

SELF MEDICATION PRACTICES IN AN URBAN POPULATION OF KERALA: A CROSS SECTIONAL STUDY

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Abstract

Background: To determine the extent and pattern of self-medication among an urban population Kalamassery, Ernakulam, Kerala and to determine the factors responsible for self-medication practices. **Materials and Methods:** A descriptive cross sectional study was conducted among patients attending selected pharmacies in Kalamassery Municipality of Ernakulam district of Kerala. A pre tested questionnaire prepared in English was used to collect relevant information from those practicing self-medication. Questionnaire collected socio-demographic profile of the participants and the reported self-medication practices. Data was appropriately coded and entered in MS excel. Analysis was done using SPSS software. Results were presented as frequency charts and tables. **Result:** Out of 623 people who came to the pharmacies, 79% came with a prescription of a registered medical practitioner while the remaining (21%) did not have a prescription. Males practiced self-medication more (66%) compared to females (34%). High prevalence of self-medication was among married respondents (52%). Among the study population, 43% were unemployed, 25% were daily wage workers and 32% were salaried. 16% were illiterate. Most common reason cited for self-medication was prior experience of taking the medication for similar symptoms. 55% of samples had taken self-medication once in the last 3 months and remaining had taken it twice or more. Majority of people had no side effects from self-medication while few reported rashes, sedation, allergy, and stomach discomfort. Most commonly used over the counter self-medication among the study participants was NSAIDS (64%), followed by Topical preparation (16%) and GI medication (13.3%). Most common condition self-treated by the study population was headache and myalgia (76%) followed by diarrhea (27%) and fever (26%). **Conclusion:** Self-medication practices among the urban population of Kerala are a cause of serious public health concern which need to be curtailed through awareness generation among the public and stricter regulations.

INTRODUCTION

Self-medication is a significant concern of the health sector in a developing country like India. It is common in our population to take medications, both modern medicines or traditional ones on their own to self-treat their minor illnesses. According to WHO definition, self-medication is the practice of consumption of drugs to treat self-diagnosed disorders or the intermittent or continued use of a prescribed drug for chronic or recurrent illness or symptoms. Certain socio-demographic factors are known to contribute to the practice of self-medication.

Self-medication has its own pros and cons. On one hand, it has helped the individuals to take responsibility and to build confidence to manage their own health, a sort of self-empowerment. If done judiciously, the practice of self-medication helps in alleviating acute medical conditions or even save lives in emergencies where access to medical care is still difficult. It may also provide a cheaper alternative to treat common ailments. On the flip side, inappropriate self-medication leads to emergence of antimicrobial resistance and wastage of resources. Even, self-medication may result in serious health hazards like adverse drug reaction and even drug dependence. Masking of symptoms may lead to misdiagnosis in many cases.

In this background, a study throwing light on the socio demographic factors leading to wide spread practice of self-medication and thereby highlighting the need for proper awareness to the public regarding the hazards of improper self-medication seemed to be relevant. Adequate research has not been done about the practices of self-medication in a setting like Kerala, where the health indicators speak for itself. Though the state leads the country in terms of health indicators, it has also become the non-communicable disease capital of the country. In terms, of literacy and human development index, Kerala is in the forefront. How, this has reflected in the self-medication practices of the population is a grey area in research. Moreover, the heavy influx of migrants from the northern and eastern states of India has greatly influenced the medication and self-care practices of the state. Instances of increased frequency of communicable diseases have been reported in the recent past. Also the menace of antibiotic resistance against several diseases like Tuberculosis and Leprosy is on the rise. This study is focused on assessing the prevalence of self-medication and also the factors contributing to it in an urban population of a Municipality in Ernakulam district of Kerala.

Aims and Objectives

To determine the extent and pattern of self-medication among an urban population in Kerala and to determine the factors responsible for self-medication practices.

MATERIALS AND METHODS

Study Design: Descriptive cross-sectional study

Study Setting: Community based study in urban area of Kalamassery Municipality of Ernakulam district, Kerala.

Study Period: 2 weeks

Study Tool: A pre tested questionnaire which was prepared in English was used to collect relevant data. Questionnaire collected socio-demographic profile of the participants and the reported self-medication practices

Study Population: Patients attending selected pharmacies in Kalamassery Municipality area, Ernakulam district, Kerala.

Sample Size: Considering the prevalence of self-medication practice of 50%, among the rural population of Sahaswan in Uttar Pradesh (1), and absolute precision of 10, the calculated sample size was 100.

