

## Self-medication in the Panadura MOH area.

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### Abstract

**Objective** This study was done to identify self-medication practices and related factors among people in DDHS area Panadura.

**Methodology** A community based descriptive cross sectional design with a two stage sampling method was used. An interviewer administered questionnaire was used for data collection.

**Results** 486 subjects were interviewed. A self-medication prevalence of 49.6% was found within the two weeks preceding the data collection. Of these, 79.3% had used western medicine alone or in combination with ayurvedic / indigenous medicines.

Self-medication was higher in the age group of 18-34, among females and those in Islam religion, which suggests some influence of age, sex and religion on practice of self-medication. The majority used a single western drug while 92.7% knew the drugs used, by their name. Majority of drugs used were over the counter (OTC) and 97.5% classified as essential according to essential drug list (EDL) of Sri Lanka. Majority of drugs were used in brand names.

Majority of respondents had resorted to self-medication with the impression that the illness was a minor one. Main source of information for self-medication in the current study was experience from a previous illness.

**Conclusion** Self-medication is a common practice. It is seen frequently in certain population subgroups than others.

**Key words** Self-medication, western drugs

### Introduction

Since western medical tradition became the main stay of health care delivery in Sri Lanka, medicinal drugs became a day-to-day consumable item in households. People in

both urban and rural sectors became familiar with western medicines creating a "problem usage" of western medicines without proper medical advice and knowledge (1).

The role of medicines for self-care is to provide quick and effective relief of symptoms that do not require medical consultation. It reduces the increasing pressure on the medical services for the relief of minor symptoms and increases the availability of health care to populations living in rural or remote areas where access to medical advice is difficult (2).

The mismatch of supply and demand for medical services in the Third world is a reason why self-care is of crucial importance. In some poor countries, people often have no choice but to treat themselves, whereas in industrialized countries people resort to self-care for minor ailments, because it is a convenient alternative to medical consultation (3).

The ordinary users have no specialized knowledge of the principles of pharmacology or of the specific characteristics of the medical products used. This results in certain potential risks for the consumer (4). These include incorrect self-diagnosis, failure to seek appropriate medical advice promptly, incorrect choice of therapy, failure to recognize or self-diagnose contraindications, interactions, warnings and precautions. It could also give rise to the failure of recognizing the same active substance being taken under a different trade name, failure to report current self-medication to the prescribing physician, failure to recognize or report adverse drug reactions, incorrect route of administration, inadequate or excessive dosage, excessively prolonged use and storage in incorrect conditions or beyond the recommended shelf life.

One of the main problems associated with rational drug use is the existence of large amounts of drugs not controlled by health workers. Studies from all over the world suggest that a substantial proportion of pharmaceutical drugs are purchased without a prescription (1,5). Prescription only drugs are often potent drugs that should be taken carefully. Self-medication with prescription only drugs can lead to serious adverse effects. Antibiotics are also overused in self-

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medication for treatment of minor disorders such as simple diarrhoeas and colds (6).

Very few consumer-oriented studies have been done to explore western drug utilization in Sri Lanka. Hence, there is a lack of knowledge of the experience of the consumers.

This study intended to identify self-medication practices and related factors among people in a health unit in Sri Lanka.

### **Methodology**

A community based descriptive cross sectional study was carried out in 20 randomly selected Public Health Midwife (PHM) areas in the Panadura Health Unit of the Western Province.

The definition of self-medication used in this study was a combination of the WHO definition (4) on self-medication and that of Peach (7). It was defined as "Self-medication involves the use of medicinal products by the consumer to treat self-recognized disorders or symptoms, or the intermittent or continued use of a medication prescribed by a physician for chronic or recurring diseases or symptoms. It also includes the use of medicinal products on the advice of a pharmacist or a lay person."

Panadura is one of the eight health units in the Kalutara district and is approximately 75.3 square kilometers in extent with urban, semi urban and rural areas. Total population at the beginning of January 2002 was approximately 212000.

