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Comparative Medical Ethnobotany of the Senegalese Community Living in Turin (Northwestern Italy) and in Adeane (Southern Senegal)

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A medico-ethnobotanical survey was conducted among the Senegalese migrant communities of Turin (Piedmont, NW Italy) and their peers living in Adeane (Casamance, Southern Senegal), both among healers and laypeople. Through 27 in-depth interviews, 71 medicinal plant taxa were recorded and identified in Adeane and 41 in Turin, for a total of 315 different folk remedies recorded in Senegal and 62 in Turin. The large majority of the medicinal plants recorded among Senegalese migrants in Turin were also used in their country of origin. These findings demonstrate the resilience of home remedies among migrants and consequently the role they should have in shaping public health policies devoted to migrant groups in Western Countries, which seek to seriously take into account culturally sensitive approaches, that is, emic health-seeking strategies.

1. Introduction

In the last decade, the ethnobotany of migrant populations, especially in Western countries, has become the focus of a number of studies, which have investigated the trajectories of change of Traditional Medicines (TMs) and especially Traditional Knowledge (TK) concerning medicinal plants. Moreover, such studies have made progress in gaining a better understanding of newcomers’ health-seeking strategies. These data are crucial in the implementation of culturally sensitive approaches in public health and nutritional policies in the host countries and/or to improve phytopharmacovigilance [1–5].

In particular, in Europe, the ethnobotanical knowledge of various migrant groups has been studied in different (mainly urban) contexts: Turkish and Russian migrants in Germany [6, 7]; Thai women in Sweden [8]; Surinamese migrants in The Netherlands [9, 10]; South-Asians [11–14] and Andeans in England [15–17]. From these previous studies, three key findings have emerged so far.

(i) Newcomers’ TK and related domestic practices may show various degrees of resilience (i.e., the attitude to recover from the changes, which originate from the displacement).

(ii) The resilience is highly dependent on practical circumstances (distance between the home and the host countries, corresponding to possibilities of frequent travel), but also on complex cultural exchanges ongoing between the diasporas and the autochthonous and/or other migrant populations. For example, factors such as (1) the occurrence of relevant transnational social and trade networks between the migrants and their home country, (2) the availability of traditional practitioners and/or herbs and food plant items in food shops in the host country, (3) identity-bound perceptions in relation to specific botanicals (which may be considered culturally important), (4) laws in place in the host countries allowing or tolerating the occurrence of non-autochthonous food/medicinal plants, and (5) multicultural approaches in the institutionalised public health frameworks of the host country, all play crucial roles in determining the resilience and sustainability of these TM practices in the migrants’ host country.
In Italy, no ethnobotanical study has addressed these specific issues thus far, despite the fact that the country has faced tremendous changes in its social structure over the last two decades. In fact, these changes are due in large part to the arrival of a significant number of young and middle-aged migrants from Africa and especially Eastern Europe (most notably, Romanians and Albanians). Nowadays, it is estimated that five million migrants live in Italy, with an increase of three million in the last ten years [18]. The large majority of migrants live in the Central-Northern regions of the country; one-fifth of which are Romanians, followed by Albanians and Moroccans. The Senegalese are quantitatively the 17th largest migrant community in Italy, but they represent the biggest “black” African community in the country, encompassing approximately 73,000 members. Moreover, this community is also historically one of the most important migrant groups in Italy, as it formed a significant presence already in the 1980’s [18].

Recent sociological studies have pointed out the existence of a Senegalese transmigrant movement made of people who are regular “comers and goers” between Africa and Europe and that their perception of a successful return is still associated—in contrast with other African communities—with permanent return to their homeland. This final aim is, however, generally compromised with aspirations of economic advancement and family obligations [19, 20]. Most of the earnings of Senegalese migrants are used for investment in housing in their home country, significantly altering the landscape of local cities [21].

Despite the fact that a study has well demonstrated the link between depression and rapid changes in the social organisation among Senegalese migrants [22], a fair public debate on culturally sensitive approaches in transcultural health policies is still lacking in Italy. This could be due to the state of political discourse in Italy, which has been highly influenced over the last years by instances of xenophobia, and which has subsequently affected several political actors and policy makers [23–27].

