Original article

# Practice of Self-medication in Jimma Town

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**Abstract**

**Background**: Inappropriate drug use in self-medication leads to emergence of drug resistant pathogens and poses serious health hazards.

**Objective**: To assess the prevalence of self-medication among residents of Jimma town.

**Method**: The study was conducted in December 2000. It was a community based cross-sectional survey on a sample of 352 households, which were selected systematically. Data was collected by structured and pre-tested questionnaire, and analyzed using SPSS/PC computer statistical soft ware.

**Result**: Out of the 152 ill people, 27.6% were self-medicated. The most frequent illness reported for self-medication was headache (60%). Most of the drugs for self-medication were obtained from drug retail outlets (52.4%). The relative lesser cost (35.7%) was the major reason for using self-medication.

**Conclusion**: The availability of drugs in informal sectors contributed to the increase in self-medication. Though self-medication is hard to eliminate, drug law enforcement and educating the public at large is vital. [*Ethiop.J.Health Dev.* 2003;17(2):111-116]

## Introduction

Inappropriate self-medication results in wastage of resources, increases resistance of pathogens, and generally entails serious health hazards such as adverse reaction & prolonged suffering (1-3).

A number of reasons could be enumerated for the rise of self-medication. The shift in the pattern of disease towards chronic ones (from 30% to 80% in 40 years) with attendant shift from cure to care is often mentioned. The inadequacies (failure) of health care system with its misdistribution of drugs, rising cost and the issue of curative stance of drugs are worth mentioning (1-4).

The use of drugs from informal sectors such as open markets and village kiosks encourage the practice of self-medication. In order to handle unnecessary health risk and bacterial resistance due to improperly obtained drugs, it is important to consider the manners of drug availability to consumers` (3,4).

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Unlike in the developed countries, illegal purveyors of drugs (sellers in the market, non licensed providers of injections etc) are common in developing countries along with some practitioners - a further source of irrational and potentially dangerous drug use. There is much anecdotal evidence of such self-medication & inappropriate purchasing of drugs for a particular condition though few studies have quantified their extent (1,4,5).

Though self-medication is difficult to eliminate, intervention can be made to discourage the rampant practice. The increasing self-medication will require more and better education of both the public and health professionals to avoid the irrational use of drugs. If action is not taken, the danger of drug interactions and side effects could increase because it is expected that adverse reactions are mostly under reported since the use of over the counter (OTC) may not be recorded or reported to the doctor (5-9).

For there has not yet been any systematic research conducted as to the distribution and use of drugs at the community level, little is known about self-medication in the third world.

Thus overall self-medication in modern pharmaceuticals seems to be a field in which information is scarce. (4,8,10).

To the investigators` knowledge, there is no research conducted to reveal the extent of this problem in Jimma town. Therefore, we believe that this research may show the magnitude of the problem so as to initiate intervention by the concerned authorities and the community as well. Thus, the purpose of this study is to assess the practice of self- medication in Jimma town.

**Methods and Materials**

*Study area*: The study site is Jimma town, one of the major towns in southwest Ethiopia.

According to the projected CSA census of 1994, the total population of the town was estimated to be 111,000 by the year 2000.The average family size is about 4.6. The population of Jimma town has relatively good access to health facilities. There is one hospital, a health center, one MCH/FP clinic, 5 pharmacies, more than 10 drug shops and drug vendors, more than 10 traditional healers, and other private and NGO clinics during the study period.

***Study Design and Population***: This cross sectional study considered all individuals (N= 111,000) irrespective of their age and sex, living in Jimma town during the study period (December 2000). The survey included 352 systematically selected households in the 5 kebles that were taken randomly. Every body in the selected household was eligible for the study.

The number of selected households is made proportional to the total number of households in the five Kebles.

***Data collection and management***: A structured and pre-tested questionnaire was used to collect the information. The pretest was done on ten households in one kebele, which was excluded from the study. It was first prepared in English and then translated to local language. The collected variables include: Sociodemographic and economic, questions on self-medication such as health condition one month prior to the survey, action taken for the illnesses, the sources where the drugs are obtained from, and reasons for self medication.

Data was collected from all ill adults in the household and mothers/caretakers for ill children. A separate questionnaire was used whenever more than one person was found ill in a household. Income was determined by asking monthly salaries for employees, average monthly profit for business people, average daily income so as to make an estimate of monthly income for daily laborers. And, family income was considered for housewives and jobless. Ten trained enumerators, Pharmacy final year students, were assigned to collect the data, which were checked for completeness and consistency by the investigators before data entry.

***Ethical issues***: To obtain the consent of kebele administrators and interviewees prior to data collection, a detailed explanation on the aim and objectives of the study was given. Confidentiality was ensured and the problems of self-medication communicated at the end of every interview.

***Data analysis and interpretation***: Data was cleaned and entered into a computer. Analysis was done using SPSS/PC computer software and the results were presented in absolute figures and percentages.