Sample size is calculated using the formula

$$n = \frac{4pq}{D^2}$$

p is the prevalence from previous study

$$q = 100 - p$$

D= Absolute Precision (10)

Study Procedure: After getting clearance from the Institutional Research Committee and Ethics Committee, we enlisted all the medical stores and pharmacies in the Municipality region of Kalamassery, Ernakulam district, Kerala. From these, we selected 6 medical stores by simple random sampling, from where the participants would be interviewed. An appropriate study tool comprising of a questionnaire seeking information and socio-demographic profile of the participants along with their self-medication habits was designed. After taking individual consent, all those customers who had come to the pharmacy for buying medications without a prescription written by a registered medical practitioner, were individually interviewed, with the help of the questionnaire, by the Junior Health Inspector (JHI) in charge of public health of the respective ward in which the pharmacy is located. Contents of the questionnaire included socio demographic details, how often customers practiced self-medication, sources from where they came to know about these drugs, reasons for practicing self-medication and conditions for self-medication. The collected data was properly coded and entered into MS Excel. Statistical analysis was done using SPSS software version 17.0. Data was tabulated and pictorial representations were made using frequency charts.

RESULTS

Out of 623 people who attended the pharmacies over the week duration, as per the register maintained at the pharmacies, 495 came with a prescription (79%) while 128 had no prescription (21%). Of the 128 participants included for the interview, who were doing self-medication, 115 (90%) were natives while 13 (10%) were migrants from outside the state. 85(65%) of those practicing self-medication were males while 43(34%) were females. 66(52%) were married and 62 (48%) were unmarried. 55(43%) were unemployed, 32(25%) were daily wage workers and 41(32%) were salaried. With regard to their educational status, 21(16%) were illiterate and all others were literate, having done school at least till 10th grade (19%) or studied above 10th grade (65%). Majority of people (55%) had taken self-medication only once in the last 3 months and few had taken it twice (27%). Remaining had practiced self-medication three or more times in the past 3 months. Most common reason cited for self-medication was knowledge from previous experience of taking medication of the same illness (41%). 27% thought that the disease was too simple to seek medical help. [Table 1]

Table 1: Distribution Based on Reasons for Self-Medication

	Frequency (n=128)	Percentage
Previous experience	53	41
Disease is simple	34	27
Family/friends/neighbor	23	18

Knowledge about disease and drugs	22	17
Pharmacists	17	13
Self decision	14	11
Treatment cost is high	11	9
Lack of trust in doctors	2	2
Media	1	1
Lack of hospitals in the area	0	0
Internet knowledge	0	0

Table 2: Distribution of reported side effects among the participants

	Frequency	Percentage
No Side Effects	125	97.6
Fever	0	0
Nausea/Vomiting	0	0
Rashes	1	0.78
Diarrhoea	0	0
Constipation	0	0
Others-Sedation, Allergy, Stomach Ache	2	1.56
Total	128	100

Majority of people had no side effects (97.6%); a few had rashes, sedation, allergy, and stomach ache. [Table 2]

Table 3: Distribution based on self-medication taken by the study population

	Frequency (n=128)	Percentage
Nsaid's	82	64
Topical preparation	20	16
Gi medication	17	13
Cardiac drugs	16	13
Eye/ear drops	16	13
Antihistamines	16	13
Antibiotics	13	10
Herbal drugs	9	7
General tonics	8	6
Multivitamins	8	6
Antidiabetics	6	5
Other drugs	5	4
Antiemetics	4	3
Antiasthmatics	4	3
Corticosteroids	2	2

Most commonly used over the counter self-medication among the study participants was NSAIDs (64%) followed by Topical Preparations (16%) and GI medications (13.3%). [Table 3].

Table 4: Distribution based on disease condition of study population

	Frequency (n=128)	Percentage
Headache and myalgia	97	76
Diarrhoea	34	27
Fever	33	26
Respiratory problems/asthma	32	25
Acne	29	23
Cardiac problems	20	16
Wound	13	10
Skin problems	12	9
Gastric problem	11	9
Eye/ear problems	7	5
Diabetes	6	5
Blood pressure	5	4
Abdominal pain	2	2
Hair problems	2	2
Insomnia	1	1
UTI	1	1
General health	0	0
Others	26	20

Most common condition treated by self-medication among the study population was headache and myalgia (76%) followed by diarrhoea (27%). [Table 4]

DISCUSSION

Prevalence of self-medication among the study population was high. In this study, self-medication was reported to be extensively practiced in about 1/5th of the population. Similar studies have been carried out in different parts of the world, showing

highly variable proportions of self-medication practices. Generally, such self-medication practices have been reported to be high among populations in the developing world.^[1]

