Assessment of Traditional Knowledge Associated with Medicinal Plants in North Achfer District, Amhara Region, North Ethiopia

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Abstract: The objective of the study was to document traditional knowledge on medicinal plants in north Achefer district. This study was conducted using semi-structured interviews using purposeful and random sampling methods. The collected data was analyzed using IBM SPSS statics 21software. A total of 65 informants 59 male and 6 female were interviewed from 5 kebele of north Achefer district. Among 65 informants only 12 (18.5%) individuals are traditional healers and the rest 53 (81.5%) persons were not traditional healers. A total of 74 medicinal plants were recorded for treating human and animal ailments through oral, dermal and nasal routes. From the collected medicinal plant species, 98% of them were identified and the rest 2% medicinal plant species were listed by their local name. Among 39 plant families the most frequently used plant species reported were Solanaceae 5 (7.4%) and Euphorbiaceae 5 (7.4%), Fabaceae 4 (5.9%) and the least Lamiaceae 3 (4.4%). In the study area medicinal plants affect by different factors, the main factors were human activity (69.2%) by cutting; agricultural explanation, cultivating introduced species and natural factors (20%) drought, erosion, hail and the rest (10.8%) of respondents were reported that factors affected medicinal plants in the area. North Achefer woreda is rich in indigenous knowledge associated with medicinal plant but the distribution and diversity of medicinal plants have been declined at alarming rate. So attention should given and use best conservation methods to protect species from loss.

Keywords: Medicinal Plant, Traditional Knowledge, Threats

1. Introduction

Ethiopia is a land of great topographical diversity of high mountains, river valleys and rolling plains which are responsible for tropical, sub-tropical and temperate climatic conditions. The evolution and diversity of health problems and their causative agents is favored by the extreme physical and climatic conditions of the country [2]. Ethiopia is the fifth major country in tropical Africa in terms of the diversity of flora [3]. Ethiopia has attempted to come up with remedies or practices that restore good health in response to various health problems [2].

It was estimated that the Ethiopian flora contains about 6,500 to 7000 species of higher plants [3]. Almost all plant species in the Ethiopian flora are used medicinally sometime in different area [16]. In Ethiopia, there is a long history of using medicinal plants to treat a variety of ailments [21]. 80% of the people use medicinal plants and plant remedies selected over centuries [11, 18]. The vast majority of the rural populations, therefore, still depend on traditional medicine and its practitioners. Due to incomplete coverage of modern medical system, shortage of pharmaceuticals and unaffordable prices of modern drugs, the majority of peoples in the country still depend on traditional medicine [6].

Plants have played crucial role as a source of traditional medicine in Ethiopia from the time immemorial to combat different ailments and disease [10]. Plants have been an essential source of preventive and curative medicinal preparations for human beings. Different forms of remedy preparations and applications to treat live stock diseases are used. Due to accessibility, acceptability and biomedical benefits there is a large magnitude of use and interest of
medicinal plants in Ethiopia. The plant materials include seeds, berries, roots, leaves, bark or flowers are used for medicinal value [13].

Traditional knowledge is information of indigenous or local communities as secret oral traditions that have been passed down over generations, but it may also be documented in publicly available written or even electronic media. Traditional knowledge is generally includes the intellectual and intangible cultural heritage, practices and knowledge systems of traditional communities, including indigenous and local communities. The terms traditional knowledge is frequently used as categories of culturally specific knowledge, since knowledge on a subject or held by a particular group of society. Documenting traditional medical knowledge is important to facilitate the discovery of new sources of drugs and promote sustainable use of natural resources [17]. On the other hand, traditional practices have their own contributions to the modern ones and hence they have to be maintained through detailed studies and documentation [14].

Traditional people around the world possess unique knowledge of plant resources on which they depend for food, medicine and general utility including tremendous botanical expertise [9]. Although various animal and mineral products contribute to human welfare, the plant kingdom is most essential to human wellbeing especially in supplying his basic needs. The relationship between humans and plants is as old as human existence on earth [13].