The aims of this study were to record uses of natural remedies (including food preparations perceived as “healthy”) among the Senegalese community of Turin (Northern Italy) and in their country of origin, to compare these two ethnobotanies and to consequently formulate considerations on how TK changed or is changing following displacement of Senegalese citizens.

2. Material and Methods

2.1. The Study Area and Fieldwork

2.1.1. Turin, Italy. Turin (approx. 900,000 inhabitants, Piedmont, NW Italy, Figure 1) hosts an important Senegalese migrant community counting approx. 1,200 members (2004) [28]. The most significant influx of Senegalese in Turin only began at the end of 1980s. At that time, young males migrated to Italy from various areas of the Senegalese countryside and especially from those areas which were badly affected by the great drought of the 1970s. Traditionally, families gave their fourth or fifth child away to the Islamic brotherhood of believers for instruction in the faith and to work for the order, mainly engaging in agricultural activities. With the advance of desertification, however, the practice of agriculture was increasingly difficult and, as a consequence, the order allowed young people to move abroad to work in industry and services [28].

It was therefore a progressive flow, and not a mass migration, that characterized the Senegalese emigration to Italy. As often happens, the journey for many has been fragmented at various stages due to issues such as the search of a visa or other means of entry into the country. However, in Turin, the first arrivals had no intention of staying, since their aim was to work hard for a few years and return the home country. With time, however, things have changed, resulting in more stable settlements in the Italian landscape [28].

2.1.2. Adeane, Senegal. Adeane is a town of 9,000 inhabitants, located an hour’s drive from Ziguinchor, the largest urban centre in the region of Casamance, Southern Senegal (Figure 1). The climate in Casamance is the most humid of the country and subtropical forests prevail in the landscape. The abundance of rain in the Casamance permits the cultivation of a wide variety of crops.

The Casamance is inhabited mainly by the Jola ethnic group (Diola, in the French transliteration), which constitute approximately 60% of the population. Those of the Wolof ethnic group, which represent the ethnic majority in Senegal, constitute only 5% in the Casamance region. The largest portion of the Casamance inhabitants identifies their religious beliefs with Islam, while 17% are Catholics. This isolation has determined a strong regional identity and thus the culture
of its people as well as its environmental heritage has been well preserved for a long time. The regional economy is based in part on tourism, especially along the coast and on the sale of crops like rice, peanuts, and millet.

2.1.3. The Fieldwork. Fieldwork was conducted over a period of one month (November 2010) in Turin and over a period of a second month (December 2010) in Adeane (Casamance, Southern Senegal). Turin was selected as a field site because it is the home of a vibrant Senegalese community, while the area of Casamance in Senegal was chosen because it is considered the most biological and cultural diverse region of the country, as well as the most conservative in terms of folk practices.

Participants in Turin were selected using snowball techniques among the first generation of Senegalese migrants \((n = 8, \text{ all males})\), while in Casamance the same technique was used to select “laypeople” \((n = 15, 7 \text{ females and } 8 \text{ males})\). Additionally, in Adeane 4 healers (3 males and 1 female) were also interviewed. Prior Informed Consent (PIC) was obtained verbally before commencing each interview. Ethical guidelines followed the International Society of Ethnobiology Code of Ethics [29].

Questions concerning the use of medicinal and/or food plants were asked via a previous free listing of pathologies and related use of “home remedies.” For each named item, the field researcher (RE) asked for exact details of how the home medicine/food was prepared and its folk medical/food use. Interviews were conducted in Italian in Turin and in French in Casamance.

In Casamance, the named plant items were collected, when available, photographed, dried, identified by a local plant taxonomist (Professor Amadou Tidiane, Department of Agricultural Studies, University of Ziguinchor, Senegal) and via the West African plants photo database [30], and deposited at the Herbarium of the University of Gastronomic Sciences, Pollenzo, Italy. The nomenclature follows IPNI [31], with family assignments following the current Angiosperm Phylogeny Group III recommendations [32, 33].

2.2. Data Analysis. The ethnobotanical data collected from Turin and Adeane were compared with each other. Moreover, the ethnobotanical data were compared with the preexisting literature on Senegalese TM and the traditional pharmacopoeia of Senegal [34–36].

