



# Prevalence And Patterns of Self-Medication Practices in Urban Field Practice Area, Dharwad

Arpitha VS<sup>1</sup>, Pushpa S Patil<sup>2</sup>

<sup>1</sup>Belagavi Institute of Medical Sciences, Belagavi, India

<sup>2</sup>Shri Dharmastala Manjunatheswara College of Medical Sciences and Hospital, Dharwad, India

## ABSTRACT

**Context/Background:** The estimated prevalence of self-medication practices globally and nationally is 95% and 71% respectively. Inappropriate self-medication leads to irrational use of drugs and development of drug resistance. Hence, the present study was conducted to estimate the prevalence and patterns of self-medication practices in urban field practice area, SDMCMS&H, Dharwad.

**Methodology:** A cross-sectional study was conducted during 2018-2019 among adult aged 18-60 years. The estimated sample size was 335. Systematic random sampling technique was used to select the samples. Data was collected by administering questionnaire to the consented study participants.

**Results:** A total of 335 adults participated in our study. The prevalence of self-medication practices was 46%. Minor-illness 89 (57.7%) and quick relief 50 (32.46%) were the major reasons given for practicing self-medication. Fever and headache 146 (94.8%) were the most common symptom and analgesic 128(83.11%) was the most common drug used. significant association was found between self-medication practices and religion, age, employment, and presence of health care workers in the family.

**Conclusions:** Around half of the study participants practiced self-medication. Easy availability and limited knowledge are the reasons for wide range of practice. Creating awareness about dangers of self-medication is important to prevent untoward effects and drug resistance.

**Keywords:** Patterns, Prevalence, Self-medication, Systematic random sampling

## INTRODUCTION

According to World Health Organization self-medication is defined as "The use of medications without prior medical consultation regarding indication, dosage and duration of treatment".<sup>1</sup> Self-care is a broad concept which contains many components like nutrition, lifestyle, hygiene, environmental factors, socioeconomic factors and self-medication. Thus, self-medication is one of the integral components of broader aspect of self-care.<sup>2</sup>

Self-medication is an age-old practice and is a burning issue all over the world.<sup>3</sup> Being practiced globally, self-medication with OTC drugs is a public health problem. According to World Health Organization

expert committee 1995 it was stated that self-medication was widely practiced in both developed and developing countries. The practice has been dramatically increased especially in developing countries in the last few decades which has led to professional and public concern.<sup>4</sup> The estimated prevalence globally ranges from 32.5% to 81.5%.<sup>5</sup> The prevalence of self-medication in developing countries ranges from 12.7% to 95%.<sup>6</sup>

In developing country like India in which universal health care accessibility is not yet achieved the practice of self-medication is of concern.<sup>7</sup> The estimated prevalence of self-medication in India was 31% in 1997 which has increased to 71% in 2011. It is seen that there are wide range of prevalence reported in

**How to cite this article:** Arpitha VS, Patil PS. Prevalence and Patterns of Self-Medication Practices in Urban Field Practice Area, Dharwad. Natl J Community Med 2022;13(7):419-423. DOI: 10.55489/njcm.13072022149

**Financial Support:** None declared

**Conflict of Interest:** None declared

**Date of Submission:** 09-03-2022

**Date of Acceptance:** 18-05-2022

**Date of Publication:** 31-07-2022

**Correspondence:** Dr. Arpitha VS (Email: arpithavs86@gmail.com)

**Copy Right:** The Authors retain the copyrights of this article, with first publication rights granted to Medsci Publications.

many Indian studies, this might be because of methodology adopted, population selected, or the definitions used to define self-medication. The extent of practices is influenced by cultural, social and economic factors.<sup>4</sup>

Inappropriate self-medication leads to irrational use of drugs. Self-medication practices cause potential harm to an individual as well as to the society. Almost every drug has a potential to cause side-effects due to hidden active ingredient in it and also due to drug interactions.<sup>8</sup> This practice particularly with antimicrobials had led to emergence of drug resistance which is a serious issue globally. Hence, this study was conducted to know the prevalence, patterns of self-medication practices in urban field practice area, Dharwad.

## OBJECTIVE

The study was conducted to estimate the prevalence and patterns of self-medication practices in urban field practice area, SDMCMS&H, Dharwad.

