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Original Research Article

Self-medication practices among adults in urban field practice area of Rajarajeswari Medical College, Bengaluru

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ABSTRACT

Background: Self-medication is an important public health issue worldwide and is increasingly practiced in developing countries. Easy accessibility to medicines and lack of awareness regarding potential risks contribute to the widespread practice of self-medication. Inappropriate self-medication may lead to adverse drug reactions, antimicrobial resistance, delayed diagnosis and increased morbidity. The present study aimed to assess the prevalence, pattern and reasons for self-medication practices among adults in an urban field practice area of Bengaluru.
Methods: A community-based cross-sectional study was conducted among 100 adults aged ≥18 years residing in the urban field practice area of Rajarajeswari Medical College and Hospital, Bengaluru. Participants were selected using convenient sampling. Data was collected using a pre-tested semi-structured questionnaire that included socio-demographic details, self-medication practices, reasons for self-medication and types of medications used. Data were analysed using SPSS version 23 and expressed in terms of frequencies and percentages.
Results: Among the 100 participants, 81% reported practicing self-medication. Analgesics (81.5%) and antipyretics (61.7%) were the most commonly used medications. Fever (84%), cold (72.8%) and cough (64.2%) were the most frequent conditions for which self-medication was practiced. The major reasons reported for self-medication were mild illness (58%), time constraints (38.3%) and financial reasons (22.2%).
Conclusions: The study highlights a high prevalence of self-medication practices among the urban population. Public health education regarding the rational use of medicines and strict regulation of drug dispensing practices are necessary to reduce inappropriate self-medication.

Keywords: Antimicrobial resistance, Drug use, Prevalence, Self-medication, Urban population

INTRODUCTION

Self-medication has become an increasingly common health-seeking behaviour worldwide and represents an important public health concern, particularly in low- and middle-income countries. It refers to the selection and use of medicines by individuals to treat self-recognized symptoms or illnesses without consulting a qualified healthcare professional. The World Health Organization (WHO) defines self-medication as the use of medicinal products by individuals to treat self-diagnosed disorders or symptoms, or the intermittent or continued use of previously prescribed medications for recurring conditions.[1]

Responsible self-medication, when practiced appropriately, can contribute positively to healthcare by enabling individuals to manage minor ailments such as headache, fever, and common cold. It can also reduce the burden on healthcare systems by limiting unnecessary consultations for self-limiting conditions.[2] However,

irrational or inappropriate self-medication may lead to significant health risks. These include incorrect diagnosis, inappropriate drug selection, adverse drug reactions, drug interactions, and delays in seeking appropriate medical care.[3] In addition, the unsupervised use of antibiotics through self-medication is recognized as a major contributor to the global rise in antimicrobial resistance, which poses a serious threat to public health.[4]

In many developing countries, including India, self-medication is influenced by a variety of socio-economic and healthcare-related factors. Easy accessibility of medications without prescription, previous experience with similar illnesses, advice from pharmacists or family members, and the increasing cost of healthcare services often encourage individuals to self-treat their symptoms.[5] Furthermore, factors such as busy lifestyles, limited availability of healthcare facilities, long waiting times, and the perception that certain illnesses are minor or self-limiting also contribute to the widespread practice of self-medication.[6]

Recent reviews have highlighted that the prevalence of self-medication remains high across many populations, particularly in developing regions where regulatory control of drug dispensing may be limited.[7] Analgesics, antipyretics, antibiotics, and gastrointestinal medications are among the most commonly used drugs for self-treatment.[8] While responsible self-medication may offer certain benefits, inappropriate use of medications can contribute to drug misuse, adverse health outcomes, and increased healthcare costs.

Understanding the prevalence, patterns, and determinants of self-medication within communities is therefore essential for designing appropriate educational and regulatory interventions. Evidence from community-based studies can help policymakers and healthcare professionals promote rational drug use and increase public awareness regarding the potential risks associated with unsupervised medication. Hence, the present study was undertaken to assess the prevalence, pattern, and reasons for self-medication practices among adults residing in the urban field practice area of Rajarajeswari Medical College and Hospital, Bengaluru.