3. Results and Discussion

3.1. The Medical Ethnobotany of the Senegalese Migrants in Turin. Table 1 reports all medicinal plants quoted by the Senegalese migrants in Turin. In total, 47 folk taxa were recorded as medicinally used in Turin; 41 of these have been botanically identified. Of these remedies, only a few (eight) could be considered food medicines, thus contradicting what previous studies among migrants medical ethnobotanies have found [6, 13, 17]. This may be due to the fact that regular provision of African vegetables and other fresh food ingredients is scarce in Turin, where generally only dried spices and medicinal plants are imported. Another explanation may be that the Senegalese migrant community in Turin is mainly represented by males, who—in contrast to women—are not holders of culinary knowledge and therefore they do not generally have experience in managing healthcare via the diet within the domestic domain.

All remedies quoted in Turin are generally bought in small ethnic food shops and mini-supermarkets located in city centre and managed by African and/or Chinese migrant entrepreneurs. A few of the most quoted taxa (Acacia, Adansonia, Guiera, Hibiscus) are well-known African medicinal plants, which are however lacking in the Western TM pharmacopoeia.

3.2. The Medical Ethnobotany of Adeane in Senegal. Table 2 reports all medicinal plants quoted in Adeane. In total, 71 species, representing 31 botanical families, were recorded as components to TMs in Adeane. However, although the large majority of recorded medicinal taxa were found in the reviews of the Senegalese TM [34–36], only a minority (<40%) of the actual medicinal plant uses are reported in the considered literature. This confirms the highly dynamic character of the home medicines in rural Africa and highlights the urgent need for inventorying folk plant uses beyond those that are cited in the “standardized” TM reviews.

Documentation and evaluation of these home remedies are very important, since they represent a means of primary healthcare for most. Figure 2 illustrates the overlaps between the plants quoted in Casamance by healers and laypeople. Laypeople’s knowledge of medicinal plants is quite remarkable and confirms that the actual practice of household phytotherapy in Africa is much broader of what we sometimes label as “Traditional Medicine,” which is generally restricted to the knowledge, practices, and beliefs of healers. Moreover, despite living in the same village, while healers and laypeople use in large part the same medicinal plants (Figure 2), the actual plant reports (plant-based preparations used for a given health problem) are highly divergent (Figure 3). These findings confirm a remarkable “internal” variability of the African medical ethnobotanies, as a recent study in rural Mozambique also pointed out [37].
3.3. Comparison between the Senegalese Medical Ethnobotanies of Turin and Adeane. A comparison between the laypeople's medical ethnobotany in Turin and Adeane demonstrates that Senegalese in Senegal use more plants than Senegalese in Turin (Figure 4). This may be due to an objective difficulty to acquire all African plants used in country of origin in the new cultural environment in Italy and also to an adaptation process. Migrants moved in fact from their original rural areas in Senegal (where the use of herbal TMs is widespread) to urban environments in Europe, where practices of use of medicinal plants are only available within the context of Western modern herbalism and phytotherapy: Senegalese TM practitioners seem in fact not to be present in Turin. Moreover, migrants from Senegal in Turin also generally rely on Western pharmaceuticals.

However, the large majority of the medicinal botanical genera recorded in Turin are also used in the country of origin, thus confirming some resilience of original practices following displacement into another landscape. The fact that a few other genera (twelve) have been quoted instead by migrants in Turin, but not in Adeane, could possibly be explained in two ways.

(i) Senegalese migrants living in Turin did not all come from the southern part of Senegal. For instance, a few of them may have brought plant uses to Turin that are unknown in the folk medicine of Southern Senegal.

(ii) A few genera recorded quoted in Turin (i.e., *Hibiscus*, *Zingiber*) may represent the result of cross-cultural exchanges of TMs with other migrant populations in Turin, especially with the North African migrants, who also share the same religion, and with members of the Chinese migrant community who own ethnic food markets in Turin.

Out of this comparative study, a few plant families have emerged as being integral to the TM practices of the Senegalese study participants both in Turin and Adeane. In particular, a great variety of Fabaceae species were quoted as having medicinal applications in Turin (7 species) and Adeane (15 species). The second and third most represented botanical families amongst the Turin participants were Combretaceae and Malvaceae, with 5 and 3 species quoted, respectfully. In Adeane, however, Malvaceae was the second most quoted family (5 species), followed by Apocynaceae and Solanaceae (4 species each), and then Combretaceae, Myrtaceae, Euphorbiaceae, and Meliaceae, represented by 3 species each.