As reported by Ensermu Kelbessa et al, Ethiopia’s traditional medicine, as elsewhere in Africa, is faced with problems of continuity and sustainability [3]. As medicinal plants are part of the total plant of the different ecosystems of the earth, they are affected by anthropogenic and natural forces. And majority of medicinal plants utilized in Ethiopia are part of forest and rangeland. Therefore, most off the threats to the forest and rangeland plants are also threats to medicinal plants. Nowadays herbal practitioners have to walk greater distance for collection of herbal medicine that once grew in the vicinity of their homes [13]. Deforestation, soil erosion, overgrazing and drought are the major factors that affect different medicinal plants [7, 20]. Unwillingness of young generations to gain the traditional knowledge, giving high credit to modern education is factors beside other natural conditions and anthropogenic activities [7]. Most people in Ethiopia especially young generation ignored the traditional knowledge. Documentation of traditional knowledge and conservation of plants should necessary. The general objective of the study is to document traditional knowledge of medicinal plant in north Achefer district.

2. Materials and Methods

2.1. Description of Study Area

The study was conducted from September 1-29/10/2018 G. C in north Achefer district. North Achefer district is one of the thirteen woredas found in West Gojjam Administrative Zone, is located 60 km south-west of Bahir Dar town, the capital of Amhara Region. It borders North Achefer to the north, Awi zone to the south and west and Mecha woreda to the east. It is sub-divided into 18 rural and 2 urban kebele administrations.

![Figure 1. Map of the study area.](image)
2.2. Materials

Materials used during the study were Digital camera, GPS, laptop computer, pressing materials, plastic bag and note book.

2.3. Methodology

2.3.1. Study Population

The population of the study was targeted to those local people having traditional knowledge around the selected 5 kebeles of North Achefer woreda of Amhara region. The respondents were selected randomly considering different age group and gender.

2.3.2. Data Collection

Traditional knowledge of medicinal plant data was collected from September 1-29/10/2018 G. C methods following [9, 1]. Data was collected by applying semi structured questionnaire. Six kebeles were selected from the study area using purposive sampling techniques based on the distribution of different plant species and traditional medicinal value to treat different diseases. A total of 65 individual were interviewed using semi-structured interviews. Among the total respondents 12 of them the respondents were traditional healers which are selected by using purposive sampling technique to gather the relevant data. Open-ended and be close-ended questionnaires were applied during data collection to get valuable information. All of the questioners were asked by their local language (Amharic). The information collected included local/ vernacular name of the traditional medicinal plant, diseases treated, parts used, condition of plant used, method of preparation, route of administration, ingredients added, storage, side effects, other uses of the plant and existing threats and area of grown. Specimens of medicinal plants were collected and identified using the published volumes of the Flora of Ethiopia and Eritrea.

2.3.3. Sampling Size and Sampling Techniques

North Achefer district is one of the thirteen districts found in West Gojjam Administrative Zone. The woreda is selected based on traditional knowledge of the community.

2.3.4. Data Analysis

The collected data was coded, entered into excel sheet and analyzed using IBM SPSS Statistics version 21 software. The data were presented and summarized using descriptive statistics. The result was expressed in table, graph words and percent.

3. Results

3.1. House Hold Characteristics

3.1.1. Educational Level of Respondents

The study was undertaken from 65 informants 59 male and 6 female from 5 kebele of north Achefer district. Among the total respondent 56 (86.15%) of them were illiterate whereas, the other group has primary education like writing and reading 9 (13.84%). Mostly the traditional knowledge of herbal medicine was held by illiterate group of the respondent.

Table 1. Educational level of respondents.

| School level | frequency | percent |
|--------------|-----------|---------|
| Illiterate   | 56        | 86      |
| Primary      | 6         | 9.2     |
| Secondary    | 3         | 4.8     |
| Total        | 65        | 100     |

3.1.2. Job Category of Respondents

The respondent of the study area were farmers and their livelihood relies on agriculture (72%), petty trading (3%), animal fattening (5%), and forest product selling mostly Eucalyptus spp. (10%).

3.1.3. Traditional Healers

Among 65 informants only 12 (18.5%) individuals are traditional healers and the rest 53 (81.5%) persons of the informants are not traditional healers (table 2). It showed that majority of the community are not much familiar with traditional medicinal knowledge. They simply use by asking those traditional healers and receiving the prepared amount of medicine for the disease happen at a time.

