

Self Medication Practices Amongst Elderly Population in an Urban Health Center of Amravati District of Maharashtra, India

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Abstract

Objective: To study the prevalence of self-medication practices amongst elderly population in urban health center of Amravati, Maharashtra.

Materials & Methods: A cross-sectional study was conducted in April 2015-July 2015 data were collected by personal interviews using pretested questionnaires. The sample size was calculated using the formula $n = 4pq/d^2$ considering p as 56% and allowable error 10%. A total of 320 elderly people were included in the survey. The eldest member of the family, present at the time of the visit was interviewed. Data were collected from 320 persons and analyzed using SPSS version 16.0.

Results: The overall prevalence of self-medication was 48%. Allopathic drugs were the commonest mode of self-medication (95%). The commonest reason for self-medication was easy availability of medicines in medical stores and other shops, time saving factor (69%). Local pharmacist (89%) was the main source of information. Joint and muscle pain was the commonest indication identified for self-medication (89%).

Conclusion: The study revealed that 48% of elderly population is influenced by self-medication practices without consulting doctors and the commonest causes for self medication were musculoskeletal pain, headache and fever.

Keywords: Self Medication, Urban Health Center, Prevalence, Drugs, Maharashtra.

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INTRODUCTION

According to WHO's definition, self-medication is "The selection and use of medicines by individuals to treat self-recognized illnesses or symptoms". It is an old age practice but has currently gained major public health concern. In developing countries like India most episodes of several illnesses were treated by self medication

because of easy availability of a wide range of drugs and inadequate health services.¹

Self-medication is a form of self-care to establish and maintain health, to prevent and deal with illness. Self-medication is an important health issue especially in developing countries like India.² 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.

In India the prevalence of self medication was 31% and 71% in studies conducted in Nagpur³ and Karnataka⁴ respectively. 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. Practicing self-medication for drugs like antibiotics might lead to drug resistance; and hence, there needs to be a check on these practices.^{5,6,7}

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Few studies were conducted at community level especially in elderly population in India to assess the magnitude of self-medication practices. Studies of such nature will provide useful insight on the reasons for which people resort to this practice and might help the policy makers 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 amongst elderly population and also to look for association between self-medication and socio demographic characteristics in an urban area.

OBJECTIVE

To study the prevalence of self-medication practices amongst elderly population in urban health center of Amravati, Maharashtra.

MATERIALS & METHODS

A cross-sectional study was done during April 2015-July 2015 in service areas of the urban health and training center, Belpura attached to Dr. Panjabrao Deshmukh Memorial Medical College Amravati.

- Participants: Elderly 60 and above 60 yrs of age.
- Sampling technique: Random sampling technique.
- Sample size: The sample size was calculated using the formula $n = 4pq/d^2$ considering p as 56% and allowable error 10%. A total of 320 elderly people were included in the survey.

Inclusion criteria: Both males and females above 60 years of age who could communicate by speaking and willing to participate

Exclusion criteria: Elderly of insane mind, unable to communicate, not willing to participate, registered medical practitioners, pharmacist, nurse, paramedic, any person working in health sector at any level.

A pre-designed questionnaire was used to obtain the data regarding socio-demographic characters, practices and determinants of self-medication.

Permission was obtained from Institutional Ethical Committee

Method of data collection

Data were collected by interview using structured pretested questionnaire which was

administered to the elder members of the households available at the time of the visit. Prior written informed consent was obtained from the study subjects. The data were collected by the Post Graduate students from community medicine department and supervised by the investigators. For the purpose of the study, self-medication was defined as the use of over the counter drugs or any allopathic drug for self-treatment, without prior consultation with a certified doctor. We have considered 3 months period preceding the house visit for the purpose of self-medication.

Data on sociodemographic 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.

Statistical analysis: Data entry was done in SPSS 16.0 version and analysis done by using proportions and chi square test with SPSS 16.0. Values of $p < 0.05$ was considered as statistically significant.

