TRADITIONAL MEDICINES AMONG THE EMBU AND MBEERE PEOPLES OF KENYA

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Abstract

Ethnobotanical information and traditional medicines were investigated and documented in Embu and Mbeere districts, Eastern Province of Kenya. Oral interviews were obtained from over 100 herbalists, both men and women aged between 40 and 80 years. All the herbalists interviewed were Christians and had little formal education. Non-Christian herbalists were purported to combine herbal medicines with witchcraft and were not interviewed. Of the 40 commonly used herbal plants 25 were used as multi-purpose medicinal plants (mpmp), while 15 were used to treat one disease type. There was a correlation between the outpatient morbidity data at the local District hospital, and the common incident diseases treated by the herbalists. Generally a decoction or infusion of the herb was recommended for the treatment of internal or external condition of the patients. Malaria and typhoid were treatable with a total of 15 and 12 plants respectively and were among the first two commonest diseases found in the study area. \textit{Terminalia brownii} was found to be the most used medicinal plant either alone or in combination with other herbs. The second and third most utilized medicinal plants were \textit{Ovariodendron anisatum} and \textit{Wurbugia ugadensis} respectively.

Key words: Herbalists; Herbal medicine; Terminalia, Decoction

Introduction

Herbal medicines have been used for many years dating back as far as 3000 BC (Ayensu, 1978; WWF, 1993). Despite enormous advances in conventional medicines, traditional medicines have been encouraged by the Word Health Organization (WHO, 1978), partly because some conventional drugs have failed to prove effective, have serious side effects, or cannot cure certain new illnesses such as AIDS.

The World Bank has recently put a strong case for herbal healthcare (Mburu Mwangi, 2005), and recognized vital values of medicinal plants. These values are medicinal, ecological, income generation, cultural, social and religious roles. The World Bank report further pointed out that Kenya’s ministry of Health budget for medicines in 2002 provided for only 30% of the population. This left 70% (21 million) of the population who could not access the conventional drugs. The latter population group was therefore left to rely on traditional medicines for their healthcare needs.

In Africa, 90% of the population relies on traditional healers to meet their primary healthcare needs (Miller, 1990). In sub-Saharan Africa, it is estimated that one Western trained physician treats about 40,000 while one traditional healer treats about 400 patients (Hogle, 1990). This implies that there are many traditional healers serving a large portion of the population. There is need, therefore, to not only carry out ethnobotanical research and healing methods, but also encourage propagation and conservation of herbal plants among the local people. In addition, there is a rapid disappearance of genuine traditional herbalists and decline in authentic knowledge in traditional
treatment (Lindsay and Hepper, 1978). This is due to the Western influence and death of many aged healers from whom a great deal of information is derived. It is imperative therefore to document the indigenous knowledge regarding traditional medicines before it disappears.

In Kenya comprehensive ethnobotanical information and healing methods among the local communities is not completed. However, indigenous information of medicinal plants is recorded by several authors: (Glover, 1966; Lindsay and Hepper, 1978; Kokwaro, 1993; Kaendi, 1997; and Musila, 2000), among others. Elsewhere, herbal medicines research has been recently reported: (Barakat, E., Abu-Irmailum. Fatma U. Afifi. 2003; Joana Camejo-Rodrigues et al., 2003; and Lucia Viegi et al., 2003).

In this publication, ethnobotanical information and traditional medicines of the Mbeere and Embu people of Eastern province, Kenya is reported. The local herbalists complement the conventional local doctors in the treatment of the common diseases in the study area (Table 1). Documentation of the practices of these herbalists in Embu and Mbeere districts of eastern Province, Kenya, is reported for the first time. It is important to note that indigenous knowledge is passed orally and therefore there is need for comprehensive documentation. These herbalists use herbs whose available plant biodiversity transverses from the rainforests of Mt Kenya slopes to the semi-arid Mbeere District, availing a wide biodiversity of plants.

Materials and Method

The main objective of this research was to document indigenous knowledge of the Mbeere and Embu peoples of the Eastern Province, Kenya. This involved documentation of the medicinal plants traditionally used in healthcare, the herbal drugs preparations, the diseases treated, and collection of plant specimens. Preliminary visits were done to identify and select the herbalists to who took part in this study. The Provincial Director, Ministry of Gender, Sports, Culture, and Social Services provided a list of authentic herbalist groups. These groups were selected to cover most of the area under our study. The initial selection was based on the willingness of herbalists to give voluntary information and interaction with researchers during consultative meetings. These meetings were participatory in nature, with researchers as facilitators. The common agenda was to produce a pharmacopoeia of herbal drugs for use by the herbalists in the study area.

