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. 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 Ovariodendron anisatum and 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 World 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>Year / %</th>
<th>2000 %</th>
<th>2001 %</th>
<th>2002 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malaria</td>
<td>87898</td>
<td>128682</td>
<td>139985</td>
</tr>
<tr>
<td>Respiratory. system</td>
<td>68392</td>
<td>93742</td>
<td>97500</td>
</tr>
<tr>
<td>Intestinal worms</td>
<td>25385</td>
<td>33796</td>
<td>36268</td>
</tr>
<tr>
<td>Skin infection</td>
<td>22850</td>
<td>25972</td>
<td>29468</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>14771</td>
<td>16515</td>
<td>18576</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>10525</td>
<td>12714</td>
<td>10913</td>
</tr>
<tr>
<td>Respiratory. system</td>
<td>5882</td>
<td>9756</td>
<td>10873</td>
</tr>
<tr>
<td>Intestinal worms</td>
<td>5333</td>
<td>7274</td>
<td>12762</td>
</tr>
<tr>
<td>Skin infection</td>
<td>4513</td>
<td>5644</td>
<td>6681</td>
</tr>
<tr>
<td>Total new cases</td>
<td>271181</td>
<td>371668</td>
<td>437781</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

Key: (m)=Mbeere; (e)= Embu

<table>
<thead>
<tr>
<th>Condition/Local Names</th>
<th>Plant species</th>
<th>Part used</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Allergy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>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>
<tr>
<td>2. Abortion (persons)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mururuku (m)</td>
<td><em>Terminalia brownii</em></td>
<td>Leaves</td>
</tr>
<tr>
<td>The leaves are boiled in water and the decoction taken</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Anthrax</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mukenegeta (m)</td>
<td><em>Senna singuana</em></td>
<td>Roots</td>
</tr>
<tr>
<td>Muthunthi (m)</td>
<td><em>Maytenus senegalensis</em></td>
<td>Leaves</td>
</tr>
<tr>
<td>The parts are boiled and the decoction taken by the patient</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Asthma</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muthiga (e)</td>
<td><em>Warburgia ugandensis</em></td>
<td>Leaves/bark</td>
</tr>
<tr>
<td>Mwaraka (e)</td>
<td><em>Plectranthus barbatus</em></td>
<td>Roots</td>
</tr>
<tr>
<td>Kiecha kia Murangi (m)</td>
<td><em>Engleromyces goetzei</em></td>
<td>Inner fresh</td>
</tr>
<tr>
<td>The parts are boiled in water and given to the patient</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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

Muua (m)  
_Landolphia buchananii_  
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)i  
_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
- Mutatagata (m) *Harrisonia abyssinica* Roots
- Murerema (e) *Basella alba* Leaves

Mix the parts with water, boil and drink.
17. Erectile Dysfunction (Impotence)

Managu (e)  
Iviuviu (e)  
Kungumanga (e)  
Ndonga (e)  
Mugeta (e)-Muthiga  
Muramba (e)  

*Solanum nigrum*  
*Sonchus asper*  
*Punica granatum*  
*Ovariodendron anisatum*  
*Warburgia ugandensis*  
*Adansonia digitata*  

The decoction of parts drunk

18. Eye Problem (infection)

Mururuku (m)  
Muringa (m)  

*Terminalia brownii*  
*Cordia africana*  

Wash eye with decoction

19. Elephantiasis

Mwerere (Kirembo) (e)  
Mukengereta (e)  

*Euphorbia pseudograntii*  
*Senna singuana*  

Drink decoction of bark

20. Fungal Infection and Ring Worm

Gatukia (e)  
Mucii (m)  
Mwinu (m)  
Mukorwe (e)  
Mururuku (m)  

*Emilia discifolia*  
*Leucas mollis*  
*Senna didymobotrya*  
*Albizia gummięera*  
*Terminalia brownii*  

Apply decoction from boiled parts on the body

21. Family Planning (persons)

Mururuku (m)  

*Terminalia brownii*  

Boil leaves in water and drink before action

22. Gout

Murangare (m)  

*Acacia ataxacantha*  

Decoction from boiled roots taken

23. Gonorrhoea

Murangare (m)  
Mwogoya (m)  
Kithunju (m)  

*Acacia ataxacantha*  
*Plectranthus barbatus*  
*Aloe kendongensis*  

Decoction of the boiled roots taken

Makongo (m)  
Mutura (e)  
Cong'e (e)  
Muruva (m)  

*Agave sisalana*  
*Ximenia americana*  
*Oxygonum sinuatum*  
*Grewia tembensis*  

Roots  
Bark  
Leaves  
Roots
Decoction from mixture of the parts taken, two cups daily for three days

