



## Assessment of Self Medication Practices, Consumers Drug Knowledge and Consumption Patterns at Tirur City, Malapuram (Dt) in Kerala

Aravamuthan Anandhasayanam<sup>1\*</sup>, Fayis K. P.<sup>1</sup>, Subramaniam Kannan<sup>1</sup>, Doncy Raichal Chacko<sup>2</sup>

<sup>1</sup>Department of Pharmacy Practice, JKKMMRFs AJKK SA College of Pharmacy, Komarapalayam PO, Erode, Tamilnadu, India.

<sup>2</sup>III Pharm D, JKKMMRFs AJKK SA College of Pharmacy, Komarapalayam PO, Erode, Tamilnadu, India.

\*Corresponding author's E-mail: [jkkmanandha@gmail.com](mailto:jkkmanandha@gmail.com)

Accepted on: 27-06-2016; Finalized on: 31-08-2016.

### ABSTRACT

Self-medication is defined as the use of over the counter drugs or any allopathic drug for self-treatment, without prior consultation with a certified allopathic doctor with a minimum MBBS degree. Self-medication, as one of the element of self-care, is the selection and use of medicines by individuals to treat self recognized illness and symptoms (WHO 1998). Self medication is the treatment of common health problems with medicines specially designed and labelled for use without medical important Element in their proper use. People of all socio-demographic categories practice self-medication. The most frequently self- diagnosed illness or symptoms of illness were: Headache/fever, RTI illness. Of these 8% were less than 24 hours and nearly 30% less than seven days duration of illness. The resort given by respondent for self-diagnosed or self-medication were emergency use, non seriousness of the illness, prior experience about the illness/drugs. Whatever the duration of illness and reasons for self-diagnosis, 27 % requested telling the symptoms/ illness and 20 % drugs by mentioning the names of the drugs. Requested for analgesic/anti-pyretic drug were highly reported in self medication.

**Keywords:** Self-medication, Drug Knowledge, Consumption patterns.

### INTRODUCTION

Self-medication is defined as the use of over the counter drugs or any allopathic drug for self-treatment, without prior consultation with a certified allopathic doctor with a minimum MBBS degree.<sup>1</sup> It is a broad concept encompassing hygiene, nutrition, lifestyle, environmental factors, socio-economic factors and self-medication.

Self-medication is obtaining and consuming medication for common health problems without professional supervision regarding indication, dosage, and duration of treatment and approved as safe and effective for such use.<sup>2</sup> Self-medication is not only for modern medicines but also for herbs.

This type of medicines are called 'non-prescription' or 'over the counter (OTC)' drugs and available without a doctor's prescription through pharmacies.

In developing countries like India, most episodes are treated by self-medication due to easy availability for non-prescription drugs. It is a prominent constraint in ensuring the safe and effective use of medicines.

It is more likely to be inappropriate without complete knowledge although it is becoming a routine practice nowadays especially by undergraduate medical students.<sup>3-5</sup>

The WHO has also recognized the validity of self-medication in a variety of settings.

In 1995 the WHO Expert committee on National drug policies stated: "Self-medication is widely practiced in both developed and developing countries. Medications

may be approved as being safe for self-medication by the National drug regulatory authority."

#### Knowledge

Knowledge on drug is an important element in their proper use.

The patients take information and process it with their own experience.

The meaning is that the patient attaches to any information which may be quite different from that of pharmacists.<sup>6,7</sup>

Adolescence is a key period in which an individual takes first steps towards self-care and self-medication.<sup>8,9</sup>

The health care habits adopted during adolescence may be carried over into adulthood.

#### Drug Utilization

Drug utilization was defined by the World Health Organization (WHO) as the marketing, distribution, prescription, and uses of drugs in society, with special emphasis on the resulting medical, social and economic consequences.<sup>10,11</sup>

#### Self-Medication - Socio-Demographic and Medical Factors

The socio-demographic determinants are age, gender, occupation, education, marital status, religion, race, income, and culture. The socio-medical factors may be related to the female.

Medication, Drug dependency and self-managed health care is based on reproductive role (pregnancy, breast



feeding, and menstruation), psychiatric disturbance, medical states like asthma, migraine etc.<sup>12,13</sup>

Due to inherent difficulties in measuring the economic status, most of the Indian studies did not consider economic status for further association.<sup>14</sup>

#### **Self-Medication - Commonest Complaint Responsible**

Usually self-medication is indicator for trivial symptoms perceived by the patient. It was favored for skin condition, general health care, aches and pain, problems of the eye, mouth, gastro-intestinal and respiratory tract.

