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Original article

Self-medication in three towns of North West Ethiopia

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Abstract

Background: Most illnesses do not come to the attention of physicians; as many of these are either tolerated or self-medicated, in developing countries.

Objective: This retrospective study was aimed at assessing the magnitude, type and factors of self-medication in three towns of Northwest Ethiopia.

Methods: A community-based cross sectional survey with two-week illness recall was conducted. Open-ended questionnaire consisting of general demographic and socioeconomic questions as well as questions on illness in the last two weeks prior to the interview and treatment strategies, was prepared and administered.

Results: A total of 1880 households with 10/170 individuals were visited. Of which 1190 (11.6%) individuals in 984 households reported at least one episode of an illness and of whom 324 (27.5%) conducted self-medication. Self-medication was conducted using both modern pharmaceuticals and traditional medicines. Financial reasons and the triviality of illnesses were the top-two reported factors of self-medication.

Conclusion: The importance of increasing access to modern health facilities and public education regarding the safe application of self-medication is needed. [Ethiop. J. Health Dev. 2001;15(1):25-30]

Introduction

Of the very many symptoms an individual experiences, only a small proportion with an estimate of 10-30% are brought to the attention of physicians (1). This presumes that the majority of the symptoms are either tolerated or self-medicated. The decision for self-medication may be influenced by different factors (cultural, economical, psychosocial, etc) that culminate in the utilization of various therapeutic approaches in searching for a relief. Self-medication is a commonly employed practice with an attempt to normalize the perceived illness (2-13).

The type and extent of self-medication and the reasons for it may vary from country to country. In developing countries, both modern drugs and traditional medicines are commonly used for self-medication. It was also noted that prescription-only-medications could easily be obtained without prescriptions for self-medication in developing countries like Ethiopia (14). The use of such drugs without the knowledge of physicians can be less beneficial or even be dangerous for the patient. The efficacy and safety of most traditional medicines used in Ethiopia is not scientifically proven, and there is lack of precision in dosage by traditional healers (12). However, the role of traditional medicines cannot be undermined provided that large proportion of the population rely on it. Thus, an extensive research work is required to ensure its safety and efficacy. Inappropriate and ineffective self-medication can also delay timely and appropriate treatment, which may end up in tragic consequences.

A study conducted in southern part of Ethiopia showed that 15% of the persons with perceived illnesses performed self-medication (8). In another study conducted in Addis Ababa and central Ethiopia the magnitude of self-care was as high as 50%. Low severity of the disease and poverty were the major reasons for self-care (11).

To our knowledge, there is little information with regard to self-medication in Northwest Ethiopia (the present study area), although the practice of self-medication is quite common. Therefore, this study was designed with the objective of investigating the nature and extent of self-medication.

Methods

A cross-sectional community-based study was conducted between February-May, 1999 in Gondar, Kolladuba, and Debark towns, Northwest Ethiopia. The towns had an estimated population of 112000 in 23,000 households, 9000 in 2200 households, and 14000 in 3500 households, respectively. The governmental institutions, which render health care services in the study area, are one referral hospital and a polyclinic in Gondar, one health center each in Kolladuba and Debark towns. These Health institutions are used as centers where the Final year Medical and Paramedical students of the Gondar Collage of Medical Sciences pursue their community-based training. There are also about 7 private clinics in Gondar. The epidemiological characteristics of the three towns are similar with respiratory and gastrointestinal diseases being the most prevalent (unpublished North Gondar Health data).

One thousand eight hundred eighty households, which were proportionally allocated to the three towns according to their population size, were included in the study. Thus, 1546 households from Gondar town, 154 households from Kolladuba and 180 households from Debark town were selected with systematic sampling method. To determine the sample size the following assumptions were made. Since there was no previous study conducted in the study area, a 50% expected prevalence of selfmedication; and to increase the precision of the study, a 99% confidence interval with expected deviation from the true prevalence of $\pm 3\%$ were assumed.