***Operational definition***:

- Self-medication: use of modern drugs without the advice of a health professional
- Drug retail outlet: pharmacy, drug shop, or rural drug vendor.
- Non-pharmacological: use of non-drug therapy (steam inhalation, massage, exercise etc.) without consulting health personnel.

**Results**

From a total of 352 sampled households, the questionnaires were completed for 152 people with illness.

The mean age of the study participants was 25.4 years. Ninety (57.9%)were in the age group of 30 and above. Eighty-eight (57.9%) and 64(42.1%) of the subjects were female and male respectively. Majority of the respondents 122(80.3%) were literate while 30(19.7%) were illiterate. Christians represented 96(63.2%) and Muslims 56(36.8%). The majority 51(33.6%) earns monthly household income of 150-450 Birr.

The common illnesses for which the subjects took action were: headache 20(13.2%), fever 33(21.7%), cough 33(21.7%), and abdominal pain 16(10.5). Twelve (60.0%), 10(30.3%), and 8(24.2%) who had reported headache, fever and cough respectively, were self-medicated. Most who had fever 22(66.6%) reported that they sought medical assistance from health facility (Table 1).

Table 1: **Type of illness reported and Action taken by the study participants, December 2000, Jimma town.**

| Illness | Action taken | | | | | |
|---|---|---|---|---|---|---|
| | Health fac | Self med. | Trad. med | Non phar | Others | Total |
| Headache | 6(30.0) | 12 (60.0) | 2 (10.0) | 0(0.0) | 0(0.0) | 20(13.2) |
| Fever | 22(66.7) | 10(30.3) | 1(3.0) | 0(0.0 ) | 0(0.0) | 33(21.7) |
| Cough | 15(45.5) | 8(24.2) | 4(12.1) | 5(15.2) | 1(3.0) | 33(21.7) |
| Diarrhea | 7(70.0) | 3(30.0) | 0(0.0) | 0(0.0) | 0(0.0) | 10(6.5) |
| Abd. Pain | 14(87.6) | 1(6.2) | 0(0.0) | 0(0.0) | 1(6.3) | 16(10.5) |
| Dyspepsia | 1(50.0) | 0(0.0) | 1(50.0) | 0(0.0) | 0(0.0) | 2(1.3) |
| Others* | 21(55.2) | 8(21.1) | 3(7.9) | 4(10.5) | 2(5.3) | 38(25.0) |
| Total | 86(56.6) | 42(27.6) | 11(7.2) | 9(5.9) | 4(2.7) | 152(100.0) |

Note: Numbers within the parenthesis are percentages
*Stress, fatigue, loss of appetite, myalgia, arthralgia, back pain etc.
self med: self medication,trad med: traditional medicine, non phar: non pharmacological
health fac: health facility, holy wat : holy water

Fifteen (35.7%), 14(33.3%), and 8(19.1%) reported that they used self-medication because it's less costly, they had minor illness and to avoid long waiting time respectively (table 2). Twenty-two (52.4%) and 8(19.0%) said they obtained the drugs from drug retail outlets and open market respectively (table 3).

Table 2: **Reasons for self-medication December 2000, Jimma town**

| Reasons for self medication | Number | % |
|---|---|---|
| Less costly | 15 | 35.7 |
| Minor illness | 8 | 33.3 |
| Long waiting time | 14 | 19.1 |
| Used the drug before | 4 | 9.5 |
| Others | 1 | 2.4 |
| Total | 42 | 100 |

Table 3: **Sources of drugs used in self-medication, December 2000, Jimma**

| Source | number | percent |
|---|---|---|
| Drug retail outlet | 22 | 52.4 |
| Open Market | 8 | 19.0 |
| Left over past prescription | 5 | 11.0 |
| Neighbor | 4 | 9.6 |
| Kiosk | 3 | 7.1 |
| Total | 42 | 100 |

Forty-two (27.6%) of the subjects used self-medication. Out of which, 12(28.6%) and 25(59.5%) were within the age group of <14 and >30 years respectively. Majority of the females 26(61.9%), literate 30(71.4%) either the respondent or the mother/caretaker in case of children, and those with household income ranging from 150-450 Birr 17(40.5%) reported to have practiced self- medication (Table 4).