## METHODOLOGY

This was a community based cross-sectional study among adults aged between 18-60 years residing at Jannat Nagar, Urban field practice area of Dharwad. The urban field practice area attached to Department of Community Medicine, SDMCMSH, Dharwad. The study was conducted from November 2018 to October 2019.

**Inclusion criteria:** Adults aged between 18-60 years of age, permanent residents and gave consent to accepted to participate in the study were included in the study.

**Exclusion criteria:** People who were seriously ill, mentally challenged and incapable of hearing and speaking at the time of data collection were excluded.

**Sample size calculation and sampling technique:** The sample size was estimated using following formula.  $n = z^2pq / d^2$ . Based on the previous studies the prevalence of self-medication was found to be 35.9%.<sup>6</sup> Alpha error of 5%, relative error of 15% of prevalence and with non-response rate of 10% the estimated sample size was 335.

Systematic random sampling technique was used to locate the house. Jannat Nagar is an urban slum which is located around 1.5kms from Urban Health Training Center. It has a population of 5099 with 1300 households. The list of sample population was taken from Anganwadi survey register. Systematic procedure was followed to choose a sample by taking every Kth household. K is the sample interval which was calculated by dividing number of houses in the area with that of sample size which was calculated as 4. One random number from 1 to 4 was selected by

lottery method. The subsequent house was selected by adding 4 to the random number. If the selected house was locked or non-availability of study participants at the time of visit, frequent and subsequent visits were made to collect the data. Even after 3 subsequent visits, if the participants are unavailable then the next random house was selected. The process is repeated until the desired sample size is achieved.

Once the household was chosen, only one member from the family was allowed to participate in the study. All the available members of the family who are less than 60 years and more than 18 years of age were listed and one participant among them were selected by lottery method.

Institutional ethical committee approval was taken before conducting the study.

A questionnaire was self-developed for this study. It was pilot tested, and the necessary changes were incorporated. The questionnaire consisted of two parts. The first part included data on socio-demographic variables- age, gender, education, occupation, income, medical history and health insurance. The second part had details on patterns of self-medication, frequency in the past six months, type of medication, sources, commonly used drugs, the diseases for which self-medication was practiced and perceptions on self-medication.

**Statistical Analysis:** All data was entered and analyzed using SPSS 23.0 software. Descriptive statistics like frequencies and percentages were calculated. Association between self-medication and other factors were ascertained by applying Chi-square test or Fischer's exact test. P value of <0.05 was taken as statistically significant.

## RESULTS

A total of 335 adults residing in Jannath Nagar, field practice area of SDMCMS&H, Dharwad participated in the study. Majority of the participants were females 267 (79.7%), 99 (29.6%) of them belonged to 30-39 years of age, 190 (56.7%) were unemployed, 94 (27.5%) were illiterate, 180 (53.7%) were from nuclear family, 280 (83.6%) of them married and 155 (46.3%) belonged to class IV socio-economic status.

**Table 1: Reasons for practicing self-medication practices (N=154)**

| Reason for practicing self-medication | Participants (%) |
|---------------------------------------|------------------|
| Time saving                           | 35 (22.72)       |
| Economical                            | 21 (13.64)       |
| Minor ailments                        | 89 (57.79)       |
| Quick relief                          | 50 (32.46)       |
| Urgency                               | 25 (16.23)       |
| Confidence in self-diagnosis          | 22 (14.28)       |
| Previous expertise                    | 38 (24.67)       |
| Others                                | 03 (1.94)        |

**Table 2: Symptoms for which self-medication was practiced (n=154)**

| Symptoms           | Participants (%) |
|--------------------|------------------|
| Fever and Headache | 146 (94.8)       |
| Cough and cold     | 80 (51.94)       |
| Acidity            | 21 (13.63)       |
| Nausea Vomiting    | 13 (8.44)        |
| Diarrhea           | 14 (9.09)        |
| Skin Problems      | 5 (3.24)         |
| Eye Problems       | -                |
| Others             | 27 (17.53)       |

**Table 3: Sources of drugs for self-medication (n=154)**

| Source                     | Participants (%) |
|----------------------------|------------------|
| Purchase from pharmacy     | 145 (94.1)       |
| Friends and family members | 9 (5.8)          |
| Unused medicines           | 37 (24.0)        |
| Free medicines             | 1 (0.6)          |
| Free physician samples     | 1 (0.6)          |
| Previous prescription      | 12 (7.7)         |

Out of 335 study participants 99 (29.5%) of them had co-morbidities, 55 (16.2%) had personal habits like smoking 15 (4.5%), alcohol consumption 6 (1.5%) and tobacco chewing 34 (10.2%). 105 (31.3%) had health insurance coverage and 35 (10.4%) had health care workers in the family.

