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Assessment of Self Medication Practices Among The People Residing in The Urban Field Practice Area of A Medical College, Mysuru - A Cross-Sectional Study



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ABSTRACT

Introduction: WHO defines self-medication as the "use of medicinal products by the individuals to treat self-recognized disorders or symptoms" or the intermittent or continuous use of a medication prescribed by a physician for chronic or recurring diseases or symptoms. **Objectives:** To estimate the prevalence and the practices and also factors associated with self-medication among people residing in the urban field practice areas of a medical college in Mysuru. **Methodology:** It is a cross-sectional study done among the urban field practice areas of the department of Community Medicine, JSS Medical College, Mysuru, Karnataka, India. The sample size was 383 and a systematic random sampling technique was used to select the study participants. **Results:** The overall prevalence of self-medication was found to be 73.3%. The main reasons for practicing self-medication are the perception that there is no need to visit the doctor for minor illness, followed by quick relief upon the usage of self-medication and financial constraints. Self-medication practices among the study population were high in common ailments like fever, body pains, headache, flu, cough. There were no Adverse Drug reactions following self-medication reported. **Conclusion:** Nearly 2/3rd of the study participants practiced self-medication. There is a need to impart health education to the public regarding the consequences of self-medication and rational usage of drugs and antibiotics to prevent antimicrobial resistance and make healthcare easily accessible.



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INTRODUCTION

WHO defines self-medication as the "use of medicinal products by the individuals to treat self-recognized disorders or symptoms" or the intermittent or continuous use of a medication prescribed by a physician for chronic or recurring diseases or symptoms. Self-medication involves obtaining drugs without a proper prescription, using old prescriptions to buy drugs, exchanging medicines with relatives and friends, or utilizing unused medicines stored at home⁽¹⁾. Even, World Health Organizations encouraging self-medication as a means of reducing medical consultations and the pressure on healthcare facilities⁽²⁾.

The prevalence of self-medication varies over the world, ranging from 32.5 to 81.5 percent. In India, the prevalence of self-medication was 47% according to a study done by Pranav V *et. al*⁽³⁾.

Several factors have been associated with predisposal to self-medication. Age, gender, income status, and socioeconomic level all are factors that influence patterns in distinct population groups. Self-medication also reveals about education status, socioeconomic status, medical history, alertness about health. But approachability to drugs and health care facilities, medical knowledge, satisfaction, and attitude are also predisposing factors. High illiteracy rates and poor exposure to medical information in most developing countries are some of the contributing factors to the high prevalence of self-medication⁽⁴⁾. The studies conducted among slum communities in India have shown varying estimates of Self-medication practices and these variations could be due to regional differences in socioeconomic factors, healthcare-seeking behaviors, availability, and accessibility of healthcare facilities⁽⁵⁾.

In this context, the current study was carried out to estimate the prevalence and the practices and also factors associated with self-medication among people residing in the urban field practice areas of a medical college in Mysuru and also to find out factors influencing self-medication.

MATERIALS AND METHODS

A community-based cross-sectional study was conducted among the people residing in the urban field practice area of JSS Medical College, Mysuru of Karnataka state in India from January to June 2021. The sample size was calculated by a prevalence of 47% from a study done by Pranav *et al.*⁽³⁾ with an absolute precision of 5% and CI of 95% a sample size of 383

has been calculated. Ethical clearance has been obtained from Institutional Ethics Committee, and permission from the Medical Officer of JSS Urban Health Center, Bamboo bazaar, Mysuru has been obtained. Data were obtained using a predesigned questionnaire during a house-to-house visit. Information was collected regarding socio-demographic variables (age, gender, education, occupation, religion, socioeconomic status) and also about self-medication usage. Data were entered in Microsoft excel 2019 and statistical analysis was done using SPSS version 25 (licensed to JSS Academy of Higher Education and Research). Descriptive statistical measures were expressed in frequencies, percentages, mean and standard deviation. Data was represented in tables and graphs as relevant. Chi-square test/ Fisher exact test was used to find the association between various socio-demographic variables with self-medication practice. A probability value of less than <0.05 was considered to be significant.

RESULTS

Sociodemographic characteristics of study participants:

55.4% of the study participants are females, have a mean age of 39.5 years, were currently married(88.3%), and belonged to the Hindu religion(91.9%). 38.9% of the participants had diplomas/degrees as their education status. 59.3% of the study participants are semi-skilled laborers and 43.3% of the study participants belong to socioeconomic class II with a per capita income of Rs 3504-7007 according to BG prasad socioeconomic scale. 84.3% of the participants belonged to a nuclear family.