Table 4: **Action taken against the reported illness by selected background variables, December 2000,Jimma town.**

| Variable | | Selfmed. n=42 | Trad.med n=11 | Non phar. n=9 | Healthfac n=86 | Holywat n=3 | Nothing n=1 | Total n=152 |
|---|---|---|---|---|---|---|---|---|
| Age | <14 | 12(28.6) | 2(18.2) | 3(33.3) | 23(26.7) | 2(66.7) | 1(100.0) | 43(27.6) |
| | 15-29 | 5(11.9) | 3(27.3) | 0(0.0) | 11(12.8) | 0(0.0) | 0(0.0) | 19(12.5) |
| | ≥ 30 | 25(59.5) | 6(54.5) | 6(66.7) | 52(60.5) | 1(33.3) | 0(0.0) | 90(59.9) |
| Sex | Male | 16(38.1) | 6(54.5) | 4(44.4) | 37(43.0) | 1(33.3) | 0(0.0) | 64(42.1) |
| | Female | 26(61.9) | 5(45.5) | 5(55.6) | 49(57.0) | 2(66.7) | 1(100.0) | 88(57.9) |
| Literacy status* | Illiterate | 12(28.6) | 1(9.1) | 4(44.4) | 13(15.1) | 2(66.7) | 1(100.0) | 30(19.7) |
| | Literate | 30(71.4) | 10(90.9) | 5(55.6) | 73(84.9) | 1(33.3) | 0(0.0) | 122(80.3) |
| Income** (Birr) | <150 | 11(26.2) | 3(27.3) | 4(44.4) | 24(27.9) | 2(66.7) | 0(0.0) | 44(28.9) |
| | 150-450 | 17(40.5) | 3(27.3) | 3(33.4) | 27(31.4) | 0(0.0) | 1(100.0) | 51(33.6) |
| | 450-750 | 11(26.2) | 4(36.4) | 1(11.1) | 26(30.2) | 0(0.0) | 0(0.0) | 42(27.6) |
| | ≥750 | 3(7.1) | 1(9.0) | 1(11.1) | 9(10.5) | 1(33.3) | 0(0.0) | 15(9.9) |
| Religion | Christian | 27(64.3) | 6(54.5) | 6(66.7) | 55(64.0) | 2(66.7) | 0(0.0) | 96(63.2) |
| | Muslim | 15(35.7) | 5(45.5) | 3(33.3) | 31(36.0) | 1(33.3) | 1 (100.0) | 56(36.8) |

Note: Numbers with in the parenthesis are percentage
* Includes literacy status of the care taker in case of children
**Family or household income

**Discussion**

In this study, the prevalence of self-medication was found to be 27.6%, which is almost similar with the studies done in Mexico (30%), India (34.5%), and China (32.5%). But differs from the finding in rural areas around Jimma which was 8.6% in the year 1998.This difference could be attributed to the availability of more drug retail outlets in towns like Jimma where most of the drugs for self medication were obtained than rural areas (5,6,10-12).

Females practiced more self-medication (61.9%) than males did (38.1%) and this finding is in agreement with the study done in Mexico that identified women as the fundamental element in the consumption of drugs and employment of self-medication (6).

The commonest illnesses that led to self medication in this study (headache, fever, cough and diarrhea) were also reported similarly in France and Brazil. Three fourth of the ill people who had fever sought medical help. This probably shows that fever is taken as an important signal that made patients visit health facility. Thus, the type of illness was a contributing factor to the patient's manner of response towards their illness (13-16).

Unlike the study done in China where people used self-medication mainly because they felt that they know what to do, in this study one of the commonest reasons for the practice of self-medication was its relative less cost (35.7%). As WHO noted, self-medication provides a cheap alternative to people who cannot afford to pay medical practitioners. Thus, self-medication is often the first response to illness among people with low-income (9, 17-21).

The study uncovered that the availability of drugs at informal sectors: 19.0% in open market, 7.1% in kiosks and also retail drug outlets where majority of drugs (52.4%) are obtained contribute largely for rampant practice of self-medication. About one third of the drugs consumed were left over past prescription in this study unlike the study conducted in France, which was shown to be 76%(16).

The study showed that there is an influence of other individuals in the practice of self medication (69.1%). This reveals the existence of bad trend in the community where non-professionals recommend drug use and needs to be discouraged through public education. This finding is similar with the study done in Brazil

where 51.2% of self-medication used was recommended by third party (14).

Though the study has some shortcomings like recall bias, bias by the professionals who collected the data, not revealing the truth by the respondents, and not including drugs used for self-medication, we believe the study addresses an important issue as self-medication could be considered as one of the public health problems in a population where there is lack of wide controlled medical education.

In conclusion, a significant number of people use self-medication. The major reason for self-medication is its relative lower cost. Drug retail outlets are cited to be the major sources of drugs that are used for self-medication and the availability of drugs in informal sector contribute to the increase in the practice of self-medication. Therefore, though self-medication is difficult to eliminate, intervention such as dissemination of information about problems of self-medication and drugs at large, through media, health education sessions, and posters etc. can be made. Drug law enforcement authorities need to have clear and effective legislation on drug handling and dispensing so that policies can be implemented and, necessary measures may be taken on illegal purveyors of drugs. Ministry of health and the regional health bureau may need to facilitate ways so as to increase health service delivery institutions so that more people can have access for utilizing health facilities. Finally, we recommend further studies have to be done on self-medication.

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