Ethnobotanical data was collected during a 12-month period from 110 herbalists practicing in the study area. They were both men and women aged 40 to 80 years. All the herbalists interviewed were Christians. Non-Christian herbalists were said to combine herbal medicines with witchcraft and were therefore avoided.

The indigenous knowledge was collected using Participatory Rapid Appraisal method (PRA). This involved driving around to the identified herbalists. An expert in PRA from the National Museums of Kenya participated in this research. Formal interviews through questionnaires were avoided as it was found to be intimidating to the herbalists, majority of whom were semi-illiterate. A record of responses from individual and groups of herbalists were documented immediately during consultative meetings.

Plant materials were authenticated by comparison with herbarium specimens. Each plant specimen collected was given a herbarium specimen number and the voucher samples kept in the East African Herbarium, and in the Faculty of Science (Botany Department), Jomo Kenyatta University of Agriculture and Technology (J.K.U.A.T.).

Results

The results are provided in Tables 1 - 3.
Table 1: Outpatient morbidity data for Embu District Hospital*

<table>
<thead>
<tr>
<th>Disease type</th>
<th>Year</th>
<th>%</th>
<th>Year</th>
<th>%</th>
<th>Year</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2000</td>
<td></td>
<td>2001</td>
<td></td>
<td>2002</td>
<td></td>
</tr>
<tr>
<td>Malaria</td>
<td>87898</td>
<td>29.1</td>
<td>128682</td>
<td>31.9</td>
<td>139985</td>
<td>29.4</td>
</tr>
<tr>
<td>Respiratory system</td>
<td>68392</td>
<td>23</td>
<td>93742</td>
<td>23.2</td>
<td>97500</td>
<td>20.5</td>
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<tr>
<td>Intestinal worms</td>
<td>25385</td>
<td>8.4</td>
<td>33796</td>
<td>8.4</td>
<td>36268</td>
<td>7.6</td>
</tr>
<tr>
<td>Skin infection</td>
<td>22850</td>
<td>6</td>
<td>25972</td>
<td>6.4</td>
<td>29468</td>
<td>6.2</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>14771</td>
<td>5</td>
<td>16515</td>
<td>4.1</td>
<td>18576</td>
<td>4</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>10525</td>
<td>3.5</td>
<td>12714</td>
<td>3.2</td>
<td>10913</td>
<td>2.3</td>
</tr>
<tr>
<td>Rheumatisim</td>
<td>5882</td>
<td>2</td>
<td>9756</td>
<td>2.4</td>
<td>10873</td>
<td>2.3</td>
</tr>
<tr>
<td>Eye infection</td>
<td>5333</td>
<td>2</td>
<td>7274</td>
<td>2</td>
<td>12762</td>
<td>2.7</td>
</tr>
<tr>
<td>Urinary tract infections</td>
<td>4513</td>
<td>1.5</td>
<td>5644</td>
<td>1.4</td>
<td>6681</td>
<td>1.4</td>
</tr>
<tr>
<td>Total new cases</td>
<td>271181</td>
<td></td>
<td>371668</td>
<td></td>
<td>437781</td>
<td></td>
</tr>
</tbody>
</table>

*Source: Embu District Health Annual report.

Table 2: Plant species and the healing methods used by the Mbeere and Embu people

<table>
<thead>
<tr>
<th>Condition/Local Names</th>
<th>Plant species</th>
<th>Part used</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Allergy Muuti (m)</td>
<td><em>Erythrina abyssinica</em></td>
<td>Roots</td>
</tr>
<tr>
<td>Mururuku (m)</td>
<td><em>Terminalia brownii</em></td>
<td>Roots</td>
</tr>
<tr>
<td>Gatukia (m)</td>
<td><em>Emilia discifolia</em></td>
<td>Roots</td>
</tr>
<tr>
<td>The roots are boiled in water and the decoction taken</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 2. Abortion (persons) Mururuku (m) | *Terminalia brownii* | Leaves |
| The leaves are boiled in water and the decoction taken |

| 3. Anthrax Mukengeta (m) | *Senna singuana* | Roots |
| Muthunthi (m)            | *Maytenus senegalensis* | Leaves |
| The parts are boiled and the decoction taken by the patient |

| 4. Asthma Muthiga (e)    | *Warburgia ugandensis* | Leaves/bark |
| Mwaraka (e)              | *Plectranthus barbatus* | Roots |
| Kieha kia Murangi (m)    | *Engleromyces goetzei* | Inner fresh |
| The parts are boiled in water and given to the patient |
5. Back-ache and Joint-ache

