Original article

Herbalists in Addis Ababa and Butajira, Central Ethiopia: Mode of service delivery and traditional pharmaceutical practice

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Abstract

Objective: To assess herbalist's mode of service delivery and describe their traditional pharmaceutical practices.

Methods: In-depth interviews of herbalists were conducted in Addis Ababa and Butajira, using a semi-structured questionnaire.

Results: The mean age of the healers was 53.7 and most of the healers practised traditional medicine on part-time basis. The average number of patients seen per week by the healers was 7. Most of the healers do not have fixed payment rate for their services. The analysis of traditional prescriptions revealed that the predominant dosage forms were liquid preparations and the average number of plants per prescription was 1.16.

Conclusions: Healers treat a wide range of health problems using medicinal plants in various dosage forms. In the process of evaluation and standardisation of these dosage forms, formulations tested should be made in accordance with the method used traditionally. [*Ethiop.J.Health Dev.* 2002;16(2):191-197]

Introduction

The World Health Organisation estimates that at least 80% of the population in most developing countries rely for their primary health care on traditional forms of health care (1). Recognising this fact and the fact that modern health care system alone could not meet the health needs of the entire population of the world, the policy of urging its member states to promote and integrate traditional medicine into their national health care systems was launched by WHO in 1978 (2). According to WHO, the promotion of traditional medicine in health care services particularly at PHC level should be intensified by the application of appropriate traditional technology to health care, improvement based on simplicity, safety, efficacy and availability at low cost; selection of essential traditional remedies particularly herbs in PHC, evaluation of traditional claims through scientific research, policy support for integration and inclusion of traditional medicine in training programmes at various levels (3).

In Ethiopia, traditional medicine in general and herbal medicine in particular continue to be widely used by majority of the rural population. The national 1982-83 rural health survey revealed that more than half of all health seekers used traditional healers, lay or self-treatment (4). The wide spread use of traditional medicine among both rural and urban population in Ethiopia could be attributed to cultural acceptability, efficacy against certain types of diseases, physical accessibility and economic affordability as compared to modern medicine (5, 6).

Comparing the Ethiopian traditional medical practices with other systems such as Chinese and Indian, enormous effort has still to be put into research to understand the basic concept of healing and evaluation of the traditional treatment strategies and final utilisation of the

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beneficial aspects of the system. Gathering ethnomedical information is an important step in such endeavour. The fact that the use of plants constitute the largest segment of Ethiopian traditional medicine suggests that emphasis be given to the herbal aspect of the system. This study was, therefore, conducted between July 2000 – March 2001 in Butajira and Addis Ababa to assess herbalist's mode of service delivery and various traditional pharmaceutical techniques (i.e. collecting and storing plant materials, and preparation of dosage forms) employed to prepare their remedies.

Methods

Description of Study areas: *Butajira*. This is a district located 130 km south of Addis Ababa. The population size extrapolated from 1994 census is estimated to be 257,000. The dominant ethnic group is Gurage of meskan dialects. Farming is the main economic activity and the main cash crops are pepper, coffee and khat (7). During the study time, the district had one health centre, 2 health stations, 11 private clinics, 11 health posts and 8 drug retail outlets (8). Communicable diseases including malaria, ARI, diarrhoeal diseases and tuberculosis are the major public health problems of the district. This study was carried out in villages that are under a continuous demographic surveillance by the Butajira Rural Health Programme (BRHP). There are ten study communities under the BRHP which were selected based on probability proportional to size out of 84 rural and 4 urban kebeles (the lowest administrative units) of Butajira district. The demographic surveillance has been going on since 1987 to provide sampling frame for health related researches (7).

Addis Ababa. This is the largest and capital city of Ethiopia. Its estimated population size is nearly 3 million (9). As in other metropolitan cities, the pull factors of urbanisation bring many people from other parts of the country to Addis Ababa, resulting ethnic diversity. There are 18 hospitals, 251 clinics and 22 health centres in the city. The major teaching and central referral hospitals of the country are also located in Addis Ababa (10). As in other parts of the country communicable diseases are a public health threat in Addis Ababa.. The prevalence of non-communicable disease such as malnutrition, cardio-vascular diseases, mental disorder are also on the increase.