A pre-tested questionnaire was used to measure demographic, socio-economic, history of illnesses in the family in the last two weeks preceding the interview, treatment approach as well as general issues about the use of drugs. After obtaining an informed consent from the patients or caretakers (in the case of children), data was collected by trained individuals who have completed 12th grade. Data related to self-medication and general information about drugs (such as drug hoarding, preferable form of modern drugs, measures to be taken during adverse effects) were obtained from all family members with an episode of illness. Data were entered into a computer and analyzed using EPI Info Version 6.2 Statistical Package.

In this study, self-medication is defined as the use of traditional medicines and/or modern drugs without consulting qualified health practitioners. Under traditional medicines the use of homemade remedy and treatment obtained by consulting traditional healers were included. The use of diet, holy water ("Tsebel"), and other non-pharmacological approaches such as massage, exercise, and psychotherapy were not considered as self-medication.

Results

This study canvassed a total population of 10,170, residing in 1880 households to identify ill individuals in the last two weeks prior to the survey. Accordingly, 1190 (11.7%) of the individuals residing in 984 households reported a total of 1342 illness episodes for the last two weeks prior to the interview. Some households reported more than one ill person. About 60% of the illness episodes were described by the patients themselves whereas the remaining 40% were done by care takers. The average age (\pm SD) of persons with reported illnesses was 29.7 (\pm 22) years with male to female ratio of 1:2 (Table 1). Pre-school children constitute 13.6% (162) and 27.4%(326) were illiterate. About three fourth of the family of the persons with perceived illness had a monthly income of less than 200 Birr.

Respiratory and gastrointestinal diseases were the most frequently reported causes of morbidity (Table

2). The major reported illnesses include cough and cold in 321(23.9%) individuals, fever in 127(9.5%), headache in 114(8.5%), and gastritic pain in 113(8.3%). About 12.7% of the ill persons reported more than one type of illness with more than one symptom.

The actions taken for the illness are shown in table 3. Self-medication (by the patients themselves or care takers) was employed in 324(27.2%) cases whereas in 332(27.9%) cases no action was taken. 164 (13.8%) of the self-medicated persons used modern drugs obtained from pharmacy or drug shop. As shown in Table 4 more than two third of the self-medicated persons have mentioned unaffordability (in financial terms) of the modern health services and low-severity of the symptoms to be the reasons for self-medication. When asked if they would use any alternatives to self-medication in case of no relief, about 80% replied that they would look for a modern health care services at hospitals, health stations or clinics. However 10% of the sick people felt that there were no alternatives to self-medication.

With regard to drug hoarding, 40% of the respondents stored drugs at their home (26% herbal medications, 10% modern drugs and 4% both herbal and modern drugs). When asked which form of modern drugs they would prefer, 50% of the respondents did not have any special preference. Thirty percent of the respondents prefer solid oral dosage forms whereas 15% of the respondents considered injectables as their first choice.

Eighty seven percent of the respondents had knowledge about the possible adverse effects of drugs and said that they would consult a qualified person when adverse effects occur. Stopping the administration of drugs when adverse effects occur was mentioned by only 10% of the respondents.

Discussion

The importance of the provision of an effective health care in the community is unquestionable, as good health is the basic requirement of life. In developing countries, particularly the rural population has no or very limited access to the modern health care infrastructure as well as to appropriate and affordable drugs (7). Ethiopia is no exception to the above. The underutilization of modern health services due to financial inaccessibility have been reported by previous studies(15,16). On the other hand, a study conducted in Addis Ababa and rural central Ethiopia showed that higher illness prevalence was found in rural areas and in the low socio-economic households of Addis Ababa (13).

The proportion of individuals who reported an illness episode during a two weeks recall period in this study is greater than what has been reported in South Ethiopia (8) but more or less similar with other studies in the country (11, 15). The variation in the study areas, methodology and recall period may partly explain the disparity in the reported rates of illness episodes.

The subjects of this study are urban dwellers, which are supposed to have a better knowledge and access-in terms of distance- to modern health care services as compared to their rural counterparts. Accordingly, the proportion of persons who sought treatment in modern health institutions was greater than that of the previous reports (8, 15). The percentage of persons who didn't take any action against their illnesses was relatively low in this study. Self-medication in this study seems to be more prevalent as compared to the previous studies in Ethiopia (8, 13, 15); and is more or less similar to Kitaw's findings (11), which also showed the increasing tendency of self-care with urbanity.