The prevalence of self-medication practices was 154 (46%) among study participants. The practices were more among females 117 (34.9%), Muslims 81 (24.2%), literates 108 (32.3%) and between 30-39 years of age 46 (13.7%). The most common reason quoted by participants for practicing self-medication was minor illness 89 (57.7%) and quick relief 50 (32.46%) and other reasons as shown in the Table 1.

Of 154 participants who practiced self-medication 64 (41.5%) of them took drugs less than 3 times in last 6 months, 150 (97.4%) preferred oral medications. Fever and headache 146 (94.8%) were the most common symptom for which self-medication was practiced and least was for skin problems 5 (3.24%) (Table 2). The drug commonly used to alleviate their symptom was analgesic 128 (83.11%). 145 (94.1%) of them procured drugs from pharmacy and 112 (72.7%) of them procured by describing the symptoms. (Table 3)

When enquired about their experience on self-medication, 146 (94.8%) of them told they were relieved of symptoms, 147 (95.5%) of them did not experience any adverse effect, 91 (59.09%) of them preferred to continue the practice. Of 154 (46%) participants who practiced self-medication 63 (40.9%) of them wanted to stop self-medication practice due to the fear of adverse events 37 (58.73%) and chances of misdiagnosis 10 (15.87%). We found significant association between self-medication practices and religion (chi-square= 5.47, p = 0.019), age (chi-square= 5.13, p= 0.027), employment status (chi-square= 4.27, p= 0.038) and presence of health care workers in the family (chi-square= 6.134, p= 0.013) as shown in the table 4.

## DISCUSSION

The study was conducted among adults residing in Jannath Nagar, field practice area of SDMCMS&H, Dharwad. 335 participants were selected based on systematic random sampling technique. The prevalence of self-medication in our study was 46%. A study conducted in urban slums of Udupi also showed similar results.<sup>9</sup>

**Table 4: Association between socio-demographic variables and self-medication practices (n=335)**

| variables                                     | Self-medication practices |            | Total      | Chi square value | P value |
|---|---------------------------|------------|------------|------------------|---------|
|   | Yes (%)                   | No (%)     |            |                  |         |
| <b>Gender</b>                                 |                           |            |            |                  |         |
| Male  | 37 (11.0)                 | 31 (9.3)   | 68 (20.3)  | 2.448            | 0.118   |
| Female  | 117 (34.9)                | 150 (44.8) | 267 (79.7) |                  |         |
| <b>Religion</b>                               |                           |            |            |                  |         |
| Hindu   | 73 (21.8)                 | 63 (18.8)  | 136 (40.6) | 5.474            | 0.019   |
| Muslim  | 81 (24.2)                 | 118 (35.2) | 199 (59.4) |                  |         |
| <b>Age</b>                                    |                           |            |            |                  |         |
| Less than 20                                  | 06 (1.8)                  | 03 (0.9)   | 09 (2.7)   | 5.132            | 0.027   |
| 20- 29  | 31 (9.3)                  | 53 (15.8)  | 84 (25.1)  |                  |         |
| 30-39   | 46 (13.7)                 | 53 (15.8)  | 84 (25.1)  |                  |         |
| 40-49   | 28 (8.4)                  | 29 (8.7)   | 57 (17.0)  |                  |         |
| 50-60   | 43 (12.8)                 | 43 (12.8)  | 86 (25.7)  |                  |         |
| <b>Employment status</b>                      |                           |            |            |                  |         |
| Employed                                      | 76 (22.7)                 | 69 (20.6)  | 145 (43.3) | 4.273            | 0.038   |
| Unemployed                                    | 78 (23.3)                 | 112 (33.4) | 190 (56.7) |                  |         |
| <b>Literacy status</b>                        |                           |            |            |                  |         |
| Illiterate                                    | 46 (13.7)                 | 48 (14.3)  | 94 (28.1)  | 0.4628           | 0.4961  |
| Literate                                      | 108 (32.3)                | 133 (39.7) | 241 (71.9) |                  |         |
| <b>Health care professional in the family</b> |                           |            |            |                  |         |
| Yes   | 23 (6.9)                  | 12 (3.6)   | 35 (10.4)  | 6.134            | 0.013   |
| No  | 131 (39.1)                | 169 (50.4) | 300 (89.6) |                  |         |