Mukungumanga (m)  
Panica granatum  
Seeds
Mubabai (male) (m)  
Carica papaya  
Roots
Gikwa kia ngima (e)  
Dioscorea 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 glauescens  
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)  
Aujuga remotia  
Whole plant
Mukurwe (e)  
Albizia gummifera  
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/Roots
Murumbawe (m)  
Withania somnifera  
Leaves/Roots
Mutagataga (m)  
Schkuhria pinnata  
Leaves
Mataa (m)  
Ocimum basilicum  
Whole fruit
Karuria-tatha (m)  
Schkuhria pinnata  
Whole plant
Mukenia (m)  
Lantana camara  
Leaves
Muca (m)  
Vernonia lasiopus  
Leaves
Kithunju (m)  
Aloe balyi  
Leaves
Mubuthi (m)  
Caesalpinia volkensii  
Leaves
Mutambi (m)  
Strychnos henningsii  
Stem
Kivia (e)  
Engleromyces goezei  
Whole fruit
Mugegeti (e)  
*Mug*$^*$egeti* (a)  
*Pistacia aethiopica*  
Bark

Mwarobaine (e, m)  
*Mwar*obaine (e, m)  
*Azadirachta indica*  
All parts

Mukandu (m)  
*Muk*andu (m)  
*Ocimum gratissimum*  
Leaves

Njugu (e)  
*Njugu* (e)  
*Cajan*us cajan  
Leaves

**Parts indicated are boiled in water and drunk two times a day for a week.**

### 27. Pneumonia

Mwokia (m)  
*Mw*okia (m)  
*Zanha africana*  
Roots

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

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

Mukumbi (m)  
*Mukumbi* (m)  
*Abras schimperi*  
Roots

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

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

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

Mugirimura (m)  
*Mugir*imura (m)  
*Vernonia brachycalyx*  
Roots

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

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

**Decoction of mixture drunk**

### 28. Rheumatism (Joint Pains)

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

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

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

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

### 29. Stomach Pains

Mwirungwa (e)  
*Mwirungwa* (e)  
*Leonotis mollissima*  
Roots

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

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

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

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

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

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

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

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

### 30. Shampoo (Hair)

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

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

### 31. Skin Lashes

Mung’enda Nthenge (m)  
*Mung’enda Nthenge* (m)  
*Senecio succulent*  
Stem

**Apply the stem ash**
Ikothokotho (m)  
*Cissus rotundifolia*  
Fruits

Mururi (e)  
*Trichilia emetica*  
Sap

**Apply sap or fruit juice to lashes or pimples**

32. *Snake-bite*

Ndonga (m)  
*Ovariodendron 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)  
*Solamum 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'ë (e)  
*Oxygonum sinuatum*  
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

Mutootoo (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)  Vitex doniana  Fruits
Muthigiu (m)  Rhus natalensis  Tea from bark

Tea or fruits is taken

38. Worms (Human/animals)
Mubarwa (e)  Albizia anthelmintica  Bark/roots
Mwinu (e)  Senna didymobotrya  Leaves
Muvoyo (m)  Leonotis mollissima  Leaves
Mucaritha (m)  Entada leptostachya  Roots
Mugeta (m)  Warburgia ugandensis  Bark
Mururuku (m)  Terminalia brownii  Bark
Terere (e)  Amaranthus hybridus  Leaves
Mubera (m)  Psidium guajava  Leaves
Mubiru (m)  Vangueria madagascariensis  Leaves

The parts are boiled in water and given to the patient

39. Skin burns
Mwembe (e)  Mangifera indica  Leaves

Decoction applied

40. Blood pressure
Muthigiriri (e)  Lonchocarpus eriocalyx  Bark
Muterendu (e)  Teclea simplicifolia  Leaves
Mukura (e)  Piliostigma thonningii  Bark