Interestingly, despite the presence of a thriving Senegalese community in the north Italian landscape for more than 30 years, relatively few Italian medicinal plants appear to have been incorporated into the TM practices of this group. Take, for example, the notable lack of incorporation of several European mints (Lamiaceae) in the TM practices of the Senegalese in Turin. Various Lamiaceae species, such as mint, basil, peppermint, rosemary, thyme, horehound, and oregano, grow in the wild and/or are cultivated in the Italian countryside and the use of such species for medicinal purposes dates back to more than 2,000 years ago in this region, as evidenced by their presence in the ancient textbooks of the *Mediterranean Materia Medica* [38]. Moreover, the important use of Lamiaceae species as medicinal plants is crucial also in the medico-ethnobotanical literature of Piedmont ([39] and references therein). The conspicuous absence of Lamiaceae uses in the Senegalese migrant community is maybe reflective of their isolation from the Italian environmental and medical landscape, which may have been further enhanced by the characteristic male composition of the Senegalese community in Italy.

4. Conclusion

Our study illustrates that the herbal medicines used by the Senegalese in Turin are very different from those of the Italian herbal landscape and that the migrant population in Turin is instead reliant on the undependable trade and movement of plant materials from their homeland to ethnic markets in the city. This shows maybe a scarce integration of this African community into the host society.