Table 2. The traditional healers and nontraditional healers proportion in the study area.

| Traditional healer | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------------|-----------|---------|---------------|-------------------|
| Yes                | 12        | 18.5    | 18.5          | 18.5              |
| No                 | 53        | 81.5    | 81.5          | 100.0             |
| Total              | 65        | 100.0   |               |                   |

3.2. Diversity of Medicinal Plant

A total of 75 plant species collected during the study. Among collected species 68 of them belonging to 39 families were identified. From the identified families the frequently used medicinal plant species were reported to Solanaceae represented by 5 (7.4%) and Euphorbiaceae 5 (7.4%) and the rest family showed in table 3.

Table 3. Medicinal plant diversity by their family.

| No | Family  | Frequency | % |
|----|---------|-----------|---|
| 1  | Acantaceae | 2         | 2.9 |
| 2  | Alliaceae  | 1         | 1.5 |
3.3. Medicinal Value of Plants

Most plants are used for threat human and animal disease. In addition to cure ailment most plant products are used directly for food as spice, vegetable and fruit. Consumption of these herbs and spices as part of a normal diet is not likely to cause adverse herb-drug interactions because they are consumed in relatively small quantities. However, when these herbs and spices are utilized for medicinal purposes there may be an increased likelihood of adverse interactions with conventional medicines. Plant parts used is varying based on the plant and disease treatment, root and fruit are the common plant parts applied to treat disease. A total of 76 medicinal plants were recorded to use as medicinal plant by informant through oral, dermal and nasal routes. The most commonly used plant parts for preparation in the study area were root, bark, leave and fruits. Table 1 showed the local name of the plant, scientific name parts used and threats of disease.

Table 4. Plant species type and parts used.