The study population consisted of all individuals eighteen years of age or above, resident in the area for a period of one year or more and who experienced an episode of illness (e.g. symptoms, signs) within two weeks prior to selection. Those who were unable to communicate with the interviewer (e.g. deaf, dumb) were excluded.

At the first stage of sampling, 20 PHM areas were randomly selected from the 55 PHM areas in the Panadura health unit. At the second stage, one cluster was randomly selected from each PHM area. Twenty five study units were selected from each cluster.

A house was randomly picked from the selected cluster. The second house was the closest house on the left to the first. The rest

of the houses were selected using the same method.

Study subjects were selected after screening the individuals in each household according to the criteria mentioned above. Screening was done until the required numbers of study units were selected.

The sample size was calculated as 457 with prevalence of self-medication as 70% and design effect for clustering as  $\sqrt{2}$ . A further 10% was added for non respondents making the sample size 500.

An interviewer administered structured questionnaire was used to obtain information on demographic characteristics of the respondents, treatment modalities of the illness episodes and detailed information on self-medication practices with western drugs.

Public Health Midwives collected data after two sessions of training. They are familiar with the areas and had access to households.

Data collection was done on Sundays in the month of August 2002. Sunday was selected for data collection to ensure that working population is represented in the sample. EpiInfo software programme was used for data analysis

The ethical committee of the Faculty of Medicine, university of Colombo, approved the study.

### **Results**

Of the 486 respondents, the majority were females. About two thirds of the sample was unemployed. Housewives who were not directly involved in income generating activities were included in the unemployed category. Socio-demographic characteristics of the study group are given in Table 1.

Almost 50% of the subjects resorted to self-medication, of which the majority used western drugs alone or a combination of western and ayurvedic / indigenous medicines (Tables 2 and 3).

Self-medication was significantly associated with age ( $p=0.005$ ), sex ( $p=0.009$ ) and religion ( $p=0.02$ ). The statistical test used was chi square.

Table 1: Distribution of respondents by age, sex, ethnicity and employment status.

Variable	n=486	%
Age (in years)		
18-34	213	43.8
35-49	132	27.2
50-64	86	17.7
65>	55	11.3
Sex		
Male	141	29.0
Female	345	71.0
Ethnicity		
Sinhalese	439	90.3
Moor	47	9.7
Employment status		
Still studying	18	3.7
Unemployed *	321	66.1
Employed	147	30.2

\*Includes house wives not directly involved in income generation

Table 2: Distribution of respondents by the nature of care sought at the first instance of an illness.

Method	N	%
Consult a practitioner	229	47.1
Self-medication	241	49.6
No treatment	16	3.3
Total	486	100.0

Table 3: Distribution of respondents by the type of self-medication .

Type of self-medication	n	%
Western	131	54.4
Ayurvedic /indigenous	49	20.3
Mixed *	60	24.9
Others	1	0.4
Total	241	100.0

\*Mixed type is denoted by a combination of western and ayurvedic / indigenous medicine.

The majority of study subjects (83.2%) used only a single drug while 13.6% used two drugs. 92.7% knew the drugs by their names. The majority (80.9%) used paracetamol while only two antibiotics,

amoxicillin and erythromycin (2.5%) were used..

Table 4 gives the distribution of the category of drugs used for self-medication. The majority of drugs used were over the counter (OTC) drugs while 97.5% were classified as essential according to essential drugs list (EDL) of Sri Lanka (8). 89.4% of drugs were used in their brand name preparation as opposed to generic preparations.

Table 4: Category of drugs used for self-medication. (OTC / PoM, Essential / Non essential, Generic name / Brand name)

Category of drugs	n=199	%
Over the counter (OTC)	180	90.5
Prescription only medicine (PoM)	19	9.5
Essential drugs	194	97.5
Non essential drugs	5	2.5
Generic Name	21	10.6
Brand name	178	89.4

Approximately 79% of respondents had resorted to self-medication with the impression that the illness was a mild one. Lack of time or high cost (8.4% and 7.3%) was not considered important barriers for consulting a doctor. The main source of information for self-medication was an experience from a previous illness (83.3%). Chemists and drug advertisements accounted for 1% and 1.6% of self-medications respectively.