Sampling and data collection: Forty four traditional healers were identified from Addis Ababa and Butajira using convenient sampling method. The name and addresses of healers were obtained from Ethiopian Traditional Medical Practitioners Association and BRHP in the case of Addis Ababa and Butajira respectively. Originally it was planned to include 22 healers each from the two study localities. But most of the approached healers in Addis Ababa were unwilling to take part in the study. Hence it was only possible to interview 7 healers from Addis Ababa and as many as 37 from Butajira. In-depth interviews of traditional healers using a pre-tested semi structured questionnaire were done by the principal investigator and trained supervisors of BRHP. The questionnaire addressed issues related to demographic characteristics, sources of the healing wisdom, common illnesses handled by the healers and patient load; and traditional prescriptions for treating diarrhoeal diseases, malaria, helminthiasis, respiratory and skin problems. Before the initiation of each interview, consent was obtained from individuals who participated in the study.

Quantitative data were analysed using EPI-info 6.0 statistical software, while the qualitative data was categorised and analysed manually.

Results

Demographic profile: From the group interviewed males (81.8%) accounted the majority. The proportion of healers aged above 45 was approximately three times that of healers aged 45 or less. Most of the healers were Muslims 26 (59.1%) followed by the Ethiopian Orthodox Church 17 (38.6%). Concerning the level of education, half of the healers had no any education, 17 had church/adult education and only 5 attended formal education.

*Sources of healing knowledge :*The most frequently cited sources of knowledge was family 30(68.2%), followed by religious institutions 5(11.4%). Preceding sickness and corresponding use 3 (6.8%), apprenticeship 3(6.8%), gift from god, and both family and preceding sickness accounted the rest of the responses (Table 1).

Table 1: **Sources of knowledge for traditional healers (N=44), Addis Ababa and Butajira, Central, Ethiopia**

Sources	Number	Percent
Family	30	68.2
Religious Institutions	5	11.4
Preceding sickness & corresponding use	3	6.8
Apprenticeship	3	6.8
Gift of god	2	4.5
Family & Preceding sickness	1	2.3

Health problems mostly treated by the healers: When healers were asked about the health problems they commonly handle, skin diseases, malaria, diarrhoea, amebiasis (ameobiasis according to healers is diarrhoea with blood and mucus) and cough/cold were the most frequent responses followed by TB(nekersa) and helminthiasis.

Preparation, application and dosage forms of remedies : By interviewing healers from two areas, we obtained information on the use, preparation and application of plants to treat different illnesses such as diarrhoea, taeniasis, respiratory problems, skin problems, amebiasis and malaria. A total of 277 different treatment modalities were listed by traditional healers in treating the above health problems. As indicated in table 2, in the majority of the prescriptions the dosage forms were liquids 152(54.9%) followed by unprocessed herbs 36(12.9%), ointments 29(10.5%) and pellets 28 (10.1%). Powders and inhalations accounted 18 (6.5%) and 14 (5.1%) respectively. In preparing ointments, butter, honey and some times animal fat have been used as bases. Local alcoholic drinks (tela and teji), water and defeated milk were reported to be used as solvents in liquid preparations.

Table 2: **dosage forms used in traditional prescriptions (N=277), Addis Ababa and Butajira, Central Ethiopia**

Dosage forms	Number of Prescriptions	Percent
Liquid	152	54.9
Ointments	29	10.5
Pellets	28	10.1
Powders	18	6.5
Inhalation (smoke/steam)	14	5.1
Unprocessed herbs	36	12.9

From a total of 277 traditional prescriptions collected, 30(10.8%) of them contained composite remedies and 10 (3.6%) of the prescriptions consisted of three or more plants. The average number of plants per traditional prescriptions was 1.16 (Table 3). The routes of administration of herbal drugs varies according to the dosage forms and their intended purpose. In our study it was reported that powders, ointments and solutions that are used against skin diseases would be applied topically. Liquid preparations for the treatment of malaria, diarrhoea, intestinal parasites and respiratory problems were being administered orally. Administration via respiratory system was meant for dosage forms such as inhalations, smokes, and steams which are mainly used in asthma and cough/ cold remedies. The major routes of administrations of herbal drugs are presented in Table 4.