Among adult patients with acute pathology, the most common complaints were pain and increase body temperature.

Among children, respiratory symptoms especially for common cold with or without fever were the commonest complaints.

#### **Self-Medication - Commonly used Medications**

In many developing countries, thousands of different prescription only drugs are sold OTC. Many of these are drugs which potentially serious side effects and need to be used with care.<sup>15</sup> Several medications have reportedly been used for this practice.

The commonly requested drugs were nervous system analgesics, cough or cold medications, antibiotics and for adult married women, the commonly used medications were vitamins and contraceptives.

#### **Self-Medication – Places where drugs are obtained and sources of drug knowledge**

Medicine retailers play an important role, especially at the community level, in developing countries. They constitute a limited number of community pharmacies and numerous patent medicine stores.<sup>16</sup>

The common places for drug supply were in the pharmacies, general medicine dealers, hospital/clinics, traditional sources, private practitioners and other sources like self-medication, Drug dependency and self-managed health care.

A review household medicine cabinet containing previous medical prescriptions which may not have been prescribed for the same condition.

#### **Self-Medication – Side Effects and Risks**

Although these medications are considered risk free and useful for the treatment of common health problems their excessive use can also lead to serious side effects and unfavorable reactions.

Major problems related to self-medication are wastage of resources, increased resistance of pathogens and causes serious health hazards such as adverse reaction and prolonged suffering.

Antimicrobial resistance is a current problem world-wide particularly in developing countries where antibiotics are

available without any prescription.<sup>17,18</sup>

For instance, the therapy may be poorly suited for the illness in question, delay diagnosis, and the beginning of effective therapy. Increased inorganic risk due to inadequate drug therapy or of unnecessary expense and drug interaction between prescription and non-prescription drugs.

#### **Self-Managed Health Care**

Self medication is a necessary and important aspect of daily health care. It encouraged self reliance for curative, preventive, promotive and rehabilitative care. It appears to be substitute for rather than supplement or stimuli for health service utilization.<sup>19</sup> The Federal Republic of Germany and Switzerland recognized the importance of self-management in health care system because of the possibilities to treat minor illness and its health economic benefits.

#### **Objectives**

##### **Primary Objectives**

- To determine the extent and pattern of self-medication practices among the general public population.
- Identify the drug classes used for self-medication
- The common ailment for which self-medication was practiced.

##### **Secondary Objectives**

- To find out the consumer drug knowledge
- To find out the indication of self medication use among the patients

#### **MATERIALS AND METHODS**

##### **Study Site**

The study was conducted in 10 retail pharmacies at Tirur city in Malappuram dist, Kerala, India.

##### **Study Design**

It was an observational prospective study in which the data for this study was collected in a survey method from retail pharmacies.

The structural research instrument was an interview schedule. The interview schedule was used to interview person who have just come to the retail pharmacies for self-medication during the period for own use or as messenger for others.

There were two major groups of drug consumers (consumer with prescription and consumer without prescription) going to these data collection sites (retail pharmacies).

##### **Study Population**

Total number of consumers – 500, Male - 381, Female - 169.



**Study Period**

This study was carried out 10 retail pharmacies in Tirur city - Malappuram district in Kerala state over 9 months between May 2014 to Feb 2015.

**Study Criteria**➤ **Inclusion Criteria**

1. Patient of either gender
2. Homeopathic or Ayurveda and preference to generic or branded drugs
3. Retail pharmacy consumers for these own users or as messengers for others
4. Patient with prescription and those without prescription

➤ **Exclusion Criteria**

1. Unable to communicate
2. Those who are not willing to participate

**Method of Data Collection**

A questionnaire based survey of duration 9 month was carried out at the retail pharmacies at Tirur city. Questionnaire forms were divided into following two parts:

1. Socio-demographic characteristic of the consumer- age, sex, marital status, education level, occupation etc.

2. Consumer drug knowledge assessment-drug knowledge, consumption patterns of drug etc.

Data was organized in the following manner.

1. Total frequency of consumer with and without prescription
2. Percentage of population
3. Mention the consumer illness/symptoms
4. Medicine use patterns and consumer knowledge
5. Percentage of purchase drug without prescription = (number of consumer purchase drug without prescription / total number of consumers) x 100.