Moreover, the access and availability of important original medicines, especially medicinal foods, are greatly diminished in Turin, creating a significant disruption in their TM system. This may also have been influenced by the general lack of female Senegalese migrants, who would typically be
| Botanical taxon, family, and voucher specimen code | Local name(s) | Part(s) used | Preparation and administration | Folk medical use (used against/to regulate) | Qs |
|--------------------------------------------------|---------------|--------------|---------------------------------|---------------------------------------------|----|
| Adansonia digitata L. (Bombacaceae)              | Baobob        | Seed         | Eaten                           | Diarrhoea                                   | +  |
|                                                  |               | Seed         | Grind the seeds and put the powder on the lips | Burning lips                                |    |
|                                                  |               |             | Grind the seeds and put the powder on the painful tooth | Toothache                                  |    |
| Acacia nilotica (L.) Willd. ex Delile (Fabaceae) | Mbano (m) Nep nep (w) | Root         | Make a decoction and drink just a little bit | Indigestion                                 | +++|
|                                                  |               |             | Externally applied               | Wounds                                      |    |
|                                                  |               | Bark        | Drink the beverage together with Tamarindus indica fruit pulp and Hibiscus sabdariffa flowers | Fatigue                                    |    |
| Acacia tortilis (Forssk.) Hayne (Fabaceae)       | Senjen (w)    | Root         | Drink the decoction              | Eye inflammations Bellyache                 |    |
|                                                  |               |             | Drink the decoction while eating some sugar, repeating the procedure three times a day | Worms                                      |    |
|                                                  |               |             | Macerated in water for two days; the macerate drunk | Sexual impotence Stomachache Kidney troubles |    |
| Adansonia digitata L. (Malvaceae) UNISGSEN20     | Buy (w)       | Fruit        | Drink the beverage made using the pulp around the seeds | Diarrhoea                                   | +++|
|                                                  | Baobab (f)    |             | Same as above, adding Hibiscus sabdariffa flowers | Diarrhoea                                   |    |
| Allium cepa L. (Amaryllidaceae)                  | Cibolle       | Bulb         | Eaten                           | Sexual impotence Cold                       | +  |
| Allium sativum L. (Amaryllidaceae)               | Ail (f) Ladji (w) | Bulb         | Put a piece of garlic on the right wrist if the sore tooth is in the upper jaw and vice versa for the lower jaw (chanting Koran’s verses helps the pain to disappear) | Toothache Sexual impotence                   | +++|
|                                                  |               |             |                                 | Intestinal worms                           |    |
|                                                  |               |             |                                 | Lowering the blood pressure                |    |
|                                                  |               |             |                                 | Cold and cold prevention                    |    |
| Botanical taxon, family, and voucher specimen code | Local name(s) | Part(s) used | Preparation and administration | Folk medical use (used against/to regulate) |
|--------------------------------------------------|---------------|--------------|---------------------------------|------------------------------------------|
| Anacardium occidentale L. (Anacardiaceae)         | Anacardo      | Seed         | Drunk                           | Antibiotic                              |
| Annona senegalensis Pers. (Annonaceae)            | Suncun        | Leaf         | Put (powdered) on the fire      | Stomachache                              |
| Arachis hypogaea L. (Fabaceae)                    | UNISGSEN157   | Seed         | Eat the seeds                   | Digestive                                |
| Balanites aegyptiaca (L.) Delile (Zygophyllaceae) | Dattier du désert (f) | Leaf     | Grind the leaves and drink the infusion prepared with the powdered leaves | Constipation, Fatigue                     |
| Calotropis procera (Aiton) W.T. Aiton (Apocynaceae) | Kipampaan (p) | Root         | Cut the roots into small pieces, put into a cotton handkerchief, squeeze, it and inhale the aroma | Constipation, Intoxication               |
| Cassia italica (Mill) Sprengel (Fabaceae)         | Layduur (w)   | Leaf         | Drink the infusion prepared with ground leaves | Constipation, Fatigue, Nausea, Intoxication |
| Cassia occidentalis L. (Fabaceae)                  | UNISGSEN11    | Leaf         | Put leaves around the head      | Headache                                 |
| Citrus limon (L.) Osbeck. (Rutaceae)              | Citron (f)    | Fruit        | Drink the juice                 | To lose weight                            |
| Citrofortunella microcarpa L. (Rutaceae)           | Qu’cee (f)    | Leaf         | Use it as a mouthwash           | To lose weight                            |
| Botanical taxon, family, and voucher specimen code | Local name(s) | Part(s) used | Preparation and administration | Folk medical use (used against/to regulate) | Qs |
|--------------------------------------------------|---------------|-------------|--------------------------------|---------------------------------------------|----|
| *Combretum aculeatum* Vent. (Combretaceae)       | Sawat (w)     | Leaf        | Put ground leaves and sugar into water and instil the solution in the eyes | White spot in the eye on the pupil +        |    |
| *Combretum glutinosum* Perr. ex DC. (Combretaceae)| Chigommier (f) | Leaf        | Drink the decoction           | Bronchitis/cough +                         |    |
|                                                  | Rat (w)       |             |                               | Sexual impotence +                         |    |
| *Combretum micranthum* G. Don (Combretaceae)     | Quinkeliba (f) | Flower      | Drink the decoction with milk every morning | Enhancing the “well-being”                 |    |
| UNISGSEN10                                       | Sekhaw (w)    |             | Make a decoction with *Xylopia aethiopica* seeds and cloves (*Eugenia caryophyllata* flower buds) | Vision problems                            |    |
| *Dioscorea* spp. (Dioscoreaceae) UNISGSEN83      | Igname (f)    | Root        | Eat the root                  | To gain weight +                           |    |
| *Elaeis guineensis* Jacq. (Arecaceae)            | Palmier à huîle (f) | Fruit → Oil | Add oil and coffee to *Vitellaria paradoxa* butter and dab on the body | To get rid of the “dead” blood when feeling weak + |    |
|                                                  | Tiir (w)      |             | Dab on the body               |                                             |    |
| *Eucalyptus globulus* Labill. (Myrtaceae) UNISGSEN88| Eucaâptus (f) | Leaf        | Put it around the head while listening to the reading of the Koran | Headache +                                 |    |
|                                                  | Khotta bu tel (w) |             |                               |                                             |    |
| *Eugenia carophyllata* Thunb (Myrtaceae) UNISGSEN38| Girloff (f)   | Flower bud  | Use the infusion prepared with *Xylopia aethiopica* seeds and *Combretum micranthum* flower | Vision problems +                           |    |
|                                                  | Xorompole (w) |             |                               |                                             |    |
| *Euphorbia balsamifera* Ait. (Euphorbiaceae)     | Salan         | Branch      | Cut the branch and put the latex on the wound | Wounds ++                                  |    |
|                                                  | Salan mbechi  |             |                               |                                             |    |
| *Ficus iletophylla* Miq. (Moraceae)              | Xassum loro (w) | Leaf        | Drink the decoction            | Backache, skin allergies +                 |    |
|                                                  |               |             | Drink the decoction            |                                             |    |
|                                                  |               |             | Dab on the affected part       |                                             |    |
| *Grewia bicolor* Juss. (Malvaceae)               | Kel (w)       | Leaf        | Drink the decoction            | Fatigue, Bronchitis, digestive             |    |
| *Gaiera senegalensis* J.F. Gmel. (Combretaceae)  | Ngueer (w)    | Root        | Drink the decoction            | Cold ++                                    |    |
| UNISGSEN18                                       | Mamakumkoyo (m) |             |                              |                                             |    |
|                                                  | Mamankuiò (s)  |             |                              |                                             |    |
|                                                  | Leaf          |             |                              |                                             |    |
### Table 1: Continued.