RESULTS

Among 320 study participants, 149 (46.56% were male & 171 (53.44% were female). The prevalence of self-medication was found to be 48% i.e. 153 of (320) in the present study. (Fig. 1). Total 82 (53.59%) males and 71 (46.41%) female were practicing self medication. The prevalence was found to be more among the male than female and this difference was found to be statistically significant (< 0.05). Majority of the respondent were found to be illiterate 192(60%) followed by primary 87(27.19%) and secondary & graduate were 41(12.19%). The prevalence of self medication was found more among the illiterate (76.47%). This difference was found to be highly significant. ($p < 0.001$). Most of the respondent were found to be in socio economic Class IV & class V 192 (60%) followed by class III 122 (38.12%) and class I & II were only 6(1.88%). The prevalence of self medication was found more among the class IV & V (92.16%). This difference was found to be highly significant. ($p < 0.001$) The prevalence of self medication was more among the married 119(77.78%) than widow 34(22.22%) however this difference was not statistically significant ($p > 0.05$). The prevalence was found more among the dependent 77(50.33%) followed by working 71(46.41%) but this difference was not statistically significant ($p > 0.05$) (Table 1).

Table 1. Sociodemographic characteristics on self-medication use

Demography	All subjects n=320	Practicing self medication n=153	Not practicing self-medication n=167
Sex			
Male	149(46.56)	82(53.59)	67(40.12)
Female	171(53.44)	71((46.41)	100(59.88)
$\chi^2=5.827, d(f)=1, p < 0.05$ Significant			
Education			
Illiterate	192(60)	117(76.47)	75(44.91)
Primary	87(27.19)	30(19.61)	57(34.13)
Secondary & Graduate	41(12.19)	6(3.92)	35(19.76)
$\chi^2=37.34, d(f)=2, p < 0.001$ Highly significant			
Socioeconomic Status			
I + II	6(1.88)	1(0.65)	5(2.99)
III	122(38.12)	11(7.19)	111(66.47)
IV + V	192(60)	141(92.16)	51(30.54)
$\chi^2 = 126.5, d(f) = 2, p < 0.01$ Highly significant			
Marital status			
Married	244(76.25)	119(77.78)	125(39.06)
widow	75(23.44)	34(22.22)	41(24.55)
Divorced	1(0.31)	0	1(0.6)
$\chi^2=.3779, d(f)=2, p=0.54$			
Occupation			
Dependent	170(53.13)	77(50.33)	93(55.69)
Working	134(41.88)	71(46.41)	63(37.72)
Pensioner	16(5)	5(3.27)	11(6.59)
$\chi^2=3.628, d(f)=2, p= 0.163$			

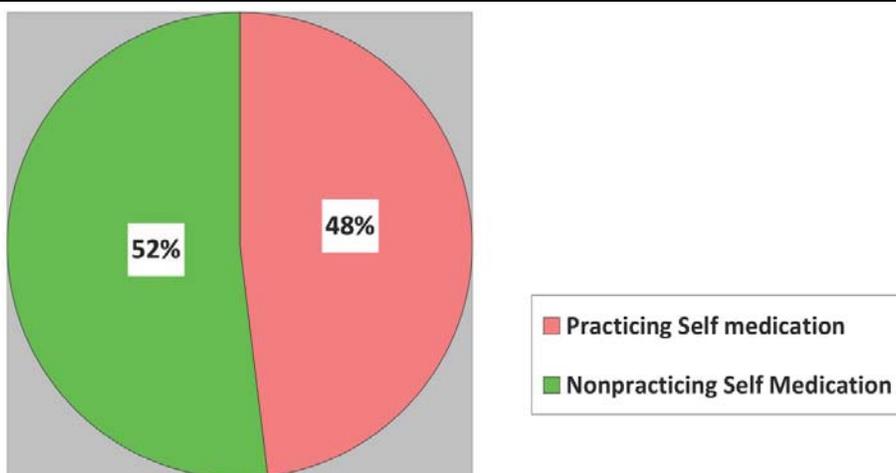


Fig. 1: Prevalence of self medication

Allopathic drugs were the commonest mode of self-medication (95%) (Table 2). Local pharmacist (89%) was the main source of information for self medication (Table 3). The commonest reason for self-medication was easy availability of medicines in medical stores and other shops 70 (45.75%), time

saving factor 69 (45%) and financial constraint 49 (32%). (Fig. 2) Joint and muscle pain was the commonest indication identified for self-medication 136(89%) followed by headache 115(75%), fever 107 (70%), cough and cold 35(23%) and others. (Fig. 3)