Muthira (e) | *Gnidia glauca* | Roots
Murangare (m) | *Acacia ataxacantha* | Roots
Muthigira (e) | *Acacia mellifera* | Roots
Muvaa (m) | *Pappea capensis* | Roots
Mutagataga (e) | *Harrisonia abyssinica* | Leaves/Roots
Mubindithindi (e) | *Fagaropsis angolensis* | Leaves
Muvingo (m) | *Dalbergia melanoxylon* | Bark
Muura (m) | *Pappea capensis* | Leaves
Muugu (e) | *Landolphia buchananii* | Leaves

The parts are boiled in water and taken with goat's soup

6. Bone-setting (fracture)

Muthata (e) | *Olea europaea ssp. africana* | Sap
Karura (e) | *Asparagus racemosus* | Roots

Apply sap or root decoction and bandage

7. Boils:

Ikothokotho (m) | *Cissus rotundifolia* | Fruits

Sap from the fruit applied on the boil

8. Bronchitis

Makandu (e) | *Ocimum gratissimum* | Leaves
Mucuki wa ngig (e)i | *Ageratum conyzoides* | Roots
Mumonjore (e) | *Solanecio sp.* | Roots

The parts are boiled and the vapour inhaled

9. Bleeding (Blood clotting)

Mutagataga (e) | *Harrisonia abyssinica* | Leaves
Mucuki wa Ngigi (e) | *Ageratum conyzoides* | Ashes
Mutundu (e) | *Croton macrostachyus* | Juice

The decoction of bark is taken, while ashes and the juice are applied to stop bleeding

10. Colds and Flu

Mucobi (m) | *Hoslundia opposita* | Leaves
Mutongu (m) | *Solanum incanum* | Fruits
Muthuguni (m) | *Clerodendron myricoides* | Leaves
Gitunguru (e) | *Allium ampeloprassum* | Leaves
Muratina (m) | *Kigelia africana* | Bark
Mugaa (1) (e) | *Acacia abyssinica* | Tea from the bark
Mugaa (2) (e) | *Acacia hockii* | Bark
Munyua-mai (e) | *Eucalyptus globulus* | Leaves
Muringamu (e) | *Eucalyptus saligna* | Leaves
Ndania (e) | *Coriandrum sativa* | Leaves
Mucururi (m) | *Trichodesma zeylanicum* | Whole plant
Parts are boiled in water. The patient inhales the vapour or washes face with the decoction

11. Cancer (of Breast and Prostate Glands)

Muburu (m)  Vitex doniana  Leaves
Mukururu (m)  Flueggea virosa  Roots
Ndonga (m)  Ovariodendron anisatum  Root tuber
Muthunga (e)  Launea cornuta  Whole plant
Mubuu (m)  Grewia villosa  Roots
Muraga (m)  Maytenus obscura  Roots
Muiria (e)  Prunus africana  Bark

Concoction of the boiled parts is drunk by the patient

12. Calf-rejection

Ndonga (m)  Ovariodendron anisatum  Root tuber

Concoction given to animal

13. Dog-poison

Mwakia (m)  Zanha africana  Root tuber

Root powder mixed with food

14. Dog-bite

Kianduri (m)  Xerophyta spekei  Ashes

Ashes applied to the bitten part

15. Diabetes

Mucege (m)  Bidens pilosa  Ashes
Mutegenye (m)  Cyathula polycephala  Ashes
Kianduri (m)  Xerophyta spekei  Ashes

Add water to ashes and drink

Ndonga(m)  Ovariodendron anisatum  Ashes

Add water to the ashes and give to the patient

Karuria-Tatha (m)  Schkuhria pinnata  Whole plant

Boil the whole plant and drink the decoction to reduce sugar levels

Muthunga (m)  Launea cornuta  Whole plant
Muthigiriri (m)  Lonchocarpus eriocalyx  Bark

The decoction reduces the sugar levels when drunk

Mwembe (e)  Mangifera indica  Leaves (shoot)

Dry young shoots of Mangifera indica. Dry Launea cornuta. Mix one teaspoonful of each powder in a cup of water, drink 3 times a week, and repeat if necessary.