| Botanical taxon, family, and voucher specimen code | Local name(s) | Part(s) used | Preparation and administration | Folk medical use (used against/to regulate) | Qs |
|--------------------------------------------------|---------------|--------------|--------------------------------|---------------------------------------------|----|
| **Hibiscus sabdariffa**<br> L. (Malvaceae) UNISGSEN12 | Bissap (w) Karkadé (f) | Flower (red) | Put the infusion into the eyes | Itchy eyes Bellyaches Menstrual pains Preventing ageing Fatigue Fever Improving the blood circulation | +++ |
| **Mangifera indica**<br> L. (Anacardiaceae) | Manguier (f) Mango joolaa (w) | Leaf | Drink the decoction | Eye problems | |
| **Maerua crassifolia**<br> Forssk (Capparaceae) | Sothiou (w) Sothiou suukar | Branch | Chew the branch | Halitosis | + |
| **Moringa oleifera** Lam. (Moringaceae) | Nebedai | Leaf | Eaten in sauces, generally accompanied with meat and couscous | Diabetes | + |
| **Musa paradisiaca** L. (Musaceae) | Bananier (f) | Leaf | Topical application of the leaf infusion | | |
| **Panicum miliaceum** L. (Poaceae) | Mil (f) | Fruit | Eat millet (couscous) | | + |
| **Parinari macrophylla** Sabine (Chrysobalanaceae) | New (w) Tamba | Leaf | Drink the infusion made from 7 leaves | High blood pressure | + |
| **Piper nigrum** L. (Piperaceae) | Mex pobare (w) Poivre noir (f) | Fruit | Eat the dried berry | Runny nose | + |
| **Tamarindus indica**<br> L. (Fabaceae) | Tamarin (f) Daqaar (w) | Fruit pulp | Eaten, or drunk, in a beverage made adding the bark of *Acacia nilotica* and the flower of *Hibiscus sabdariffa* | Fatigue | + |
| **Terminalia catappa**<br> L. (Combretaceae) | Badamier (f) Toubah (w) Xopp kerte | Not specified | Not specified | Antibiotic, antifungal | + |
| **Piper nigrum** L. (Piperaceae) | Mex pobare (w) Poivre noir (f) | Fruit | Eat the dried berry | Runny nose | + |
| **Tamarindus indica**<br> L. (Fabaceae) | Tamarin (f) Daqaar (w) | Fruit pulp | Eaten, or drunk, in a beverage made adding the bark of *Acacia nilotica* and the flower of *Hibiscus sabdariffa* | Fatigue | + |
| Botanical taxon, family, and voucher specimen code | Local name(s) | Part(s) used | Preparation and administration | Folk medical use (used against/to regulate) | Qs |
|--------------------------------------------------|---------------|--------------|-------------------------------|---------------------------------------------|----|
| *Terminalia catappa* L. (Combretaceae) | Badamier (f)  | Not specified | Add salt to the butter and dab on the back | Antibiotic, antifungal | + |
| Toubab (w) | | | To get rid of the “dead” blood when feeling weak | | |
| Xopp kerte | | | Massage on the child’s body, to make the child stronger. Bone strengthening | | |
| *Vitellaria paradoxa* C.F. Gaertn. (Sapotaceae) | Karitè (f)  | Seed → butter | Add coffee, *Elaeis guineensis*’ oil and dab on the body | | +++ |
| | | | | | |
| | | | | | |
| *Xylopia aethiopica* A. Rich. (Annonaceae) UNISGSEN70 | Diar (w)  | Seed | Instill the infusion of seeds into the eyes | | ++ |
| Jar | | | | | |
| | | | | | |
| | | | | | |
| *Zingiber officinale* Roscoe (Zingiberaceae) UNISGSEN09 | Djindjer (w) | Fresh rhizome | Eaten, or juice drunk, or decoction | Sexual impotence | +++ |
| Djinjeroo (m) | | | | Blood circulation | |
| Gingembre (f) | | | | | |
| Not identified | Berbef (w)  | Leaf | Drink the decoction | Worms | + |
| | | | Use the rough leaf like a sponge under the shower | Pruritus | |
| Not identified | Bonye | Fruit | Make a pasta and dab on the skin | Itchiness | + |
| Not identified | Khambata (w) | Leaf | Drink the infusion | Headache | + |
| Not identified | Ndiadame | Fruit | Cook it slowly and eat it; it is really bitter | Intestinal worms | + |
| Not identified | Sangol (w) | Root | Put it in water for up to two minutes and drink it (very bitter) | Intestinal worms | + |
| Not identified | Watenobout (w) | Branch | Put the latex that comes out of the broken branch on the wound | Wounds | + |