1. Kolladiba town, North West Ethiopia (62.8%).^[2]
2. Amman, Jordan (42.5%).^[3]
3. Meghalaya, India (55%).^[4]
4. Mekelle University, Northern Ethiopia (43.2%).^[5]
5. Puducherry, India (11.9%).^[6]
6. Arabian Gulf University, Manama (44.8%).^[7]
7. Southern Chile (75%).^[8]
8. Town Sahaswan, Northern India (50%).^[1]

However, since the characteristics of the study population and the health care systems, differ from country to country, results may not be comparable. In our study, among the respondents who have taken self-medication, males practiced self-medication more (66%) compared to females. In another study conducted in Town Sahaswan, Northern India,^[1] 66% male and 34% females practiced self-medication. The results of our study indicated that mostly males were practicing self-medication. Higher prevalence of self-medication was among married respondents (62%). In the study conducted in Town Sahaswan, Northern India,^[1] 70% were married, which is comparable to our results.

Among the respondents who had taken self-medication, 43%, were unemployed, 25% daily waged and salaried were 32%. The results were similar to a previous study, conducted in Kolladiba Town, Northwest Ethiopia.^[2] In this study, self-medication among the employed was 23.8%, unemployed 28.7%, and daily waged 47.5. Among the respondents who had taken self-medication, higher proportion of this practice was seen among people who had studied above 10th standard (65%). In a similar study conducted in rural population of Meghalaya,^[4] 64% were educated. In the Sahaswan study in Northern India,^[1] 60% were educated. Education influences the health seeking behaviour of the people; hence there might be high percentage of self-medication practices among the more educated. The major reason for taking self-medication in our study was previous experience of taking medications (41%) for similar symptoms in the past. Similarly, the disease being simple (27%) and advice from family/friends/neighbours (18%) were the two other major reasons to practice self-medication. In this study, none of the respondents were forced to practice self-medication due to lack of hospitals, indicating the fact that the region contains adequate number of hospitals and doctors. In another study conducted among the rural population of Meghalaya,^[4] respondent's perception of mild illness (30%) was found to be the most common reason for self-medication. Prior experience (39.1%) and mildness of illness (37.5%) were the two major reasons for self-medication in a study conducted in Mekelle University, Ethiopia.^[5]

Among the respondents of self-medication, majority of them (97.6%) did not report any side effects. Few of them reported rashes, abdominal pain and allergies as side effects. Head ache and body pain (76%), diarrhoea (27%) and fever (26%) were the most common diseases for which respondents practiced self-medication. These results were similar to the study conducted in Town Sahaswan, Northern India.^[1] Another study conducted in Mekelle University also reported that headache (57.3%) and common cold were the most frequently reported illness for the of practice self-medication.^[5] Majority of the people in our study (55%) had taken self-medication only once in the last three months and few had taken it twice (27%).

Most commonly used over the counter medication among the study population was NSAIDs (64%) followed by topical preparation (16%) and GI medication (13.3%). Analgesics especially NSAIDs were the most common category of medications used in self-medication practices in studies conducted in Manam,^[7] (81.3%) and in Town Sahaswan, Northern India (25%).^[1] Among the analgesics, paracetamol was the most commonly used drug. This is in line with our finding of headache being the most common indication for self-medication in our study. Studies conducted in other countries revealed the extensive use of antibiotics as part of self-medication. In our study, though only 10% self-medication practice involved the use of over-the-counter antibiotics, it is of great concern indicating the growing unawareness on the damage and consequences caused by inappropriate use of antibiotics.

CONCLUSION

The assessment of self-medication has immense relevance in rational drug use. Our study showed the prevalence of self-medication practice among the urban study population of Kerala to be as high as 21%. Self-medication tends to be higher among the males, the unemployed population, the educated class, natives and among the married. The most common reason for self-medication was determined to be prior experience of taking medication for the same symptoms. Headache and body pain, diarrhoea and fever were the most commonly reported conditions for which self-medication was practised. NSAIDs, topical preparations followed by GI medications were the most commonly used drugs used for self-medication. Thus, self-medication practices among the urban population of Kerala are a cause of concern.

Recommendations

Public should be motivated to quit the habit of self-medication through health education and awareness programmes. Pharmacies should be made aware of the serious consequences of self-medication and should discourage such practices among the public. Government should enact strict laws and legislations against over-the-counter dispensing of drugs. Strict

punishments and fines should be imposed on the offenders.

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