METHODS

A cross-sectional study was conducted in the Urban Field Practice Area of Rajarajeswari Medical College and Hospital, Bengaluru, Karnataka. The study was carried out over a period of three month (June, 2025 to August, 2025) with the objective of assessing the prevalence and pattern of self-medication practices among adults residing in the study area.

The study population comprised adults aged 18 years and above residing in households located within the urban field practice area. Households were selected using a convenient sampling technique during the study period. All households with at least one adult member aged 18 years or older were considered eligible for participation. Households that were locked at the time of visit, those without any adult members present during the visit, and households where individuals were unwilling to participate were excluded from the study.

The sample size was calculated using the standard formula for estimating sample size for prevalence studies:

$$n = Z^2P(1-P)/d^2$$

$$=\frac{(1.96)^2 * (0.60) * (0.40)}{(0.10)^2} \quad =92.20 \simeq 100$$

Where, n represents the required sample size, Z is the standard normal deviate corresponding to a 95% confidence level (1.96), P is the estimated prevalence of self-medication, and d is the allowable error.

Based on a previously reported prevalence of 60% for self-medication practices from a study conducted by Rathod et al,[9] the sample size was calculated with an allowable error of 10%. The calculated sample size was 92.2, which was rounded off to 100 for feasibility and to improve the precision of the study.

Data was collected using a pretested semi-structured questionnaire. The questionnaire consisted of sections related to sociodemographic characteristics of the participants, prevalence and pattern of self-medication practices, commonly treated illnesses, types of medications used and reasons for practicing self-medication. Prior to the commencement of the study, ethical clearance was obtained from the Institutional Ethics Committee of Rajarajeswari Medical College and Hospital. Participants were informed about the objectives of the study, and informed consent was obtained before conducting the interviews.

Eligible participants were interviewed during household visits using the pretested questionnaire. The collected data were checked for completeness and subsequently entered into Microsoft Excel and analysed using the Statistical Package for the Social Sciences (SPSS) software version 23.0. Descriptive statistics were used to summarize the data. Categorical variables were presented as frequencies and percentages, while continuous variables were expressed as mean and standard deviation. Inferential statistical analysis was performed to determine the association between selected variables and self-medication practices. The Chi-square test was used to assess statistical significance, and a p-value of less than 0.05 was considered statistically significant.

RESULTS

A total of 100 participants were included in the study. The overall prevalence of self-medication among the study participants was 81%.

The majority of participants belonged to the 18–30 years age group (54%), followed by 31-40 years (21%), while only 3% of participants were aged above 60 years. With respect to gender distribution, 62% of participants were males and 37% were females, whereas 1% identified as other gender. In terms of religion, the majority of participants were Hindus (74%), followed by Christians (15%) and Muslims (11%). Regarding educational status, 37% of participants were graduates, while 19% had completed high school education. A smaller proportion of participants had professional qualifications (18%) or intermediate/diploma level education (17%), whereas 5% of the participants were illiterate. Based on per capita monthly income, more than half of the participants (54%) belonged to the upper socioeconomic class, while 35% belonged to the upper middle class. Only a small proportion belonged to the middle (7%), lower middle (3%), and lower (1%) socioeconomic classes (Table 1).

Table 1: Sociodemographic characteristics of the study participants (n=100).

Sociodemographic characteristics		Frequency	Percentage
Age in years	18-30	54	54.0
	31-40	21	21.0
	41-50	13	13.0
	51-60	9	9.0
	> 60	3	3.0
Gender	Male	62	62.0
	Female	37	37.0
	Other	1	1.0
Religion	Hindu	74	74.0
	Christian	15	15.0
	Muslim	11	11.0
Educational Status	Profession /honors	18	18.0
	Graduate	37	37.0
	Intermediate or Diploma	17	17.0
	High school	19	19.0
	Middle school	1	1.0
	Primary school	2	2.0
	Illiterate	6	6.0
Socio-economic status	Upper class	54	54.0
	Upper middle class	35	35.0
	Middle class	7	7.0
	Lower middle class	3	3.0
	Lower class	1	1.0

With regard to the system of medicine preferred, the majority of participants reported using allopathic medicine (90%), followed by ayurvedic medicine (8%), while 1% each reported using homeopathy and other systems of medicine.