16. Diarrhea

Mutagataga (m)  Harrisonia abyssinica  Roots
Murerema (e)  Basella alba  Leaves

Mix the parts with water, boil and drink.
### 17. Erectile Dysfunction (Impotence)
- **Managu** (e)  
  *Solanum nigrum*  
  Whole plant
- **Iviuviu** (e)  
  *Sonchus asper*  
  Whole plant
- **Kungumanga** (e)  
  *Punica granatum*  
  Seeds
- **Ndonga** (e)  
  *Ovariodendron anisatum*  
  Whole plant
- **Mugeta** (e)-**Muthiga**  
  *Warburgia ugandensis*  
  Leaves
- **Muramba** (e)  
  *Adansonia digitata*  
  Bark

**The decoction of parts drunk**

### 18. Eye Problem (infection)
- **Mururuku** (m)  
  *Terminalia brownii*  
  Leaves
- **Muringa** (m)  
  *Cordia africana*  
  Bark

**Wash eye with decoction**

### 19. Elephantiasis
- **Mowerere** (Kirembo) (e)  
  *Euphorbia pseudogranitii*  
  Bark
- **Mukengeta** (e)  
  *Senna singuana*  
  Bark

**Drink decoction of bark**

### 20. Fungal Infection and Ring Worm
- **Gatukia** (e)  
  *Emilia discifolia*  
  whole plant
- **Mucii** (m)  
  *Leucas mollis*  
  Leaves
- **Mwinu** (m)  
  *Senna didymobotrya*  
  Leaves
- **Mukorwe** (e)  
  *Albizia gummiifera*  
  Bark
- **Mururuku** (m)  
  *Terminalia brownii*  
  Leaves

**Apply decoction from boiled parts on the body**

### 21. Family Planning (persons)
- **Mururuku** (m)  
  *Terminalia brownii*  
  Leaves

**Boil leaves in water and drink before action**

### 22. Gout
- **Murangare** (m)  
  *Acacia ataxacantha*  
  Roots

**Decoction from boiled roots taken**

### 23. Gonorrhoea
- **Murangare** (m)  
  *Acacia ataxacantha*  
  Roots
- **Mwogoya** (m)  
  *Plectranthus barbatus*  
  Roots
- **Kithunju** (m)  
  *Aloe kendongensis*  
  Leaves

**Decoction of the boiled roots taken**

- **Makongo** (m)  
  *Agave sisalana*  
  Roots
- **Mutura** (e)  
  *Ximenia americana*  
  Bark
- **Cong’e** (e)  
  *Oxygonum sinuatum*  
  Leaves
- **Muruva** (m)  
  *Grewia tembensis*  
  Roots
Decoction from mixture of the parts taken, two cups daily for three days

Mukungumanga (m)    *Panica granatun*    Seeds
Mubabai (male) (m)   *Carica papaya*      Roots
Gikwa kia ngima (e)  *Dioscoera minutifolia* Tuber

The above parts are boiled together in three cups of water (teaspoon each), one cup of decoction taken daily for three days.

24. Insecticide

Muthiringo (m)       *Strombosia scheffleri*    Powder of the dry leaves
Murema muthua (m)    *Carphalea glaucescens*   Leaves
Muthira (m)          *Gnidia glauca*         Leaves

Apply dry powder of the leaves

25. Kidney Problems

Mururi (e)           *Trichilia emetica*      Bark
Mukururu (m)         *Flueggea virosa*       Roots
Muthaguta (e)         *Securinega virosa?*      Bark

Boil parts in water and give to the patient

26. Malaria

Mubindithindi (e)    *Fagaropsis angolensis*  Leaves
Mwinu (e)            *Senna didymobotrya*     Leaves
Wanjiru-wa-Rurii (e) *Ajuga remota*         Whole plant
Mukurwe (e)          *Albizia gumiﬁera*      Bark
Mumonjora (e)        *Solanecio sp.*        Leaves
Muuti (e)            *Erythrina abyssinica*   Roots