Table 2: System of medicine used by respondents

Type of medicine	No. of respondents	Percentage
Allopathic	146	95.43
Allopathic & Ayurvedic	5	3.27
Ayurvedic	1	0.65
Homeopathic	1	0.65
Total	153	100

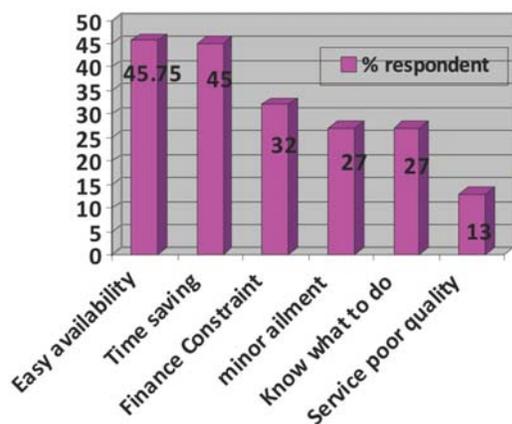


Fig 2: Reasons for self medication – MR*

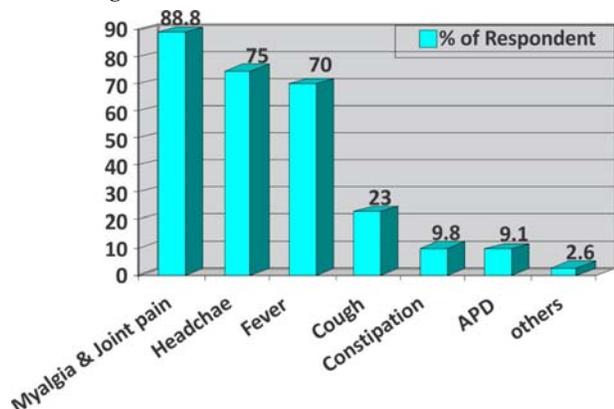


Fig. 3: Conditions for which self medication is practiced – (Multiple Response)

Table 3: Source of information about self medication- MR*

Source of information of drug	No. of respondents	percentage
Pharmacists	136	88.89
Doctor's old prescriptions	47	30.72
Friends	11	7.19
Advertisements	10	6.54
Paramedics	5	3.27
Others	3	1.96

*Multiple responses

DISCUSSION

Present study was carried out to study the prevalence of self-medication practices amongst elderly population in urban health center and to study some of the sociodemographic factors associated with self-medication.

The prevalence of self-medication was found out to be 48% in the present study. The prevalence of self medication is high as compared to the study conducted at Nagpur where prevalence of self medication was 31%.⁴ Other study conducted in urban area of Delhi showed that prevalence of self-medication was 31.3%.⁸ However, the prevalence of self medication is lower in present study as compared to the study conducted by Manish Jain which showed 57.9% prevalence in the elderly age groups⁹. In a study conducted by author Mandavi at Chandigarh showed the prevalence was 62.7%¹⁰ 77.3% prevalence was found in a study conducted by Malvi Retesh, at Bhopal region Madhya Pradesh, India¹¹ Other study conducted at Puducherry showed the prevalence 71%.⁴ The prevalence of self-medication was found 92.8% in the study conducted by Kumar V.¹² Study by author Kaushal J found prevalence 73% in housewives belonging to the middle income group in a city in northern India.¹³

This may be due to variations in the definition, recall period considered, methodology and different socio – economic and demographic variables of different regions. While prevalence of self – medication shows a wide variation, patterns of drug use and factors determining self-medication remain the same.