Among the study participants, 81% reported practicing self-medication, whereas 19% reported that they did not practice self-medication. Among those who practiced self-medication, 54.3% reported practicing it occasionally, while 45.7% reported that they always practiced self-medication (Table 2).

Table 2: Self-medication practices among participants (n=81).

Self-medication practices		Frequency	Percentage
Practice of self-medication	Yes	81	81.0
	No	19	19.0
Frequency of self-medicate	Sometimes	44	54.3
	Always	37	45.7

The most commonly reported reason for practicing self-medication was avoidance of medical consultation for minor ailments (58.0%). Other important factors included time constraints (38.3%) and financial reasons (22.2%). A smaller proportion of participants reported difficulty in travelling to healthcare facilities (16.0%) and perceived inadequate care at health facilities (9.9%) as reasons for self-medication. Additionally, 3.7% of participants reported other reasons for practicing self-medication (Table 3).

Table 3: Reasons for practicing self-medication among the study participants (n=81).

Reasons for practicing self-medication	Frequency	Percentage
Travelling difficulty	13	16.0
Financial reasons	18	22.2
Avoidance of medical consultation for minor ailments	47	58.0
Time constraint	31	38.3
Perceived inadequate care at health facilities	8	9.9
Others	3	3.7

Among participants who practiced self-medication, analgesics were the most commonly used medications (81.5%), followed by antipyretics (61.7%). Other medications used included antacids (46.9%), cough syrups (34.6%), vitamin supplements (14.8%), anti-emetics (12.3%), antihistamines (8.6%), and antibiotics (6.2%) (Figure 1). The most common conditions for which participants practiced self-medication were fever (84%), common cold (72.8%), and cough (64.2%). A small proportion of participants reported using self-medication for other conditions (2.5%).

Table 4: Association between sociodemographic variables and self-medication practices among the study participants (n=100).

Sociodemographic variables		Self-medication practices		X^2	P value
		Yes, N (%)	No, N (%)		
Age in years	18-30	47 (47)	7 (7)	9.93	0.041*
	31-40	18 (18)	3 (3)		
	41-50	10 (10)	3 (3)		
	51-60	4 (4)	5 (5)		
	> 60	2 (2)	1 (1)		
Gender	Male	51 (51)	11 (11)	0.46	0.793
	Female	29 (30)	8 (8)		
	Others	1 (1)	0 (0)		
Educational status	Illiterate	6 (6)	0 (0)	2.92	0.569
	Schooling	17 (17)	5 (5)		
	Intermediate /diploma	15 (15)	2 (2)		
	Graduate	28 (28)	9 (9)		
	Profession/Honors	15 (15)	3 (3)		

*Statistically significant.

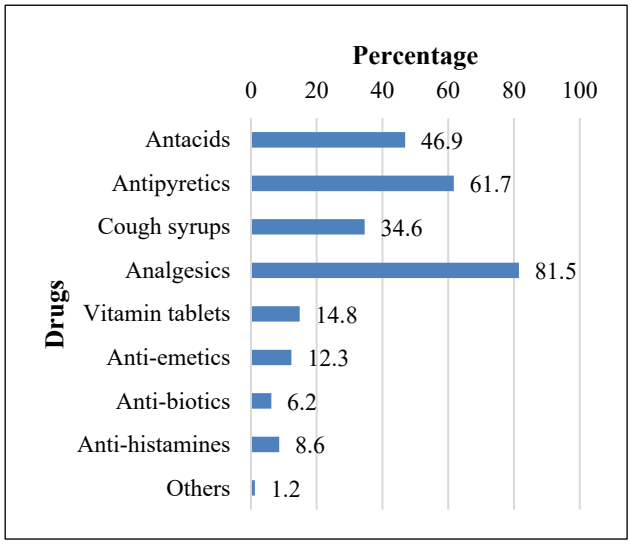

Figure 1: Types of medication used for self-medication by study participants (n=81).