The sample was selected using all data in the ordinary prescribing indicator recording form were first analyzed by using the MS office 2007 package in computer.

**RESULTS AND DISCUSSION**

A total of 10 privately owned retail pharmacies were included in the study. A total of 500 questionnaire forms were distributed. 190 (38%) were consumers with a prescription and 310 (62%) were consumers without a prescription.

**Socio-Demographic Characteristics****Age Wise Distribution**

The age group of 12-64 were consumed more drugs with prescription (62.1%) and without prescription (60.3%) than the age group below 12 and above 64.

**Table 1: Age Wise Distribution (N= 5)**

AGE (in years)	Consumer with Prescription (N=190)		Consumer without Prescription (N=310)	
	Number in Consumer	Percentage	Number in Consumer	Percentage
Less than 12	7	3.6	9	2.9
12-64	118	62.1	187	60.3
>64	66	34.7	114	36.7

**Table 2: Gender Wise Distribution Marital Status (N=500)**

Gender	Consumer with Prescription (N=190)		Consumer without Prescription (N=310)	
	Number of Consumer	Percentage	Number of Consumer	Percentage
Male	128	67.3	253	81.6
Female	62	32.6	57	18.3
Marital Status	Number of Consumer	Percentage	Number of Consumer	Percentage
Single	14	7.3	41	13.2
Married	176	92.6	259	83.5



**Gender Wise Distribution**

The men were consumed more drugs with prescription (67.3%) and without prescription (81.6%) than women. Women have more knowledge about drugs and risk of self-medication compared to men.

Here the consumer are categorized based on their marital status, 92.6% with prescription and 83.5% without prescription were married.

**Educational Status**

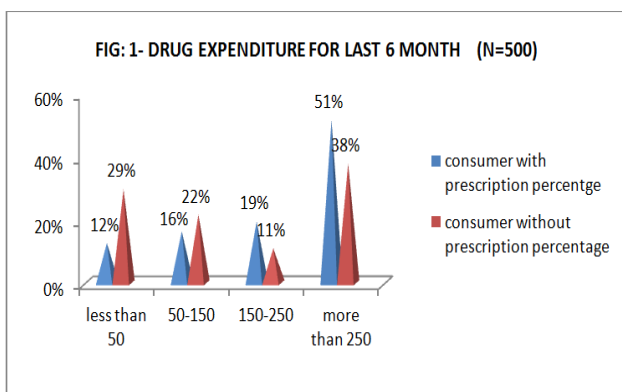
Various studies consistently showed that self-medication was associated with educational level. For instance, there is a positive correlation between level of education and self-medication.

Further analysis of the respondent based on their educational level showed that 17.8% of with prescription and 7.4% of without prescription were illiterate. And 1.5% of with prescription and 1.2% of without prescription either read and write 44.2% of with prescription and 33.2% without prescription had primary level education and 27.8% and 35.8% were found to have secondary level and 8.4% of with prescription and 22.2% of without prescription were graduates and post graduates.

**Occupational Status**

Occupation decides the amount of earning potential of the study population and leads to better health facilities. Among the study population of consumers without prescription the highest were self employees (53.6%) and the least were Government employees (3.8%). Out of study population containing consumers with prescription the highest were unemployees (52.6%) and the least were students (2.6%).

**Drug Expenditure for Last 6 month in Rupees**

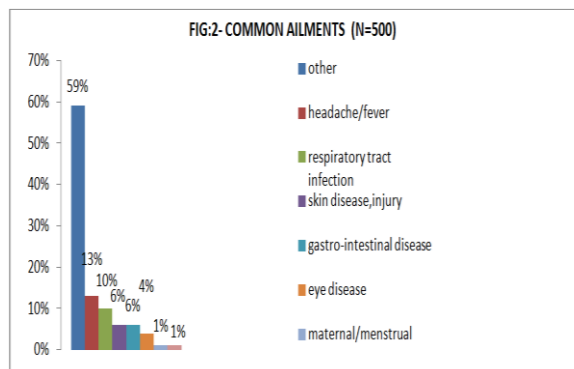


**Consumer Drug Knowledge Assessment - Prospective Self Education**

**Common Ailments**

Actual drug user respondents were asked to mention illness or symptoms of illness that prompted them for self-medication. Accordingly the frequently reported problems were, 11% respiratory tract infection (RTI), 6% of gastro-intestinal disease (GI), 1% sexually transmitted disease, 4.% eye ache, 13% headache/fever, 6% skin

injury, 1% maternal/menstrual and other illness were 59%.