| No. | Local name     | Scientific name               | Family      | Parts used | Disease treated                                      |
|-----|----------------|------------------------------|-------------|------------|------------------------------------------------------|
| 1   | Abathareg      | Clematis longicauda          | Ranunculaceae | Root       | To treat hyena bite                                  |
| 2   | Aderqet        | Physalis peruviana           | Solanaceae   | Leaves     | To treat wound                                      |
| 3   | Awetegn        | Syzygium guineense           | Myrtaceae    | Root       | To treat donkey pain                                |
| 4   | Dokima         | Capparis tomentosa           | Capparidaceae| Bark       | stop tonsil pain                                    |
| 5   | Enkoy          | Sida schimperiana            | Malvaceae    | Leaf       | To treat flesh wound and to stop bleeding           |
| 6   | Gemero          | Triumfetta pilosa            | Tiliaceae    | Root, stem | snake bite, swelling, donkey hemorrhoid             |
| 7   | Gorggegit      | Flueguea virosa              | Euphorbiaceae| Liquid     | Botch                                              |
| 8   | Hargeablabit   | Flueguea virosa              | Euphorbiaceae| Root       | evil eye                                           |
| 9   | Merzenchet     | Flueguea virosa              | Euphorbiaceae| Leaf       | To stop cow abortion                                |
| 10  | Shimgegit      | Indigofera spicata           | Fabaceae     | Bark       | Rabies                                             |
| No. | Local name   | Scientific name | Family           | Parts used | Disease treated                  |
|-----|--------------|-----------------|------------------|------------|----------------------------------|
| 1   | Yeqebrotelba | Gnida glauca    | Thymelaeaceae    | Root       | evil eye                         |
| 2   | Ymerzenchet  | Acokanthera scimperi | Apocynaceae | Stem       | For snake bite, donkey hemorrhoid |
| 3   | Wysaloni     | Acanthus sp.    | Acanthaceae     | Root       | For rabies, anthraxess           |
| 4   | Zureshi      | Acanthus sp.    | Acanthaceae     | Leaf       | Fungal disease                   |
| 5   | Kuseshela    | Acanthus sp.    | Acanthaceae     | Root       | evil eye, Scorpion bit, animals Pain |
| 6   | Semiza       | Justice schimperiana | Acanthaceae | Leaf       | to treat abdominal pain! To remove placenta |
| 7   | Nechshnkurt  | Allium cepa     | Aliiaceae       | Fruit      | evil eye, abdominal pain         |
| 8   | Ret          | Aloe sp.        | Aloaceae        | Leaves     | Animals pain                     |
| 9   | Ret          | Aloe sp.        | Aloaceae        |            | to treat fungal disease          |
| 10  | Telenge      | Achyranthes aspera | Amaranthaceae  | Root       | eye pain, fever                  |
| 11  | Dog          | Fera communis   | Apiceae         | Root       | to facilitate cows birth         |
| 12  | Agam         | Carissa spirum  | Apocynaceae     | Root       | evil eye                         |
| 13  | Tefrina      | Tacaees apiculata | Asclepiadaceae | Root       | evil eye                         |
| 14  | Ysetqest     | Asparagus africans | Asparagaceae  | Root       | To treat toothache and evil eye  |
| 15  | Grawa        | Vernonia amygdalina | Asteraceae  | Leaves     | animals pain/swallow             |
| 16  | Quebercho    | Echinaops kebericho | Asteraceae  | Root       | To treat livestock bone Dislocation and animals cough |
| 17  | Zana         | Stereospermum khanthianum | Bignoniaceae | Bark       | evil eye                         |
| 18  | Wanza        | Cordia africana | Boraginaceae    | Root/leaves| animals skin itch Diarrhea, fever |
| 19  | Kalkual      | Opuntia spp.    | Cactaceae       | Root       | Rabies                           |
| 20  | Ymiderqulqual | Opuntia spp.    | Cactaceae       | Root       | Evil eye                         |
| 21  | Amedahula    | Kalanchoe petitiana | Crassulaceae  | Stem       | To treat flesh wound/ livestock swelling/ remove placenta and fever |
| 22  | Aregrsa      | Zebreria scabrah | Cucurbitaceae   | Leaf, stem | Fever, ox sore, Abdominal pain eye pain |
| 23  | Qurahareg    | Monordica foetida | Cucurbitaceae | Hole parts | To treat ox sore                   |
| 24  | Ymerdermubay | Cucumis ficifolius | Cucurbitaceae | Root       | To treat eczema                   |
| 25  | Dedho        | Euclea racemosa | Ebenaceae       | Root       | To stop hating of cows there calf when it birth, Abdominal pain |
| 26  | Abebalit     | Travia sp.      | Euphorbiaceae   | Root       | To treat animal bite              |
| 27  | Gulo/qachima | Ricinis communis | Euphorbiaceae  | Root       | To treat anthraxes                |
| 28  | Mesana       | Croton macrostachyus | Euphorbiaceae | Bark       | Abdominal pain, to stop cows calves ignorence to protect animals bite, evil eye |
| 29  | Beshbeshi    | Lannia fructosa | Fabaceae        | Leaf       | To protect when a women got birth |
| 30  | Gerar        | Acapia sp.      | Fabaceae        | Root       | evil eye                         |
| 31  | Zegetar      | Calpartia aurea | Fabaceae        | Root       | To treat snake bite               |
| 32  | Toseg        | Thymus schimperi | Lamiaceae       | Leaf       | Fever, common cold               |
| 33  | Tunjit       | Orostegia integrofollia | Lamiaceae | whole parts | common cold                     |
| 34  | Zeqaqbae     | Ocmum africanum | Lamiaceae       | Whole parts| Common cold                      |
| 35  | Chifer       | Sida debrihna   | Malvaceae       | Root       | Evil eye                         |
| 36  | Kibqetel     | Stephania abyssinica | Menispermacae | Root       | To treat anthraxes                |
| 37  | Yahiya joroo | Stephania abyssinica | Menispermacae | Root       | evil eye                         |
| 38  | Bamba        | Ficus sycomorus | Moraceae        | Root       | to treat uvula/ Tonsillitis,      |
| 39  | Wortbenmeda  | Dorstenia barnimiana | Moraceae  | Root       | To treat flesh wound             |
| 40  | Nechbahirza  | Eucalyptus globulus | Myrtaceae   | Root       | to protect ants bite             |
| 41  | Tembele      | Jasminum grandiflorum | Oleaceae | Root       | animals eye pain, ring worm      |
| 42  | Enedod       | Phytolaca dodecandra | Phytolacaceae | Root       | To treat anthraxes, rabbis       |
| 43  | Mekanendod   | Phytolaca sp.   | Phytolacaceae   | Root       | to treat rabbis, to remove animal skin lice |
| 44  | Gorteb       | Plantago lanceolata | Plantaginaceae | Leaf       | To treat injured                  |
| 45  | Zegeba       | Podocarpus falcatus | Podocarpaceae | Root, leaf | to protect animals bite          |
| 46  | Embacho      | Rumex nervosus  | Polygonaceae    | Leaves     | to treat animal wound, to stop bleeding and injured |
| 47  | Meqenmoo     | Rumex abyssinicus | Polygonaceae    | Leaf       | To treat fungal disease          |
| 48  | Azoharg      | Clematis sinensis | Ranunculaceae  | Leaf       | To treat abdominal pain, cough   |
| 49  | Esataber     | Jasminum grandiflorum | Oleaceae | Root       | to stop fire pain                 |
| 50  | Lomi         | Citrus aurantiifolia | Rutaceae   | Epiphytes  | Erestoblastiosis /Shetolay       |
| 51  | Tenadam      | Ruta chalepensis | Rutaceae       | Leaf       | To treat common cold and evil eye, |
| 52  | Keteketa     | Dodonaemia angustifolia | Sapindaceae | Leaves     | For fracture/ any broken part of body, |
| 53  | Dabaqedded   | Verhascum siniticium | Scrophulariaceae | Root      | cough and Abdominal pain to protect bleeding during birth |
| 54  | Yeedegaabalo | Brueca antisyrtica | Simaroubacaeae | Root       | Abdominal pain                    |
| 55  | Astenager    | Datura stramontum | Solanaceae     | Fruit/leaves| To prepare abisho, to treat itching |
| 56  | Embuy        | Solanum campylacanthum | Solanaceae  | Root       | evil eye,                         |
| 57  | Gezews       | Helianthus myrtacinus | Rhannaceae  | Leaf       | To stop hepatitis stop kids fever |
| 58  | Zerchiembaam | Solarum anguvisi | Solanaceae     | Root, fruit| To treat syphilitis, fungal disease |
| 59  | Doqema       | Strychnoe spinosa | Strychnaceae   | Epiphytes  | Erestoblastiosis/ Shotelay        |
| 60  | Yzengotetba  | Gnidia glauca   | Thymelaeaceae  | Root       | To protect dogs from rabies       |
| 61  | Aserkush     | Cyphostemma adenoacala | Vitaceae  | Root       | evil eye                         |
**Figure 2.** Use of plant in addition to medicine.