Decoction of the above mixture in boiled water is taken

Mururuku (m)         *Terminalia brownii*     Leaves
Mukunyi (m)          *Cardiospermum corindum*  Roots
Mutagataga (m)       *Harrisonia abyssinica*  Roots
Mugirimura (m)       *Pentas zanzibarica*     Roots
Muvovo (m)           *Leonotis mollissima*    Roots
Murumbawe (m)        *Withania somnifera*     Leaves/Roots
Muterendu (m)        *Teclea nobilis*        Leaves
Mataaa (m)           *Ocimum basilicum*      Leaves
Karuria-tatha (m)    *Schkuhria pinnata*     Whole plant
Mukenia (m)          *Lantana camara*        Leaves
Mucatha (m)          *Vernonia lasiopus*      Leaves
Kithunjua (m)        *Aloe balyi*            Leaves
Mubuthi (m)          *Caesalpinia volkensii*  Leaves
Mutambi (m)          *Strychnos henningsii*    Stem
Kivia (e)            *Engleromyces goetzei*    Whole fruit
**27. Pneumonia**

- **Mwokia (m)**  
  *Zanha africana*  
  Roots

- **Mucigara (m)**  
  *Uvaria scheffleri*  
  Roots

- **Murangare (m)**  
  *Acacia ataxacatha*  
  Roots

- **Mukumbi (m)**  
  *Abrus schimperi*  
  Roots

- **Muthigira (m)**  
  *Acacia mellifera*  
  Bark

- **Kigurugua (m)**  
  *Commiphora africana*  
  Roots

- **Kithunju (m)**  
  *Aloe ballyi*  
  Leaves

- **Mugirimura (m)**  
  *Vernonia brachycalyx*  
  Roots

- **Mucatha (m)**  
  *Vernonia lasiopus*  
  Leaves

- **Munjuga-iria (e)**  
  *Clerodendrum myricoides*  
  Roots

**Decoction of mixture drunk**

**28. Rheumatism (Joint Pains)**

- **Mubingo (m)**  
  *Dalbergia melanoxylon*  
  Roots

- **Muthinia (m)**  
  *Croton dichogamus*  
  Roots

- **Mutiru (m)**  
  *Lonchocarpus eriocalyx*  
  Bark

- **Mukenenga (m)**  
  *Zanthoxylum chalybeum*  
  Roots

**29. Stomach Pains**

- **Mwiringwa (e)**  
  *Leonotis mollissima*  
  Roots

- **Mucuki (m)**  
  *Epilobium hirsutum*  
  Roots

- **Muthunthi (m)**  
  *Maytenus senegalensis*  
  Roots

- **Mutegeanye (m)**  
  *Cyathula polycephala*  
  Leaves

- **Muga-Nthege (m)**  
  *Albizia amara*  
  Roots

- **Kirurite (e)**  
  *Tithonia diversifolia*  
  Leaves

- **Thina (e)**  
  *Cuscuta kilimanjari*  
  Whole plant

- **Muthaata (m)**  
  *Olea europaea*  
  Leaves

**Parts boiled in water and the decoction drunk**

**30. Shampoo (Hair)**

- **Karundu (m)**  
  *Hermannia sp.*  
  Leaves

**Mix the leaves of the plant with water, apply to hair then rinse with water**

**31. Skin Lashes**

- **Mung’endia Nthenge (m)**  
  *Senecio succulent*  
  Stem

**Apply the stem ash**
32. Snake-bite
Ndonga (m)  
*Kvariolendrion anisatum*  
Ashes
Kianduri (m)  
*Xerophyta spekei*  
Ashes

Apply ashes to the bite

33. Soup
Muthinia (m)  
*Croton dichogamus*  
Roots
Mukenenga (m)  
*Zanthoxylum chalybeum*  
Roots
Mugeta (m)  
*Warburgia ugandensis*  
Leaves

Boil the parts in water and take with goat's bone soup

34. Tooth-ache
Mwokia (e)  
*Zanha africana*  
Roots
Gakurue (e)  
*Phyllanthus sepialis*  
Roots
Mutongu (m)  
*Solanum incanum*  
Fruits
Mutegenye (e) white  
*Achyranthes aspera*  
Roots

Either apply powdered parts to the tooth or boil the parts and gaggle the decoction