Prevalence of self-medication:

The study was conducted among 383 participants in the Urban field practice area of medical college, Mysuru. As shown in figure-1, the prevalence of self-medication among the study participants was found to be 73.36%.

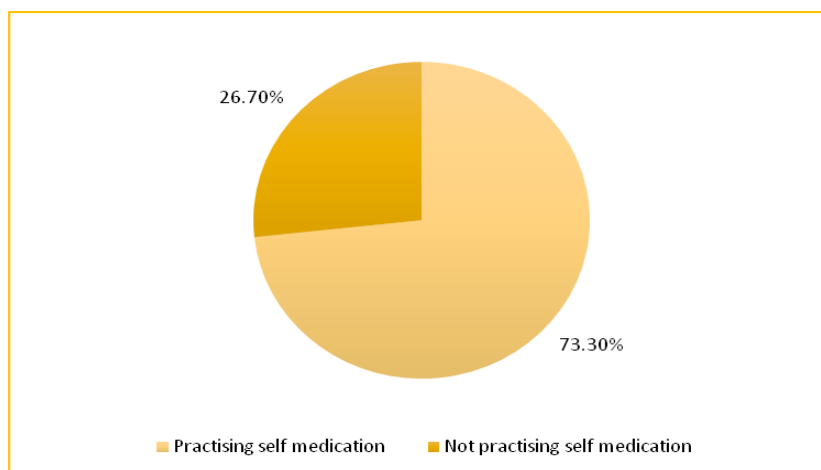


Figure No 1: Prevalence of self-medication among study participants(n=383)

Practices related to self-medication:

77.5% of the participants are practicing self-medication to treat headache or body ache and the least(0.5%) was to treat skin allergies(figure-2). 92% of the study participants opined that the most commonly used drugs were analgesics and 3.2% opined that the least used were multivitamins(figure-3). 79.6% of the study participants will obtain drugs for self-medication directly from the pharmacy without a prescription and least(1.1%) by seeing advertisements on TV or other media. 81.9% of the participants gained knowledge on the dosage of drugs of self-medication through pharmacists and 62.5% gained knowledge via healthcare professionals. 150.2% of those who were practicing self-medication never changed their treatment course and 0.4% always changed their treatment course. 70.8% of the participants stopped taking drugs whenever the symptoms subsided even before the completion of the course. Of the 281 who were practicing self-medication, 71.1% of the participants verified the expiry date always(Table-1).

Table No. 1: Practices related to self-medication

Practices related to self-medication	Frequency	%
Sources of obtaining drug prescription		
Directly from a pharmacy without prescription	223	79.60%
Old prescription	197	70.4%
Friend prescription	14	5.0%
TV other media	3	1.1%
Pharmacist	226	81.6%
Source of information on dosage of medicine		
Pharmacist	226	81.6%
Doctor	173	62.5%
Family members and friends	8	2.9%
Internet	5	1.8%
Previous experience	6	2.2%
Practices related to changing treatment course		
Yes always	1	0.4%
Sometimes	139	49.5%
Never	141	50.2%
Practices related to stopping drugs used in self-medication		
Whenever the symptoms subside even before the completion of the course	199	70.8%
Irrespective of the symptoms subsiding after the completion of the course	64	22.8%
After consulting a doctor/pharmacist	18	6.4%
Verification of expiry date		
Yes always	199	71.1%
Sometimes	43	15.4%
Never	38	13.6%

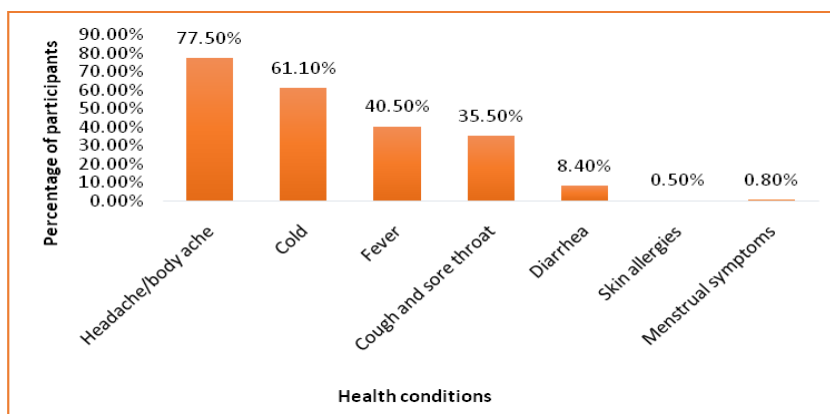


Figure No. 2: Responses of study participants towards reasons for the practice of self-medication