The studies conducted all over India showed wide range of prevalence of self-medication practices ranging from 29.1% to as high as 92.8%. The prevalence of self-medication practices in various parts of India are: Rural south India (51.75%),<sup>3</sup> Urban areas of Udupi (35.9%),<sup>6</sup> Maharashtra (29.1%),<sup>10</sup> Delhi (92.8%),<sup>4</sup> and Urban areas of Belagavi (35.1%).<sup>11</sup> The wide range of variation in the prevalence may be due to the literacy status, socio-economic status, easy accessibility and availability of over-the-counter drugs and accessibility and availability of health services.

Of those 154 (46%) who practiced self-medication, majority 89 (57.79%) answered that they were using it only for minor illnesses, 50 (32.46%) of them said it gave quick relief. A study done in Islamabad, Pakistan in urban and rural areas showed the following reasons for practicing self-medication: mild illness 158 (41.8%), economical 65 (21.2%) and previous experience 60 (19.6%).<sup>12</sup> This shows that the study participants practiced self-medication only if it is a non-serious illness as it would give quick relief and also may be due to the socio-economic status which made them reserve money for future and serious illnesses. And also, as most of them were labourers, they couldn't afford to go to a doctor for minor illnesses as they may lose their daily wages. The most common symptoms for which self-medication practiced was fever and headache 146 (94.8%) followed by cold and cough 80 (51.94%). In a community based cross-sectional study done in Harar city of Eastern Ethiopia in 2018 showed that headache 112 (30.3%) and respiratory symptoms 109 (29.5%) were the common symptoms for which self-medication was practiced.<sup>13</sup>

When we intend to know the perceived outcome of self-medication among participants who practiced it, we found that 146 (94.8%) of the study participants were relieved of symptoms after practicing self-medication and 7 (4.5%) had experience minor side effects like itching, rashes, nausea and vomiting. A study conducted in Addis Ababa found that 275 (45.5%) of them were relieved of the symptoms, 79 (13.1%) had no improvement, 72 (11.9%) of the participants perceived complete cure while the remaining 5% had worst experience and said that it aggravated their present condition.<sup>14</sup> A study done in Eastern Ethiopia in 2018 showed that 44 (11.9%) of participants had experienced adverse effect following self-medication.<sup>13</sup> The difference in perceptions of study participants from place to place can be attributed to literacy status, information on drug and availability of the over the counter drugs.

Majority 46 (13.7%) of the study participants who practiced self-medication belong to 30-39 years of age. We found a significant association between age and self-medication practices (chi-square= 5.13, p= 0.027). The higher proportion of study participants practicing self-medication were of younger age group, which may be due to the carefree behaviour, easy accessibility to information or risk-taking behaviour. In the present study of 335 (100%) study

participants 190 (56.7%) of them were unemployed, of which 78 (23.3%) of them practiced self-medication which was found to be statistically significant (chi square= 4.27, p= 0.038). Similar findings were reflected in a study conducted in Bangalore.<sup>15</sup> The relatively higher proportion of unemployed people preferring self-medication can be attributed to the affordability to pay doctor and self-medication being a cheap alternative. Our study shows that majority 108 (32.3%) of literates practiced self-medication. A study conducted in Rajasthan also reflected similar findings. The higher proportion of literates practicing self-medication can be attributed to their ability to read and understand the information on drugs.