35. Typhoid
Muthithi (e)  
*Osyris abyssinica*  
Leaves/Roots
Mutathi (e)  
*Clausena anisata*  
Roots
Mwiria (e)  
*Prunus africana*  
Bark
Mukambura (m)  
*Dovyalis abyssinica*  
Fruits
Cong'e (e)  
*Oxygonum simuatum*  
Whole plant
Kiruma (m)  
*Aloe lateritia*  
Leaves

Mixture of parts boiled in water and then drunk
Mwonge (m)  
*Periploca linearifolia*  
Roots
Kirurite (e)  
*Tithonia diversifolia*  
Leaves
Mutotoo (m)  
*Dombeya rotundifolia*  
Bark
Munjuga-iria (m)  
*Clerodendrum myricoides*  
Roots
Murembu (e)  
*Ehretia cymosa*  
Bark
Murava (m)  
*Combretum molle*  
Leaves

Individual parts are boiled in water and drink

36. Ulcers
Gatukia (e)  
*Emilia discifolia*  
Whole plant
Mugere (e)  
*Hibiscus micranthus*  
Roots
Mukeu (e)  
*Dombeya burgessiae*  
Roots

Powder of the parts is mixed with water and boiled, then given to the patient
37. Vitamins Supplement
Muburu (m)  
Muthigiu (m)  
Tea or fruits is taken

38. Worms (Human/animals)
Mubarwa (e)  
Mwinu (e)  
Muvovo (m)  
Mucaritha (m)  
Mugeta (m)  
Mureruku (m)  
Terere (e)  
Mubera (m)  
Mubiru (m)  
The parts are boiled in water and given to the patient

39. Skin burns
Mwembe (e)  
Decoction applied

40. Blood pressure
Muthigiriri (e)  
Mutendu (e)  
Mukura (e)  
Drink decoction

Table 3: Medicinal plant species ranking.

<table>
<thead>
<tr>
<th>Species Name</th>
<th>Ranking</th>
<th>No of Times Used</th>
<th>Diseases Treated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terminalia brownii</td>
<td>1</td>
<td>6</td>
<td>Allergy, Abortion, Eye problems</td>
</tr>
<tr>
<td>Ovariodendron anisatum</td>
<td>2</td>
<td>5</td>
<td>Family planning, Kidney, Worms</td>
</tr>
<tr>
<td>Warburgia ugandensis</td>
<td>3</td>
<td>4</td>
<td>Cancer, Calf rejection, Diabetes, Erectile Dysfunction</td>
</tr>
<tr>
<td>Acacia ataxacantha</td>
<td>3</td>
<td>4</td>
<td>Asthma, Erectile Dysfunction, Soup, Worms.</td>
</tr>
<tr>
<td>Harrisonia abyssinica</td>
<td>3</td>
<td>4</td>
<td>Back-ache, Gout, Gonorrhea, Pneumonia.</td>
</tr>
<tr>
<td>Olea europaea</td>
<td>4</td>
<td>3</td>
<td>Back-ache, Joints, Bleeding, Diarrhea, Malaria.</td>
</tr>
<tr>
<td>Emilia discifolia</td>
<td>4</td>
<td>3</td>
<td>Bone-setting, Stomach pains.</td>
</tr>
<tr>
<td>Leonotis mollissima</td>
<td>4</td>
<td>3</td>
<td>Allergy, Fungal infection, Ulcers.</td>
</tr>
<tr>
<td>Acacia mellifera</td>
<td>5</td>
<td>2</td>
<td>Malaria, Stomach pains, Worms.</td>
</tr>
<tr>
<td>Fagaropsis angolensis</td>
<td>5</td>
<td>2</td>
<td>Backache, Pneumonia.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Backache, Malaria.</td>
</tr>
</tbody>
</table>
Dalbergia melanoxylon | 5 | 2 | Backache, Pneumonia.
Ocimum gratissimum | 5 | 2 | Bronchitis, Malaria.
Clerodendrum myricoides | 5 | 2 | Cold and Flu, Malaria.
Prunus africana | 5 | 2 | Cancer, Typhoid
Schkuhria pinnata | 5 | 2 | Diabetes, Malaria
Flueggea virosa | 5 | 2 | Cancer, Kidney problems
Trichilia emetica | 5 | 2 | Kidney problems, Skin rashes.
Senna singueana | 5 | 2 | Anthrax, Elephantiasis
Tithonia diversifolius | 5 | 2 | Stomach pains, Typhoid
Vitex doniana | 5 | 2 | Cancer, Vitamins supplement
Mangifera indica | 5 | 2 | Diabetes, Skin burns
Ageratum conyzoides | 5 | 2 | Bronchitis, Bleeding
Xerophyta spekei | 5 | 2 | Dog bite, Diabetes
Erythrina abyssinica | 5 | 2 | Allergy, Malaria
Engleromyces goetzei | 5 | 2 | Asthma, Malaria
Maytenus obscura | 6 | 1 | Cancer
Plectranthus barbatus | 6 | 1 | Gonorrhoea
Aloe kendongensis | 6 | 1 | Gonorrhoea
Vernonia lasiopus | 6 | 1 | Malaria
Croton macrostachyus | 6 | 1 | Bleeding
Grewia virosa | 6 | 1 | Cancer
Lonchocarpus eriocalyx | 6 | 1 | Diabetes
Cordia africana | 6 | 1 | Eye problems
Senna didymobotrya | 6 | 1 | Fungal Infection, Ring worms
Albizia gummifera | 6 | 1 | Fungal Infection, Ring worms
Ximenia americana | 6 | 1 | Gonorrhea
Ajuga remota | 6 | 1 | Malaria
Cardiospermum corindum | 6 | 1 | Malaria
Zanthoxylum chalybeum | 6 | 1 | Rheumatism
Maytenus senegalensis | 6 | 1 | Stomach pains

