health concern for the community. A relatively limited amount of study has been done on self-medication. Therefore, additional research is required to investigate this. In light of this, it is suggested that this study examine the frequency of self-medication, the sociodemographic factors influencing the practices, and the underlying causes.

METHODOLOGY

Study design: community based Cross sectional study

Study population: Adults population residing in selected urban slum under urban health training centre.

Sample size: As per article by Rathod et al prevalence of self-medication sample size calculated using formula $4p(100-p)/I^2$, where P is prevalence, I is absolute precision = + 5. The sample size calculated was 384 and for easy analysis it can be rounded off to 400.

Sampling technique: Total population under UHTC is 27,132 which was distributed in 5 areas. One area amongst the 5 were selected randomly by lottery method and 1st house was selected randomly

Ethical approval from institutional ethics committee is obtained

Method of data collection: Data is collected in the form of interview. Every second house was selected. One person per house was taken till sample size completed. During the house visit first self-introduction and introduction of the study was given and aim of the study was explained properly. After taking a informed consent of the participant, interview was conducted in Hindi or Marathi, which are the local languages with help of pre designed pretested questioner. Adequate time was given to provide any response from the participants for every question asked. The questionnaire included the information about sociodemographic factors and self-medication practices including method, drug, reason etc. For same.

Operational definition

Self-medication: According to WHO Self-medication are defined as the use of medications to treat illnesses or symptoms which are self-diagnosed or as the intermittent or ongoing use of prescribed drugs to treat a chronic or recurrent illness or its symptoms [1].

Chronic illness: A disease or condition that usually lasts for 3 months or longer and may get worse over time.

Medical background in family – study participants have Medical /Paramedical professionals in family

Data management done using open epi version 3.01, P value less than 0.05 is considered significant . Multivariate regression was applied.

RESULTS

Total 400 participants were interviewed. The mean age group among the participants was 21-30 years. 61.25% study population was female, and 33% study population was educated up to high school. According to modified BG prasad socioeconomic classification 2022 27.25% population was belonging to class V. someone with medical or paramedical profession was present in families of 77.5% study population. 14.25% study population had history chronic illness. (Table no 1)

Out of 400 study population residing in urban slum area under study 204 (51%) participants reported practicing self-medication. The prevalence of self-medication among the participants was 51%. (Fig no 1)

From table no 2 it is observed that. There was significant association between self-medication and higher educational level (P= 0.007) , lower socio economic status is statistically associated with self-medication (P= 0.001) , medical background in family (p = 0.0000001) is also associated with the self-medication. Presence of chronic illness (P=0.0017) is statistically associated with self-medication practice. No statistical association is found in age and sex of participant and employment status with self-medication. When multivariate regression analysis was done it was observed that having medical background in family (P = 0.0000001 OR = 4.24 CL UL= 7.396 LL=2.503) and presence of chronic illness (P= 0.0017 OR = 2.56 UL=4.797 LL= 1.41) was associated with self-medication.

The most frequently used drugs for self-medication were Analgesics 59.8% and Antacid 46.07% (table no 3). Common ailments for which self-medication was used frequently were Body pain 60.29%, Headache 55.88%, fever 53.43% and cough 49.01% (table no 4). Source of self-medication was previous experiences with same disease 56.37% (table no 5) Reason for self-medication was that problem was not serious 50.49% (table no 6)

Table 1: Distribution of study subject according to socio demographic details.

_Factor	Frequency	Percentage
Age		
≤20	27	6.75%
21-30	163	40.75%
31-40	64	16%
41-50	42	10.5%
51-60	51	12.75%
61-70	38	9.5%
≥71	15	3.75%
Sex		
Male	155	38.75%
Female	245	61.25%
Educational status		
Illiterate	36	9%
Primary	59	14.75%
Secondary	57	14.25%
Highschool	132	33%
Diploma	47	11.75%
Graduate	42	10.5%
Postgraduate	27	6.75%
Employment status		
Employed	182	45.5%
Unemployed	169	42.25%
Retired	19	4.75%
Student	30	7.5%
Socio economic status according to modified BG prasad classification		
I	66	16.5%

II	50	12.5%
III	69	17.25%
IV	106	26.5%
V	109	27.25%
Medical background in family		
Yes	90	22.5%
No	310	77.5%
History of chronic illness		
Yes	57	14.25%
No	343	85.75%

Table 2: Association between self-medication and various socio demographic factors.