This study showed a higher prevalence rate in males than females which is in agreement with the findings of some previous studies. Males are economically stronger, can easily access medical store, and freely move outside. More dependency on males than females in our society may be a reason for the relatively low self-medication level seen in females.

This study reports the high prevalence of self-medication among illiterate i.e. 76.47% and more than middle school when compared to those who were 1-8th class. Education of the respondents was found to be the major factor influencing the practice of self-medication in various studies including the present study.^{13,14,15,16} However, according to Sharma *et al*¹⁷ self medication was more among respondents who had less than higher secondary education compared with respondents completed more than higher secondary.

Allopathic drugs were the commonest mode of self-medication (95%) in this study. Similar findings quoted by other authors also NSAIDs and antibiotics were most common allopathic drugs used for self-medication in a study by Kalaiselvi Selvaraj¹⁸. A study conducted at Pune found that NSAIDs (33.33), antibiotics (10.32), vitamins (14.08), and Gastro intestinal tract ailment drugs (13.61) are most commonly used as self-medication in rural area.¹⁹

Analgesics, antipyretics and antibiotics are the most common drugs used by participants without prescription.²⁰

In the present study it was found that Pharmacists were the most important source of information (89%) regarding self-medication. Study reported by Deshpande and Tiwari also states every third customer coming to pharmacy is receiving drugs without prescription³. The similar findings found in other study by Vanita D Saharan the source of information for self medication were pharmacist, 56%²¹. People opted for self-medication mainly due to nature of mild illness and lack of time. Majority of the respondents had the intention to use in future for them and to recommend for others.

The role of the pharmacist has been changing over the past two decades. The pharmacist is no longer just a supplier of medicines and a concocter of medicinal products, but also a team member involved in the provision of health care whether in the hospital, the community pharmacy, the laboratory, the industry or in academic institutions.

In this study the commonest reason for self-medication was easy availability of medicines in medical stores and other shops 70 (45.75%), time saving factor 69 (45%) and financial constraint (32%). Similar findings were found in other study also the reasons of self medication were saving time (59%), being economical (34%), ease and convenience (20%), no need to visit a physician for minor illness (38%) and providing quick relief (24%)¹⁹

Joint and muscle pain was the commonest indication identified in the present study for self-medication 136 (89%) followed by headache 115 (75%), fever 107 (70%), cough and cold 35 (23%) and others. In study conducted at Mumbai showed common indications reported by the respondents were headache (96%), fever (84%), cough and cold (81%), acidity (67%) and dysmenorrhea (48%).²¹

The easy availability of drugs pose risks to patients thus, it is important to understand patient's choices on allopathic medicine and complementary/alternative medications used for self-medication. The availability of potentially unsafe

drugs has made self medication a risky proposition. A large majority of elderly were unaware of the adverse risks associated with concurrent use of pain medicines and other drugs. This makes it necessary for all healthcares professional to intensify efforts to educate and advise the elderly patients to ensure safe and appropriate use of drugs.

Limitations

Recall bias is one of the limitation of present study. The study was conducted at a Urban health center, so the results cannot be generalized to the whole urban population.

CONCLUSION

The study revealed that 48% of elderly population is influenced by self-medication practices without consulting doctors and the commonest causes for self-medication were musculoskeletal pain, headache and fever.

RECOMMENDATIONS

- People should be educated about the risks of self-medication.
- Strict implementation of laws regarding dispensing of OTC medicines by the pharmacist is needed.
- Strengthening the National programme for healthcare of elderly (NPHCE) by starting special geriatric clinics and if possible domiciliary services must be made available to them.

Ethical Considerations: The study protocol was submitted to the Institutional Ethical Committee and clearance was obtained.

Conflict of Interest: There does not exist any conflict of interest what so ever.

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Author Contribution: Conception and design & acquisition of data done by author Dr. Anuradha K, analysis and interpretation of data and drafting the article done by Dr. Vinod Wasnik & revising it critically for important intellectual content has been done by the author Dr. Ajay Jawarkar.

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