Table 3: **Number of plant ingredients in traditional prescriptions (N=277), Addis Ababa and Butajira, Central Ethiopia**

Composition of prescriptions	Number of prescriptions (and number of species involved)	Percent
Single species	247 (247)	89.2
double species	20 (40)	7.2
Triple species	7 (21)	2.5
Quadruple species	3 (12)	1.1
Total	277 (320)	100.0

Collection and storage of plant materials: Healers were asked regarding the sources of plants for their practices. Forty (90.9%) of the healers responded that they mainly depend on wild plants and 4 (9.1%) grow most of medicinal plants in their garden. Lack of land, agroecological factors and maintaining the

secrecy of the knowledge were the most frequently cited reasons for not growing plants in their garden.

Table 4: **Routes of administration of herbal drugs in Addis Ababa and Butajira, central Ethiopia**

Routes of Administration	Number of prescriptions	Percent
Oral	188	67.9
Tropical	64	23.1
Inhalation	16	5.8
Bathing	9	3.2
Total	277	100.0

Regarding collection time, 29 (65.9%) of the healers believed that the collection time of different plants should vary. Some of them said that medicinal plants are effective when collected early in the morning. According to some healers, medicinal plants should be collected with certain ritual procedures such as cutting the plant using knife with handle made of horn, abstaining from sexual contact in the preceding day of collection, etc.

Concerning storage of herbal drugs, half of the interviewed healers believed that there should not be differences in storage conditions of different herbal drugs. Containers such as plastic bottles, pots (made of clay), horn, and tins have been used to store drugs by most of the traditional healers. Most of the healers, particularly in rural areas, do not write labels on the containers. Some used to write labels on the containers and observation of their labelling pattern revealed that the labels most of the time stated names of the diseases to which that particular medicament was meant to cure but not names of the plant(s).

Mode of service delivery and relation with modern health practitioners: The majority 38 (86.4%) of the healers practised traditional medicine on part-time basis. All of the 6 full-time practitioners were found in Addis Ababa. 26 (59.1%) of the interviewed healers said that they don't have fixed payment rate for their services; out of which 21 (80.8%) claimed that the rate and type of payment largely depends on the ability of the patients and 5 (19.2%) of healers were rendering service free of charge. All interviewed healers have been conducting only out patient services and the average number of patients seen per week was reported to be seven. Only six of the healers reported that they had assistants in their work.

More than 90% of the healers said that they had no any interaction with modern practitioners. The reason being absence of forum to create links 12(27.3%), feeling of healers that they are undermined and ignored by modern counterparts 11(25%) and other reasons such as mistrust, lack of interest, distance, etc. accounted the rest of the responses.

Healers needs and aspirations: Summary of the qualitative data concerning healers' future wishes and needs revealed that there was a deep desire of legitimisation and general willingness to work in close collaboration with modern medicine practitioners. They also expressed their interest to participate in any health related training courses. Most mentioned that they would like if the government would provide them some facilities for grinding and boiling medicinal plants. The desire of having strong practitioners association, which would have the power to strengthen the position of healers in Ethiopian health care system was expressed by healers particularly from Addis Ababa.

Discussion

The older age predominance in our study group signalled that herbalistic knowledge which handed down to them through out generations is at risk of getting lost. The young generation is not willing to acquire the knowledge may be because of the assumption that the practice is generally assumed and perceived to be traditional. Therefore, efforts should be made to document this cultural heritage. The low number of women in the interviewed healers might be due to the fact that herbalistic knowledge is mostly acquired from family and religious institutions. Parents prefer to pass the knowledge more to sons than daughters. In addition, in Ethiopian culture, it is not common to send females to religious education and hence the opportunity

of learning this traditional wisdom from religious institutions is remote for females.