Variable	Category	Self-medication Present	Self-medication absent	Total	P value
Age	>=30 years	101	109	210	0.26
	<30 years	103	87	190	
Sex	male	71	84	155	0.12
	female	133	112	245	
Education	>high school	134	102	236	0.007
	<=high school	70	94	164	
Employment status	Employed	102	80	182	0.08
	Unemployed	102	116	218	
Socio economic status	<=class 3	110	75	185	0.001
	>class 3	93	122	215	
Medical background in family	Yes	69	21	90	0.00001
	No	135	175	310	
History of chronic illness	Yes	40	17	57	0.007
	No	164	179	343	

Table 3: Drug use as self-medication

	Frequency	Percentage
Analgesics	122	59.08%
Antipyretics	94	46.07%
Cough Remedies	91	44.06%
Antacids	97	47.54%
Sleeping Aids	12	5.88%
Skin creams	33	16.17%
Food Supplements	38	18.62%
Antiallergics	36	17.64%
Antispasmodics	42	20.58%
Antibiotics	58	28.43%

Multiple responses were allowed

Table 4: Indication for self-medication.

	Frequency	Percentage
Headache	114	55.88%
Cold Cough	100	49.01%
Leg/body pain	123	60.29%
Fever	109	53.43%
Gas trouble /Acidity	62	30.39%
Diarrhoea	49	24.01%
constipation	44	21.56%
Sore throat	52	25.49%
Stomach ache	57	27.94%
Vomiting	45	22.05%
Dyspnoea	15	7.35%

Multiple responses were allowed

Table 5: Reason for self-medication

	Frequency	Percentage
Urgency of situation	68	33.33%
Previous experience	65	31.86%
Financial constrain	12	5.88%
Advice from pharmacist	25	12.25%
Easy availability of drugs	36	17.64%
Distance from healthcare facility	21	10.29%
Problem was not serious	103	50.49%
Saves time	63	30.88%

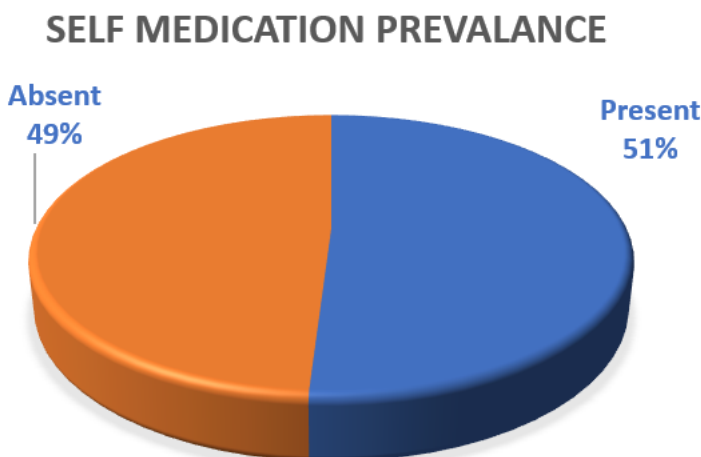
Multiple responses were allowed

Table 6: Source of self-medication

	Frequency	Percentage
Pharmacist advice	51	25%
old prescription	73	35.78%
previous experiences	115	56.37%
friends and relatives	39	19.11%

Multiple responses were allowed

Figure 1: Prevalence of self-medication



DISCUSSION

Prevalence of self-medication in current study is 51%, nearly similar results were found by studies of A Ahmad et al, D Limaya et al [8, 9] while it is higher in study done by Pahlke et.al. i.e. 81.5% in rural population of Maharashtra [10] and very low prevalence is found by Selvaraj et al. and R. Dutta et al [11, 12], prevalence of self-medication is different in different studies done in various states of India and also in other developing countries. It varies according to sociodemographic backgrounds of people and also their health seeking behaviour.