## CONCLUSION

This study showed that around half (46%) of the adult population in Jannath Nagar, Dharwad practiced self-medication. Statistically significant association was found between self-medication practice and few socio-demographic variables like age, employment status, religion and presence of health care professional in the family. Minor illness and quick relief were the common reasons quoted by study participants for practicing self-medication. Fever and headache were the most common symptom and analgesic was the most common drug used for self-medication purpose. As we assessed self-medication practices in the last 6 months, there could be a possibility of recall bias. The cross-sectional nature of the study is unable to prove the temporal association between socio-demographic profiles and self-medication practices. Drug authorities and health professionals should educate the community regarding the dangers of self-medication with impressive attention. Strong policies should be applied prohibiting the supply of medicines without a valid prescription.

## REFERENCES

1. Agabna N M et al., Self-medication. Sudan journal of rational use of medicines. 2014; (6):3-4.
2. WHO. The role of the pharmacist in self-care and self-medication.1998. Available at: <https://apps.who.int/medicinedocs/pdf/whozip32e/whozip32e.pdf>. Last accessed on 2020 March 10.
3. Kumar C A, Revannasiddaiah N. Assessment of self-medication patterns in a rural area of south India: a questionnaire-based study. Int J Community Med Public Health. 2017;5(1):354-60. DOI: <http://dx.doi.org/10.18203/2394-6040.ijcmph20175812>
4. Kumar V, Mangal A, Yadav G, Raut D, Singh S. Prevalence and pattern of self-medication practices in an urban area of Delhi, India. Med J Dr Patil Univ. 2015;8(1):16-20. DOI: 10.4103/0975-2870.148828
5. Kassie A D, Biftu B B, Mekonnen H S. Self-medication practice and associated factors among adult household members in Meket district, Northeast Ethiopia, 2017. BMC PharmacolToxicol. 2018;19(1):15. doi: 10.1186/s40360-018-0205-6
6. Divya M, Bharatesh S, Vasudeva G, Varalakshmi C. Self-Medication Among Adults in Urban Udupi Taluk, Southern In-

- dia. *Int J Med Public Health*. 2016;6(3):126–9. DOI:10.5530/ijmedph.2016.3.6
7. Dutta R, Raja D, R A, Dcruze L, Jain T, P S. Self-medication practices versus health of the community. *Int J Community Med Public Health*. 2017;4(8):2757–61. DOI: <http://dx.doi.org/10.18203/2394-6040.ijcmph20173169>
  8. Priyatno D. Drug Regulation in Self Medication. 2018;5.
  9. Pranav V, Narayanan P, Guddattu V. Self-medication practice among urban slum dwellers in Udupi taluk, Karnataka, India. *Int J Pharm Pharm Sci*. 2017;9(6):19–23. DOI: <https://doi.org/10.22159/ijpps.2017v9i6.15950>
  10. Limaye D, Limaye V, Fortwengel G, Krause G. Self-medication practices in urban and rural areas of western India: a cross sectional study. *Int J Community Med Public Health*. 2018;5(7):2672–85. DOI: <http://dx.doi.org/10.18203/2394-6040.ijcmph20182596>
  11. Chari HS, Kadeangadi DM, Mal-lapur MD. Practice of Self-Medication Among Urban Households –A Community Based Cross Sectional Study. *Ntl J of Community Med* 2015; 6(2):93-96.
  12. Aqeel T, Shabbir A, Basharat H, Bukhari M, Mobin S, Shahid H, et al. Prevalence of Self-Medication among Urban and Rural Population of Islamabad, Pakistan. *Trop J Pharm Res*. 2014;13(4):627-33.
  13. Mamo S, Ayele Y, Dechasa M. Self-Medication Practices among Community of Harar City and Its Surroundings, Eastern Ethiopia. *J Pharm*. 2018; 2018:1–6. DOI: <https://doi.org/10.1155/2018/2757108>
  14. Shafie M, Eyasu M, Muzeyin K, Worku Y, Martín-Aragón S. Prevalence and determinants of self-medication practice among selected households in Addis Ababa community. *PLOS ONE*. 2018;13(3): e0194122. DOI: <https://doi.org/10.1371/journal.pone.0194122>
  15. Saba IH, Shivananda KS, Mini J, Hussain CA. Prevalence of self-medication practices and its associated factors in rural Bengaluru, Karnataka, India. *Int J Community Med Public Health*. 2016;3:1481-6. DOI: <http://dx.doi.org/10.18203/2394-6040.ijcmph20161615>