**Figure 3.** Growing area of medicinal plants.
3.4. Other Use of Medicinal Plants

Medicinal plants used for community in deferent way in addition to cure human and animal malady. During the study respondent stated additional use of medicinal plants for food (27.7%), fodder (21.5%), bee fodder (4.6%), soil fertility (21.5%), for all (6.2%) and the rest (9.2%) respondent described medicinal plants used only for medicinal value.

3.5. Medicinal Plant Growing Area

Results from informant showed that medicinal plants can grow in the forest, farmland border, rock, protected land and wetland areas. Large species of medicinal plants are growing on natural forest and list numbers of plant species are available wetland and free human intervention area. As respondat result showed majority of medicinal plant grow with out requiring special place (33.8%) and forest areas (30.8%) and less medicinal plant species can grow around wetland areas (4.6%) (figure 3). Traditional medicinal plant users can collect plants from forest, home garden, relatives or from markates.

3.6. Traditional Medicine Use Practice by the Society

In the study area plants used for medicine are native and served for long period of time. In terms of threatening the disease, peoples in the study area showed that majority of the community used more modern medicin (73.8%) than traditional medicin (16.9%). The main reason stated by the respondents was peoples giving more trust in modern medicine than traditional medicin but it depends. (9.2%) of respondat neither use traditional nor modern medicinal treatment. They prefer modern medicine for ailment like buda (evil eye), yewefit (hepatites) gunfan (comen cold) and mich.

3.7. Factor Affecting Medicinal Plant Distribution

Medicinal plants affect by different factors, the main factors affect in the study area was human activity (69.2%) by cutting, agricultural explanation, cultivating introduced species and natural factors (20%) drought, erosion, hail and the rest (10.8%) of respondents were responded that factors affected medicinal plants in the area. Majority of respondent react over utilization (24.6%), natural factor (3.1%), giving less concern (23.1%) lack of knowledge (6.2%), deforestation (24.6%) and agricultural explanation (9.2%). The rest 9.2% of respondents have no idea why medicinal plants in their area are threaten (Table 4).