## Discussion

Choosing the type of therapy for an illness is an important decision in life. The over eighteen-year age group was selected as this age is conventionally regarded as the demarcating line of adulthood with ability of independent decision making.

Subjects were selected based on experiencing an illness episode within two weeks prior to the interview. Restricting recall period for two weeks in acute illnesses ensures validity of the data (9). As the recall period was short, subjects were able to provide information on the illness episode

more accurately and in the correct sequence of events.

The age structure of the study group included larger proportions of 18-34 and 35-49 years. This corresponds with the current age distribution of the population in the country.

The majority of the respondents were female. Since the data collection was done on Sundays and all inhabitants in a household were screened to select the subjects, the excess of females in the sample may be due to higher incidence of illness among females or their willingness to admit illness more readily compared to males. It may also be that on Sundays more females are at home than males.

People do not seek medical consultation for each and every illness (10). Present study further strengthens this observation as only 47.1% had consulted a practitioner for the illness episode under study. Rest of the subjects had resorted to other means of dealing with the illness.

Only 3.3% of subjects had not resorted to any type of treatment for the illness episode under study. A comparable observation was reported in Kandy by Silva et al (11) where they found 5.1% not taking any treatment during an illness episode. De Silva (12) recorded a higher estimate of 25%. However the present finding supports the observation made by Caldwell et al (13) that societies in Sri Lanka and Kerala are conditioned to look for ill health or unusual symptoms and to react to them early.

In this study almost 50% of illness episodes were self-medicated. In two Brazilian villages the prevalence of self-medication was 43% and 40%, (14) and 64% in India (15).

In Sri Lanka, Silva (11) reported a comparable figure of 58.5% in Kandy while De Silva (12) recorded a higher self-medication prevalence of 80 % in a community based study in Gampaha district.

The differences in the self-medication prevalence in the former studies and the present one could be attributed to the differences in the populations and methodology used. Silva et al (11) used a follow up study design in a sample of 32

households. De Silva (12) used a cross sectional design restricting the study population to married females only in the Gampaha district. The present study employed a cross sectional design and included both sexes over eighteen years of age. Therefore, the present study provides a more representative estimate.

Self-medication was higher in the age group 18-34, among females and those in Islam religion. This indicates the presence of some influence of age, sex and religion on practice of self-medication.

In a pharmacy survey in India, Kamat and Nichter (16) concluded that persons in high socio-economic strata were more likely to engage in self-diagnosis, self-prescribing and self-medication than those in low and middle socio-economic strata. However, a consistent pattern of self-medication with monthly family income was not observed in this study

The majority used a single western drug in self-medication while 92.7% knew the name of the drugs used. Over 80% drugs were analgesics or antipyretics. Only a minority of subjects used antibiotics in self-medication. These findings are comparable to De Silva (12) who found that more than two thirds of drugs used for self-medication were analgesics or antipyretics and only 3.9% were antibiotics.

Problems identified in relation to self-medication in many countries are usage of prescription only medicines (PoM) and over use of antibiotics (6) in contrast to this study.

The reasons for self-medication are similar to those reported by De Silva (12) in which 84.3% of self-medication was due to the perception of less severe illness. Abosedo (17) reported that lack of time to see a doctor was the major reason for self-medication.

In contrast to the study in Gampaha district (12) where almost one third of subjects relied on information from drug advertisements for self-medication, in the present study, advertisements were not a major source of information. This difference may be attributed to the difference in populations and to the

difference in the periods of time of the two studies.

The high prevalence of self-medication in response to illness in the community and majority using western drugs for self-medication, demand educational programmes addressing the issues to maintain the policy of rational use of drugs in the community

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