Self-medication using mainly modern drugs in other parts of the world is a widely employed practice (2, 3, 6, 7, 8, 10) as compared to what has been seen in Ethiopia. However, due to differences in definitions, methodology and study settings of different studies, it is difficult to make a comparative conclusion. The provision of health education by the health profession trainees of the Gondar College

of Medical Sciences to the population of the study area might have influenced decisions regarding measures to be taken during illness.

Poverty and low severity of symptoms were the two major reasons for self-medication in this study. The low severity of the symptoms of the illness is frequently reported as a reason for self-medication in the literature (3, 4, 8, 10). The fact that 80% of the self-medicated persons of this study reported that they would go to modern health care units if they do not get relief by using self-medication shows the role of socio-economic factors on self-medication. This indicates that the self-medicated persons have good perception about modern health care services but they cannot utilize because of mainly or the above reasons.

The major concern in self-medication is whether an effective and least hazardous approach is employed. The role of both traditional and modern drugs on self-medication has been described in studies conducted in Ethiopia. The utilization of both types of medications entail serious risks to the user (patient). The availability of modern and potentially dangerous drugs over-the-counter orders in Ethiopia(14), and elsewhere in the World (6, 17-19) has made self-medication a more risky practice. On the other hand, the use of traditional medicines whose efficacy and toxicity is not well known scientifically could be even more dangerous (12), requires a reservation provided that there are other alternatives.

The proportion of households with drug hoarding in this study is greater than the report from South Ethiopia (8). The majority of drugs stored are herbal medicines, which are intended for use in selfcare. Although drug hoarding of modern drugs is relatively low in this study, the duration of storage and the manner they are used should be considered seriously. It has been reported that in more than 50% of the modern drugs stored at home, the correct use of the drugs could not be ascertained (11).

The preference for dosage forms of modern pharmaceuticals seemed to have changed in this study. Contrary to the previous studies that reported preference for injections in many cultures irrespective of the illness (20-23), this study reported less preference for injections. This might be probably related to increasing awareness regarding the risk of serious infections such as HIV associated with injections.

In conclusion, although appropriate self-medication can be advantageous without proper education of the public and proper regulation of potent drugs dispensary, it may cause tragic consequences. Thus, emphasis should be given to increase access to modern health facilities by creating mechanisms to reduce the cost of medication. Public education regarding the dangers of self-medication must also be given due attention. Parallel to these, scientific approaches in order to develop traditional medicines should be strengthened. Further studies are required to investigate the self-medicating behavior of different communities.

Acknowledgments

Tables

Table 1: Demographic characteristics of persons who reported illness in the last two weeks in Gondar, Kolladuba and Debarke towns, 1999

Variable	Number (n=1190)	%
Sex		

Male		
Female	394	33.1
	796	66.9
Age		
0-4		
5-14	130	10.9
15-49	238	20.0
50+	560	47.1
	262	22.0
Educational status		
Pre-school children		
Illiterate	162	13.6
1-6 grade	326	27.4
7-12 grade	393	33.1
12+	236	19.8
	73	6.1
Family Monthly Income		
<100 birr		
100-199 birr	531	44.6
200-299 birr	339	28.5
300-499 birr	147	12.4
500 birr	99	8.3
	74	6.2

Table 2: Frequency of the reported symptoms (n=1342)

Type of symptom	Frequency (n)	%
Cough and cold	321	23.9
Fever	127	9.5
Headache	114	8.5
Gastric pain	113	8.3
Diarrhea	74	5.6
Eye disease	72	5.4
Others	521	38.8

Table 3: Measures taken by persons who reported an illness (n=1190)

Measures taken		Frequency (n)	%
Treatment in Health Institution		534	44.9
Self-Medication	Treatment by modern drugs (from Pharmacy & drug shop)	164	13.8
	Treatment using Home-made Remedy	109	9.1
	Treatment by Traditional Healer	51	4.3
No action taken		332	27.9

Table 4: Factors for self-medication (n=324)

Factor	Frequency (n)	%
could not afford modern health care	121	37.4
Low-severity of symptoms	97	29.9
To save time	48	14.8
Expectation of less/no benefit from modern health care	44	13.6
Remoteness of modern health care	14	4.3

Figures

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