Ranking: 1= Commonly used; 6= Used for only one disease

Discussion

Herbal medicines played an important role in the provision of health care for the rural poor within the communities under our study. The advantages are clearly low cost of herbal drugs and an element of self-reliance and non-dependency on government health institutions, some of which were located far away from the communities. Traditional health practitioners or herbalists treat patients using the indigenous knowledge acquired over generations, down family lines. This information is usually stored in human pharmacopoeia and hence the need for documentation for posterity. It is also prudent to document the indigenous knowledge due to the rapid disappearance of herbalists with authentic knowledge majority of who are advanced in age.

The herbalists were able to identify poisonous plants, by observing the foliage which domestic animals avoided while grazing. In addition, birds and bees avoided nectar from flowers of toxic plants, and through this “traditional taxonomy” plants with thorny leaves were regarded as “male”, that is, naturally poisonous. On the other hand, plants without thorny leaves were regarded as non-poisonous.
The commonest diseases within the study area were malaria, respiratory disorder, intestinal worms, skin diseases, and pneumonia, rheumatism, diarrhea and eye infections. Their incidences increased in that order. This was confirmed by the Embu District hospital morbidity data covering a three-year period from year 2000 to 2002 (Table 1). These diseases were treatable by the herbalists using common medicinal plants found in the study area. The report shows malaria was the commonest and the most commonly addressed disease by both herbalists and by the doctors at the local hospital. There was a correlation between the number of plants used to treat the most common diseases and the prevalence of diseases found in the study area (Table 2). Thus, the herbalists knew many herbal plants that were used in the treatment of the most prevalent ailments.

Medicinal plants species documented in the study area were ranked by the number of times they were used to treat different diseases (Table 3). The ranking ranged from 1 to 6. Rank 1 represented multi-purpose herbs and rank 6 denoted those herbs used to treat one type of ailment without combination with other medicinal plants.

*Terminalia brownii* was a multi-purpose medicinal plant and among the most used herbal plant for various conditions. It was used as a multi-purpose medicinal plant and was used either alone or in combination with other plants. The second and third most utilized medicinal plants were *Ovariodendron anisatum* and *Warbugia ugandensis* respectively. For this reason, these plants should be encouraged for propagation and conservation. In addition, proper methods of harvesting should be used as means of conservation of such multi-purpose medicinal plants.

**Conclusions**

The herbalists were active in the provision of primary and secondary healthcare in the study areas. Malaria was the commonest disease in Mbeere and Embu districts and could be treated with at least twenty-five medicinal plants, either singly or in combination with other medicinal plants. Respiratory ailments were treated with 21 herbs; Intestinal worms with 9 herbs; Pneumonia with 10 plants; Diarrhea with 23 plants; Rheumatism with 9 herbs and urinary tract infections with 11 herbs. The most used medicinal plants were *Terminilia brownii* and *Ovariodendron anisatum*, which treated six and five conditions respectively.

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**References**