### Table 5. Main cause for threats of medicinal plants in the area.

| threats of medicinal plants | Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------------------------|-----------|---------|---------------|--------------------|
| over utilization            | 16        | 24.6    | 27.1          | 27.1               |
| natural factor              | 2         | 3.1     | 3.4           | 30.5               |
| less concern                | 15        | 23.1    | 25.4          | 55.9               |
| lack of knowledge           | 4         | 6.2     | 6.8           | 62.7               |
| Deforestation               | 16        | 24.6    | 27.1          | 89.8               |
| expansion of agricultural practice | 6 | 9.2 | 10.2 | 100.0 |
| Total                       | 59        | 90.8    | 100.0         |                    |
| Missing                     |           |         |               |                    |
| System                      | 6         | 9.2     |               |                    |
| Total                       | 65        | 100.0   |               |                    |

3.8. Solution for Medicinal Plant Threats

Solutions stated by respondents were conservation (43.1%), awareness creation (29.2%) and forest protection (16.9%).

4. Discussion

In the study area the respondent result showed that 11 (16.9%) are use traditional medicine, 48 (73.8%) use modern medicine and the rest 6 (9.2%) of the respondent are neither use traditional nor modern medicine. This showed that the community in the area used more modern medicine than traditional medicine but research conducted by [15] showed that medicinal plants are the main, often only source of traditional medicine for the rural population in the health care systems of this population when compared to modern medicine. The shrubs and herbs were the most harvested for medicinal purpose than other life forms [19]. Similarly in this study result showed that herbs, shrubs and trees respectively used for medicinal value, but herbs are the most frequently used medicinal plants in the area.

Traditional healers were found to play an important role in the primary health care system of the rural people as they treat resource people who had little access and could not afford the cost of modern medication [15]. But in this study results showed that majority of the community prefer modern than using traditional medicine, the main reason stated was they trust more in modern than traditional healers. Also majority of the traditional healers were older than 46 years [16]. The same in this study majority of the traditional healers were older and young generations are not interested to have such traditional medicinal knowledge. They putted as reason to have less interest about medicinal knowledge is the people who have such knowledge have not used as source of income. Many traditional healers of the area held their indigenous knowledge in secret. The study conducted by [16] also reported, in Ethiopia it is very difficult to obtain their traditional medicinal information as they considered their indigenous knowledge as a professional secret, only to be passed orally to their older son, at their oldest age.

Medicinal plants affect by different factors, the main
factors affect in the study area was human activity (69.2%) by cutting, agricultural explanation, cultivating introduced species and natural factors (20%) drought, erosion, hail and the rest (10.8%) of respondents were responded that factors affected medicinal plants in the area. Majority of respondent react over utilization (24.6%), natural factor (3.1%), giving less concern (23.1%), lack of knowledge (6.2%), deforestation (24.6%) and agricultural explanation (9.2%). The rest 9.2% of respondents have no idea why medicinal plants in their area are threaten.

5. Conclusions

The study of traditional medicinal plants indicates that the study area contains different types of medicinal plants and the associated indigenous knowledge. Seventy six medicinal plants were recorded to treat human and animal ailments. The medicinal plant species were collected from the wild and homegardens. Among 74 collected species 72 species were identified by their scientific name and the rest 2 spp. were recorded by their local name. During the study informant results and observation showed that medicinal herbs are highly utilized than trees and shrubs and root part of the plant also take the first place in case of using for medicine. Mostly medicinal plants are applied in oral than other ways. The major threats to medicinal plants and the associated Knowledge in the study area were agricultural expansion, unsustainable utilization, giving less concern, drought and deforestation. Unwillingness of young generation to gain the knowledge, unavailability of the species, influence of modern education and less awareness are another factors. Traditional knowledge studies are required to introduce the existence of traditional practices as well as the rich plant species of the area and plant species of medicinal value that are used by traditional healers and the community to treat various health problems. The expansion of modern medical services and cultures cause for much of the traditional practices are getting less. Giving less respect for the knowledgeable and elders die without sharing their knowledge to the younger generation are the key problems for traditional knowledge transfer through generation. Therefore, awareness creation campaigns are timely needed to improve local community’s knowledge on the importance and management of medicinal plants and awareness raising should be made among the healers so as to avoid erosion of the indigenous knowledge and to ensure its sustainable use. Most of the traditional healers in the study area were males and are married. This showed that they have family to support with the income realized from the sale and administration of the herbs.

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