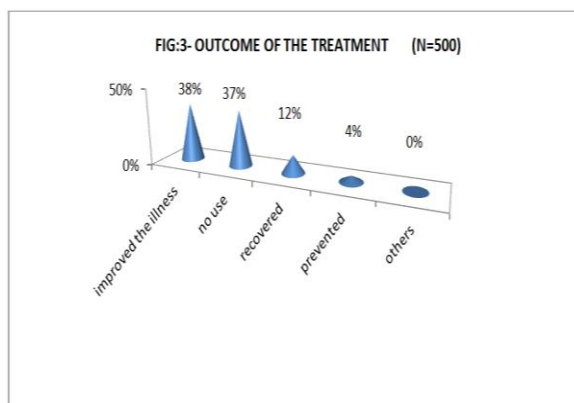
**Therapeutic Classes of Drugs used in Self Medication**

Commonly used therapeutic classes of drugs in self-medication were antibiotics, analgesics, Vitamins for primary care patients, while for OTC drugs the commonly used drugs were nervous system analgesics, cough and cold medications.

**Table 3:** Therapeutic Classes of Drugs (N=500)

Drugs Used	Actual Drug Users (N=500)	Percentage (%)
Analgesics	66	13.2
Antipyretic	59	11.8
Anti - allergic	41	8.2
Vitamins	36	7.2
Antibiotics	31	6.2
Decongestants/cough medicines	17	3.4
Sleeping pills	13	2.6
Herbal / Homeopathic	12	2.4
Birth control pills	0	0

**Outcome of the Treatment**



Outcome of the self-medication were collected from study population. 37% of the population reports a negative outcome like no recovery, prevention and no improvement of signs and symptoms after administration of drugs. 38% of population reports improvement of signs



and symptoms followed by recovery of illness (12%) and prevention (4%).

#### Frequency of Receiving Drugs without Prescription

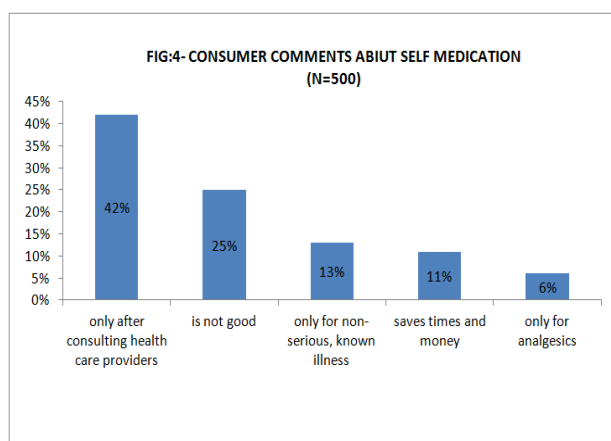
Another way to show the extent or frequency of self-medication was to ask how many times the Respondents self medication in pharmacy to purchase drugs for her/him or for others over six months period.

Around 27.8% had used self medications in pharmacy one time, 19.2% two times, 12.8% three times, 4.6% Four times, 3.2% five times and 27% had self medicated a pharmacy more than five times over a six months period.

**Table 4:** Frequency of Receiving Drugs without Prescription (N=500)

Purchase Drugs without Prescription	Actual Drug User (N=500)	Percentage (%)
Once	139	27.8
Twice	96	19.2
Thrice	64	12.8
Four times	23	4.6
Five times	16	3.2
More than five times	135	27

#### Consumer Comments about Self-Medication



Study populations were requested to freely comment about self-medication. 25% of respondents perceived that self-medication was not good, 13% of them believed that self-medication should be for non-serious, known illness, 42% said that self-medication is useful only after consulting health care providers of any category, 6% only for analgesics and 11% of them said that they choose self-medication because it saves their time and money.

#### CONCLUSION

Among the study population (500), 190 were using drugs with prescription, 310 were taking drugs without prescription. 36% of the population consuming drugs without prescription were secondary school students and the least (1.2%) were the people who just know reading and writing only.

53.6% of the total population consuming drugs without prescription were self employees and the least were government employees (3.8%).