This study indicated that family and religious institutions were reported to be the major sources of healing wisdom. The role of religious institutions in expanding herbalistic knowledge in Ethiopian traditional medicine has been described by Vecchiato (11). The importance of family in the context of acquiring traditional healing practice was also reported in other African studies (12).

The pattern of diseases that healers reported to handle in our study is in agreement with what was previously reported (13). But in the present study the frequency of psychosocial problems was less. This might be due to the variability of informants. In our study informants were herbalists unlike previous studies which included spiritual healers.

Concurrent to a report in northern Ethiopia (14), in this study liquid preparations were reported to be the predominant dosage forms. It was evident also that, depending on dosage forms, herbalists use different additives and solvents in preparing their formulations. In this connection, it is important to note that some of the additives in traditional formulations may exert therapeutic activity in addition being used as adjutants. For example, the antibacterial and antifungal properties of honey is well documented, with the inhibition of growth of organisms such as *Staphylococcus aureus* and *Candida albicans* (15, 16). Honey has also been shown to have a great value in treating infected surgical wounds (17, 18). Hence the use of honey in traditional formulations might have a direct therapeutic effect to many diseases.

Analysis of the pattern of traditional prescriptions revealed that about a tenth of the prescriptions contained composite remedies. As has been well documented (19), traditional healers claimed that the use of multiple plants has a synergetic effect. It has been also indicated that there is a possibility that the properties of the constituents of composite remedies could be different from those of the mixtures considered as a whole (20).

The present study also demonstrated that most of the herbalists do not grow medicinal plants in their garden. In view of the excessive harvesting of wild plants, the biological diversity of medicinal plants is being reduced from time to time. It is believed that the cultivation of widely used wild medicinal plants in home gardens will substantially reduce the pressure that such plants are facing in the wild environment thereby ensuring conservation of these flora (21). In addition, medicinal plant gardens improve the health care delivery system by promoting indigenous innovations and the medicinal plants industry. In this regard, healers' awareness on the importance of growing medicinal plants in their gardens should be appraised.

It was interesting to note that most of the healers believed that there exist differences in the collection time of different plants. Some of them said that medicinal plants are effective when collected early in the morning. Similar finding was documented in a study done in Tanzania in which traditional healers claimed that traditional remedies are only effective if plants are collected in a certain time of the day or moon cycle (22). Abebe reported a similar finding in northern Ethiopia (19). In this study it was further learnt that the effect of different storage conditions and shelf life on the active principles of the plant materials seems to be less understood by half of the healers interviewed, and appropriate labelling of their preparations was not also practised. This may lead to dispensing of inappropriate herbs. Giving education to the healers on the possibilities of this hazard is of paramount importance.

The majority of the studied healers were found practising traditional medicine on part-time basis and full-time practice was more prevalent in Addis Ababa. This pattern has been observed in Tanzania (13) where it was found out that full-time practice was more usual in Dar es Salaam than other rural villages. This might be due to the fact that

most of the traditional practitioners in rural areas do not have fixed payment rate for their services. In most cases, the payment depends on the ability of the patient. It would be, therefore, difficult for the traditional healers in rural areas to sustain their lives with the income generated only from their healing practices. The fact that traditional healers consider the economic and social background of patients in asking and fixing treatment costs could be one of the reasons for the continued acceptance of the system in many developing countries.

This study also documented that although majority of the studied healers expressed their general willingness to work in close collaboration with modern medicine practitioners, most healers were found to have no interaction with modern practitioners. It is evident here that more has to be done to create discussion forum for both modern and traditional medicine practitioners and bring together in co-operative relationship. It is only with the spirit of mutual trust and collaboration between the two groups that successful evaluation of traditional remedies and medical practices be made which may gradually leads to the integration of the two medical systems.

Generally healers treat a wide range of health problems using remedies prepared by employing various traditional pharmaceutical techniques. In the process of scientific validation of the traditional remedies, it is vital that the formulations tested are made in accordance with the method used traditionally.

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