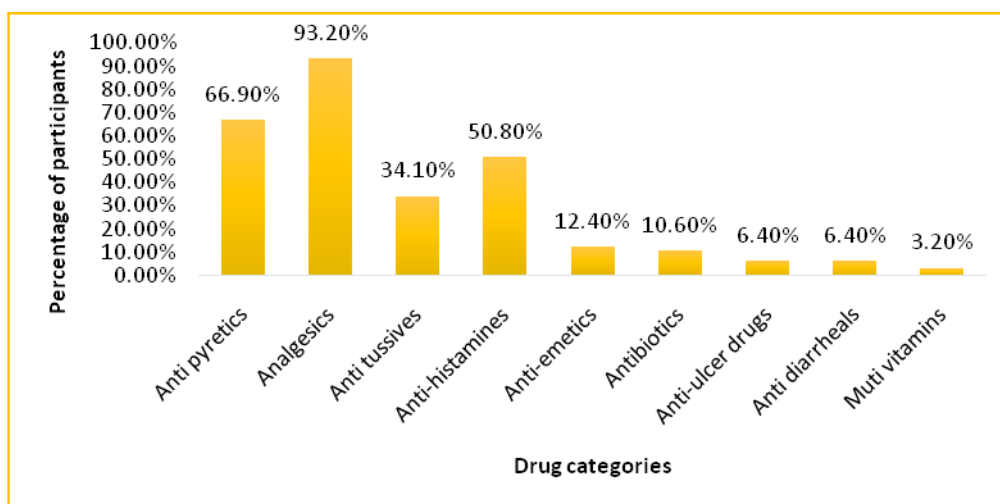


Figure No. 3: Responses of study participants towards reasons for non-practice of self-medication

Adverse Drug Reaction’s related to self-medication:

Of the 281 participants who were practicing self-medication, none of them experienced any form of Adverse Drug Reactions (ADRs).

Association between sociodemographic variables and self-medication usage:

Table-2 shows the association between the socio-demographic variables and the self-medication usage reveals that there is a significant association between the education status of the head of the family and the self-medication usage (chi-square value 22.6, p-value - 0.001).

Table No. 2: Association between sociodemographic variables and self-medication practice

Variables		Self-medication practice		Chi-square value	p-value
		Present	Absent		
Gender	Male	119(42.3%)	52(51%)	2.256	0.133
	Female	162(57.7%)	50(49%)		
Religion	Hindu	262(93.2%)	90(88.2%)	2.743	0.254
	Christian	8(2.8%)	6(5.9%)		
	Muslim	11(3.9%)	6(5.9%)		
	Others	0(0%)	0(0%)		
Marital Status	Married	247(87.9%)	91(89.2%)	0.729	0.866
	Unmarried	21(7.5%)	8(7.8%)		
	Divorced	1(0.4%)	0(0%)		
	Separated	0(0%)	0(0%)		
	Widower/Widow	12(4.3%)	3(2.9%)		
Education Status	Illiterate	25(8.9%)	2(2.%)	22.697	0.001*
	Primary education	25(8.9%)	4(3.9%)		
	Secondary education	23(8.2%)	2(2%)		
	High school	33(11.7%)	6(5.9%)		
	Pre university	62(22.1%)	38(37.3%)		
	Diploma/Degree	104(37%)	45(44.1%)		
	Post-Graduate degree	9(3.2%)	5(4.9%)		
Occupation	Unemployed	5(1.8%)	3(2.9%)	7.234	0.124
	Unskilled	36(12.8%)	5(4.9%)		
	Semi-skilled	158(56.2%)	69(67.6%)		
	Skilled	77(27.4%)	24(23.5%)		
	Retired	5(1.8%)	1(1%)		
Socio-economic status	Class I	45(16%)	10(8.8%)	4.687	0.321
	(7008 and above)				
	Class II	122(43.4%)	44(43.1%)		
	(3504 – 7007)				

	Class III	107(38.1%)	43(42.2%)	0.139	0.933
	(2102 – 3503)				
	Class IV	6(2.1%)	5(4.9%)		
	(1051 – 2101)				
	Class V	1(0.4%)	0(0%)		
	(1050 and below)				
Type of Family	Nuclear family	236(84%)	87(85.3%)		
	Joint family	38(13.5%)	13(12.7%)		
	Three generation	7(2.5%)	2(2%)		

Note: Figures within brackets indicate percentage. *p-value <0.05 statistically significant.*Chi-square test.