The association between selected sociodemographic variables and the practice of self-medication was assessed using the Chi-square test. Age showed a statistically significant association with self-medication practices (p=0.041). However, no statistically significant association was observed between gender (p=0.793) or educational status (p=0.059) and self-medication practices (Table 4).

DISCUSSION

This cross-sectional study assessed the prevalence and pattern of self-medication practices among adults residing in the urban field practice area of Rajarajeswari Medical College and Hospital, Bengaluru. The study observed that 81% of participants practiced self-medication, indicating that self-medication remains a common health-seeking behaviour in urban communities. Similar findings has been reported in a community-based study conducted in urban Belagavi where 62.3% of participants practiced self-medication, highlighting the widespread nature of this practice in urban populations.[10] Another community-based study conducted in Davangere also reported a substantial proportion of adults practicing self-medication.[11] The relatively higher prevalence observed in the present study may be attributed to easy accessibility of pharmacies, prior experience with similar illnesses, and the perception that minor ailments can be managed without professional consultation.

In the present study, the majority of participants belonged to the 18-30 years age group, and age showed a statistically significant association with self-medication practices. Younger individuals may be more inclined to practice self-medication due to increased access to health information, previous exposure to medications, and the tendency to manage minor illnesses independently. Similar findings have been reported in a study conducted in North Karnataka where younger adults demonstrated higher prevalence of self-medication practices.[12]

With regard to the system of medicine followed, the present study found that allopathic medicine was the most commonly preferred system (90%) among participants. This finding is consistent with observations from study by Samuvel et al. where modern medicine remains the predominant choice for self-treatment because of its perceived effectiveness and rapid symptomatic relief.[13] Easy availability of over-the-counter medicines further contributes to the preference for allopathic drugs for minor ailments.

In the present study, the most commonly reported reason for practicing self-medication was avoidance of medical consultation for minor illnesses, followed by time constraints and financial reasons. Similar reasons have been reported in community-based study conducted in South India, where individuals perceived certain illnesses such as fever, headache, or common cold as minor conditions that do not require professional medical consultation.[14] In addition, factors such as busy lifestyles, long waiting times at healthcare facilities, and easy accessibility of medicines from pharmacies further promote the practice of self-medication.

With respect to the types of medications used, analgesics and antipyretics were the most commonly used drugs in the present study. Comparable findings have been reported in a study conducted in Central India where these medications were frequently used for the management of common symptoms such as fever, headache, and body pain.[9] The relatively lower use of antibiotics observed in the present study may indicate increasing awareness regarding antibiotic misuse; however, unsupervised use of antibiotics remains a public health concern because of its contribution to antimicrobial resistance.

The present study also found that fever, cold, and cough were the most common conditions for which self-medication was practiced. Similar findings have been reported in a study conducted by Babu et al in Karnataka where upper respiratory tract infections and febrile illnesses were the most common conditions managed through self-medication.[15] These conditions are often perceived as mild and self-limiting, which may reduce the perceived need for medical consultation.

This community-based study provides insights into the prevalence and pattern of self-medication among adults in an urban population. Use of a pretested questionnaire enabled systematic assessment of sociodemographic factors, commonly used medications, and reasons for self-medication, contributing to a better understanding of medication practices in the community.

The study had certain limitations. The sample size was relatively small, and the study was conducted in a single urban field practice area, which may limit the generalizability of the findings to other populations. The use of convenience sampling may introduce selection bias. In addition, the study relied on self-reported information from participants, which may be subject to recall bias or reporting bias.

CONCLUSION

The present study highlights that self-medication is highly prevalent among adults in the study area. Analgesics and antipyretics were the most commonly used medications, and fever, cold, and cough were the most frequent conditions for which self-medication was practiced. Avoidance of medical consultation for minor illnesses, time constraints, and financial reasons were the major factors influencing self-medication practices.

Although responsible self-medication may help individuals manage minor ailments, inappropriate use of medicines can lead to adverse health consequences and contribute to irrational drug use. Therefore, public health interventions focusing on awareness regarding rational drug use and the potential risks of unsupervised medication are essential. Strengthening regulations on over-the-counter drug sales and promoting community education regarding appropriate healthcare-seeking behaviour may help reduce inappropriate self-medication practices and promote safer use of medicines.

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