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, Family planning, Kidney, Worms</td>
</tr>
<tr>
<td>Ovariodendron anisatum</td>
<td>2</td>
<td>5</td>
<td>Cancer, Calf rejection, Diabetes, Erectile Dysfunction</td>
</tr>
<tr>
<td>Warburgia ugandensis</td>
<td>3</td>
<td>4</td>
<td>Asthma, Erectile Dysfunction, Soup, Worms.</td>
</tr>
<tr>
<td>Acacia ataxacantha</td>
<td>3</td>
<td>4</td>
<td>Back-ache, Gout, Gonorrhea, Pneumonia.</td>
</tr>
<tr>
<td>Harrisonia abyssinica</td>
<td>3</td>
<td>4</td>
<td>Back-ache, Joints, Bleeding, Diarrhea, Malaria.</td>
</tr>
<tr>
<td>Olea europaea</td>
<td>4</td>
<td>3</td>
<td>Bone-setting, Stomach pains.</td>
</tr>
<tr>
<td>Emilia discifolia</td>
<td>4</td>
<td>3</td>
<td>Allergy, Fungal infection, Ulcers.</td>
</tr>
<tr>
<td>Leonotis molliosona</td>
<td>4</td>
<td>3</td>
<td>Malaria, Stomach pains, Worms.</td>
</tr>
<tr>
<td>Acacia mellifera</td>
<td>5</td>
<td>2</td>
<td>Backache, Pneumonia.</td>
</tr>
<tr>
<td>Fagaropsis angolensis</td>
<td>5</td>
<td>2</td>
<td>Backache, Malaria.</td>
</tr>
<tr>
<td>Plant Name</td>
<td>Rank</td>
<td>Disease</td>
<td></td>
</tr>
<tr>
<td>--------------------------------</td>
<td>------</td>
<td>----------------------------------</td>
<td></td>
</tr>
<tr>
<td>Dalbergia melanoxylon</td>
<td>5</td>
<td>Backache, Pneumonia.</td>
<td></td>
</tr>
<tr>
<td>Ocimum gratissimum</td>
<td>5</td>
<td>Bronchitis, Malaria.</td>
<td></td>
</tr>
<tr>
<td>Clerodendrum myricoides</td>
<td>5</td>
<td>Cold and Flu, Typhoid.</td>
<td></td>
</tr>
<tr>
<td>Prunus africana</td>
<td>5</td>
<td>Cancer, Typhoid.</td>
<td></td>
</tr>
<tr>
<td>Schkuhria pinnata</td>
<td>5</td>
<td>Diabetes, Malaria.</td>
<td></td>
</tr>
<tr>
<td>Flueggea virosa</td>
<td>5</td>
<td>Cancer, Kidney problems</td>
<td></td>
</tr>
<tr>
<td>Trichilia emetica</td>
<td>5</td>
<td>Kidney problems, Skin rashes.</td>
<td></td>
</tr>
<tr>
<td>Senna singueana</td>
<td>5</td>
<td>Anthrax, Elephantiasis</td>
<td></td>
</tr>
<tr>
<td>Tithonia diversifolius</td>
<td>5</td>
<td>Stomach pains, Typhoid</td>
<td></td>
</tr>
<tr>
<td>Vitex doniana</td>
<td>5</td>
<td>Cancer, Vitamins supplement</td>
<td></td>
</tr>
<tr>
<td>Mangifera indica</td>
<td>5</td>
<td>Diabetes, Skin burns</td>
<td></td>
</tr>
<tr>
<td>Ageratum conyzoides</td>
<td>5</td>
<td>Bronchitis, Bleeding</td>
<td></td>
</tr>
<tr>
<td>Xerophyta spekei</td>
<td>5</td>
<td>Dog bite, Diabetes</td>
<td></td>
</tr>
<tr>
<td>Erythrina abyssinica</td>
<td>5</td>
<td>Allergy, Malaria</td>
<td></td>
</tr>
<tr>
<td>Englomeromyces goetzii</td>
<td>5</td>
<td>Asthma, Malaria.</td>
<td></td>
</tr>
<tr>
<td>Maytenus obscura</td>
<td>6</td>
<td>Cancer</td>
<td></td>
</tr>
<tr>
<td>Plectranthus barbatus</td>
<td>6</td>
<td>Gonorrhoea</td>
<td></td>
</tr>
<tr>
<td>Aloe kendongensis</td>
<td>6</td>
<td>Gonorrhoea</td>
<td></td>
</tr>
<tr>
<td>Vernonia lasiopus</td>
<td>6</td>
<td>Malaria</td>
<td></td>
</tr>
<tr>
<td>Croton macrostachyus</td>
<td>6</td>
<td>Bleeding</td>
<td></td>
</tr>
<tr>
<td>Grewia virosa</td>
<td>6</td>
<td>Cancer</td>
<td></td>
</tr>
<tr>
<td>Lonchocarpus eriocalyx</td>
<td>6</td>
<td>Diabetes</td>
<td></td>
</tr>
<tr>
<td>Cordia africana</td>
<td>6</td>
<td>Eye problems</td>
<td></td>
</tr>
<tr>
<td>Senna didymobotrya</td>
<td>6</td>
<td>Fungal Infection, Ring worms</td>
<td></td>
</tr>
<tr>
<td>Albizia gummifera</td>
<td>6</td>
<td>Fungal Infection, Ring worms</td>
<td></td>
</tr>
<tr>
<td>Ximenia americana</td>
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<td>Gonorrhoea</td>
<td></td>
</tr>
<tr>
<td>Ajuga remota</td>
<td>6</td>
<td>Malaria</td>
<td></td>
</tr>
<tr>
<td>Cardiospermum corindum</td>
<td>6</td>
<td>Malaria</td>
<td></td>
</tr>
<tr>
<td>Zanthoxylum chalybeum</td>
<td>6</td>
<td>Rheumatism</td>
<td></td>
</tr>
<tr>
<td>Maytenus senegalensis</td>
<td>6</td>
<td>Stomach pains</td>
<td></td>
</tr>
</tbody>
</table>

**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 ugadensis 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 Terminalia brownii and Ovariodendron anisatum, which treated six and five conditions respectively.

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References