DISCUSSION

Prevalence of self-medication:

In the current study total sample size was 383 and the prevalence of self-medication in the urban field practice area of a medical college, Mysuru, Karnataka state in India estimated through this study was 73.36%. Studies in India regarding self-medication prevalence in Karnataka was 47%⁽³⁾ and in Tamilnadu was 71%⁽⁶⁾ and in Uttar Pradesh was 80%⁽⁷⁾.

Factors associated with self-medication:

The current study shows that "Education status of the head of the family" was strongly associated with self-medication usage with a chi-square value of 22.6 with a 'p-value' of 0.001. Similarly, in a study done by Sharma et.al., some of the factors that were strongly associated with self-medication are gender, education status, occupation, socioeconomic status⁽⁴⁾.

Practices of self-medication:

In the current study total of 281 were practicing self-medication and the conditions in which they were following self-medication are for headache/body ache, cold, fever, cough and sore throat, diarrhea, menstrual symptoms, and skin allergies. Similar results were also found in studies done by Pranav et al⁽³⁾, NithinKumar et al⁽⁶⁾, and SyamaSundar et al⁽⁷⁾, which shows headache, body ache, fever, common cold, cough as common conditions in which Self-

medication was being practiced⁽³⁾. Compared to other studies in India, this study has also shown the participants are majorly using analgesics(93.2%) then followed by antipyretics(66.9%), anti-tussive(34.1%), anti-histamines(50.8%), anti-emetics(12.4%), antibiotics(10.6%), anti-ulcer drugs(6.4%), antidiarrheals(6.4%) and multivitamins(3.2%). These results are in resemblance with the studies conducted in Bangalore⁽⁸⁾ and Manipal⁽⁶⁾. Among the sources for obtaining drugs, 79.6% were obtained drugs directly from pharmacies without prescription, followed by 70.4% who used old prescriptions and 1.1% from by seeing advertisements on TV or other media, which is in congruence with the studies done on coastal Puducherry, South India by Balamurugan et al⁽⁹⁾ and Andhra Pradesh, South India by Rangari et al⁽¹⁰⁾. In the present study, participants knew drug dosage mainly through the pharmacist(81.9%) and healthcare professionals(62.5%). The current study showed that the majority of the participants stopped taking drugs whenever the symptoms subsided even before the completion of the course(70.8%), followed by drugs irrespective of the symptoms subsiding after the completion of the course(22.8%), and discontinued after consulting a pharmacist or physician(6.4%). This is mainly because most of the participants were using self-medication for minor ailments like body ache, headache, flu, cough, and fever. So, the majority of the drugs were Over the Counter(OTC) and had been stopped once symptoms have been subsided. Most of the participants in the current study verified the expiry date and similar results were also found in a study done by Pranav et al⁽³⁾. Results in the current study showed that none of the participants reported any form of Adverse Drug Reactions(ADR).

There is a need for promoting health education regarding the safer use of drugs. Educating pharmacists is also required while dispensing Over Counter(OTC) drugs and antimicrobials. Government has to ensure proper implementation of the Drugs and Cosmetics Act of 1945 which states that the pharmacist should not sell Scheduled-H drugs without proper prescription and a second schedule H₁ drugs⁽¹¹⁾.

Limitations of the current study are probably could be due to the ongoing pandemic situation majority of the participant's interviews had to be done through phone calls. This study was conducted only in the urban field practice area of the medical college, and hence the finding might not be generalizable.

CONCLUSION

The current study reveals the prevalence of self-medication in the urban field practice area of JSS medical college was 73.36. The education status of the head of the family was strongly associated with self-medication usage. Participants in the current study had good knowledge and a negative attitude towards inadvertent use of medications, though the prevalence was very high. This may be due to the majority of the participants in the current study were practicing self-medication for conditions like headache, body ache, flu, cough and sore throat, fever, diarrhea, and immunity boosters. The majority of them used analgesics, anti-pyretics, antitussives, antihistamines, antibiotics, anti-emetics, antacid drugs. No Adverse Drug Reactions were reported by any participant.

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Conflicts of interest: None declared

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