Majority of the study population 13% were consuming the drugs for headache and fever, and the least (1%) were for eye disease and maternal/menstrual problems.

The commonly used therapeutic classes of drug were found to be analgesics (13.2%) and the least (2.4%) were herbal/homeopathic drugs. Over six months period 28% had practiced self-medication in pharmacy at one time and 27% were taking self-medication for more than 5 times. 43% of the population said that self-medication is useful only after consulting health care provider of any category and 11% of the population said that they choose self-medication because it saves their time and money.

#### REFERENCES

1. World Health Organization (last accessed on 2013 June 24) <http://www.apps.who.int/medicinedocs/pdf/whozip32e>.
2. Regional strategy on prevention and containment of antimicrobial resistance, 2010-2015. (Last accessed on 2013 June 24)
3. Girish H.O, Divya H.M, Prabhakaran s, Venugopalan P.P, Koppad R. A cross sectional study on self-medication pattern among medical student at Kannur, North Kerala. *J Evol med Dent Sci*, 2, 2013, 8693-700.
4. Patel P.M, Prajapathi A.K, Ganguly B, Gajjar B.M, Study on impact of pharmacology teaching on knowledge, attitude, and practice on self-medication among medical students. *Int J med sci public health*, 2, 2013, 181-6.
5. Kumar N, Kanchan T, Unnikrishnan, Rekha T, Mithra P, Kulkarni V. Perceptions and practices of self-medication among medical students in coastal south India. *Plosone*, 8ie, 2013, 72247.
6. Magasi S, Durkin E, Wolf M.S, Deutsch A. Rehabilitation consumers use and understanding of quality information; a health literacy perspective. *Arch phys med Rehabil*. 90(2), 2009, 206.212.10.1016/j.aspm.2008.07.023.
7. Kommuri N.V, Johnson M.L, Koelling T.M. Relationship between improvements in heart failure patient disease specific knowledge and clinical events as part of a randomized controlled trial. *Patient-educ couns*. 2012, 86(25:233-238.10.1016/j.pre.2011.05.069)
8. Perrira F.S, Bjarctchi F, Stephen C, Cordeiro R. Self medication in children and adolescence. *J. Pediate (RioJ)*, 83, 2007, 453-458.
9. Hansen E.H, Holstein B.E, Due P, Currie C.E. International survey of self-reported medicine use among adolescents. *Ann pharmacother*, 37, 2003, 361-366.
10. Grimmsmann T, Himmel W. Discrepancies between prescribed and defined daily doses. A matter of patients of or drug classes *Eur J Clin Pharmacol*. 67, 2011, 847-854.
11. Singh I, Mittal R, Phafiq N, Bhardas B, Nigah P.K, Pandhip. A drug utilization study to provide background data for bringing amendments in the drug dispensing policy of a pediatric referral center *Pharmacoepidemiol drug saf*. 19, 2010, 393-399.



12. Pharke V, Pharke D, Durgawala P. Self-medication practices in rural Maharashtra. *Indian J community med*, 31, 2006, 34.
13. Kaushal J, Gupta M.L, Jindal P, Verma S. Self-medication patterns and drug use behavior in housewives belonging to the middle income group in a city in Northern India.
14. Yuefing L, Keqin R, Xiaower R. Use of and factors associated with Self-medication in China; *BMC Public health*, 12, 2012, 995.
15. Health topics: traditional medicine. World health organization (<http://www.who.int/topics/traditional-medicine/enj> accessed 21) sansary, 2015.
16. Goodman C, Brieger W, Unwin A, Mills A, Meeks S, Greer G. Medicine sellers and malaria treatment in Sub-Saharan Africa. What do they do and how can their practice be improved? *AMJ Jrop Med Hyg*. 77, 2007, 2003-2015.
17. Vizhi S.K, Senepathi R. Evaluation of the perception, attitude and practice of self-medication among business students in 3 select cities, South India. *International Journal of Enterprise and Innovation Management Studies (IJEIMS)*, 1(3), July-December 2010, 40-4.
18. Pagas J.A, Ross s, Yau J, Polsky D. Self-medication and health insurance coverage in Mexico. *Health policy*, 75, 2006, 170-7.
19. Hughes C.M, Mc Elnay J.C, Fleming G.F. Benefits and risks of self-medication. *Drug saf*. 24, 2001, 1027-37.

**Source of Support:** Nil, **Conflict of Interest:** None.