In current study age and sex of study participant was found statistically not significant with self-medication similarly studies done by Subhashini et al., AK Simon et al [13, 14]. In contrast to current study A Shalini et al [15] found that Age and sex of study participant is associated with self-medication practices. Similarly Study done by A Sharma et al. found young age group as a risk factor for self-medication [16].

The current study found that higher educational status is statistically associated with self-medication practices similar results are found by

Study done by S. Jain et al., S. Katkuri et al [17,18] as higher educational status can be the source of more knowledge regarding self-care in form of self-medication. Also, the educated people have more knowledge about medicine brands and names which can make them to buy medication on their own and use it.

Lower socio economic status is statistically associate with self-medication practices this can be due to the higher cost of health services and medication prescribed by private practitioner which is not affordable to the people in low income groups, which is explained by RD Gadekar et al.(19) Where study done by Subhashini et al [13] found that higher socio economic class practices self-medication more compared to lower socio economic class.

Participants who had family member with medical training/medical background tend to self-medicate more frequently than others.

Participants with chronic illness like Hypertension, Diabetes, Asthma, Arthritis etc. practice self-medication more. This may be because of the fact that medical care and cost of medicines is both expensive and as they require both for longer period of time, to cut down the cost they prefer to buy medicines on their own with previous prescriptions or prior knowledge. The medicines for acute illnesses are also expensive hence to reduce financial burden on themselves they tend to self-medicate without consulting the doctor. D Limaye et al [9] found similar results.

The most common drug use for self-medication by participant was Analgesic 59.08% for body pain followed by antacids, antipyretics, cough remedies. A Ahamad et al., HG Bagewadi et al. K Krishnaveni et al [8,20,21] found similar result. Because of their frequent and appealing marketing, over the counter nature and easy availability people are familiar with these medications and tend to self-medicate, whereas sleeping pills are rarely used for self-medication because these are not sold without prescription and their brand names are unpopular.

Leg pain/ body pain is most common indication for self-medication followed by headache, fever, cough cold among participants. Similar results are found by AK Jawarkar [22]. Body pain and headache is very common among population and they feel these are minor illnesses dose not require any physician's consultation and for which medicines are easily available. Regular use of analgesics for it can cause analgesic abuse among them. Dyspnoea is uncommon condition and people are not aware about same so they don't tend to self-medicate for same.

In current study population is self-medicating on basis of their previous experiences of similar symptoms and drugs. Similarly, PM Durgawle et al. did study in tribal population of northern Maharashtra found that reason for self-medication was relief from previous use of similar drug [23]. They also use old prescription or labels of used medication and ask Pharmacist for medicine. Studies done by S Jain et al., S Mir et al [17,24] found that most common way of self-medicating was pharmacists' advice.

Participants self-medicated because they though these illnesses or symptoms were not serious that much to seek physician advice. Which saves their time and money. Also, some participant said that it was urgency of situation which made them to self-medicate for it. RK Sagrika et al., NS Nair [25,26] found similar results.

CONCLUSION

Prevalence of self-medication is found to be 51% in participants which is high. Higher educational level is associated with tendency of self-medication . medical background in family is not protecting participants from habit of self-medication rather it contribute as a important factor for self-medication. being in lower socioeconomic group participants avoid medical practitioners visit and take medicines without consultation of doctor this increases the habit of self-medication in them. Also people suffering from chronic illness are required regular follow up and regular medication this is also a important factor for self-medication. study participants are self-medicating for problems like body pain and headache which can result in analgesic abuse. Educating people on adverse effects of self-medication is needed.

Limitations

As the samples are from urban slum area observations of study cannot be generalised to whole population.

Recommendations

- There should be laws addressing over the counter purchase of drugs.
- There is need to reduce the health care expenses on the population. This problem needs to be addressed by establishing policy to regulate the fees charged by doctors.
- As analgesics are mostly used drug by people. This can lead to analgesic abuse which poses the threat of kidney or liver failure, people need to be made aware about this. With increasing self-medication and insufficient knowledge there is increase in antibiotic use leading antibacterial resistance. People are not aware about the doses, duration of treatment as well as their side effects for this people should stop self-medicating without physicians' advice.

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