(f): French; (m): Mandingo; (p): Pulaar; (w): Wolof; Qs quotations: + quoted by 1 or 2 informants only; ++ quoted by 3, 4, or 5 informants; +++ quoted by 5 informants or more.
| Botanical taxon, family, and voucher specimen code | Local name(s) | Part(s) used | Preparation and administration | Folk medical use (used against/to regulate) | Healers | Laypeople | Qs |
|--------------------------------------------------|---------------|-------------|--------------------------------|---------------------------------------------|---------|-----------|----|
| *Acacia albida* Delile (Fabaceae) UNISGSEN019     | Kade (f)      | Root        | Instill the infusion in the eye| Vision problems                            | +       | 3         |    |
|                                                  | Kadd (w)      | Bark        |                                |                                             |         |           |    |
|                                                  | Baransango    |             |                                |                                             |         |           |    |
| *Acacia nilotica* (L.) Willd. ex Delile (Fabaceae) UNISGSEN15 | Acacia molotique (f) | Root | Apply the infusion externally | Herpes                                     | +       | 2         |    |
|                                                  | Nep nep (w)   |             |                                |                                             |         |           |    |
|                                                  | Mbano (m)     |             |                                |                                             |         |           |    |
| *Acacia seyal* Delile (Fabaceae)                  | Suuro         | Leaf        | Topical application of liquid resulting from pressed leaves | Toothache                                    | +       | 1         |    |
|                                                  |               |             | Soak in water for some time and drink | Tapeworm, Stomachache, Bellyache (abdominal pains) | +       |           | 11 |
|                                                  |               |             |                                |                                             |         |           |    |
|                                                  |               |             | Drink the cold infusion        | Rheumatism                                   | +       |           |    |
|                                                  |               |             |                                |                                             |         |           |    |
|                                                  |               |             | Apply the infusion on hair      | Strengthening the hair                       | +       |           |    |
|                                                  |               |             |                                |                                             |         |           |    |
|                                                  |               |             | Boiled in water and the vapour is inhaled | Cold                                        | +       |           |    |
|                                                  |               |             |                                |                                             |         |           |    |
|                                                  |               |             | Cold infusion is drunk          | Blood pressure                               | +       |           |    |
|                                                  |               |             |                                |                                             |         |           |    |
|                                                  |               |             | Eat it with rice                | Sterility                                    | +       |           |    |
|                                                  |               |             |                                |                                             |         |           |    |
|                                                  |               |             | Make aerosol with the infusion? | Lung cancer                                  | +       |           |    |
|                                                  |               |             |                                |                                             |         |           |    |
|                                                  |               |             | Drink the infusion              | Bloodstream                                  | +       |           |    |
|                                                  |               |             |                                |                                             |         |           |    |
|                                                  |               |             | Eat it with rice                | Ulcer                                        | +       |           |    |
|                                                  |               |             |                                |                                             |         |           |    |
|                                                  |               |             | Eat it with rice                | Gastritis                                    | +       |           |    |
|                                                  |               |             |                                |                                             |         |           |    |
|                                                  |               |             | Eat it with rice                | Kidney problems                              | +       |           |    |
|                                                  |               |             |                                |                                             |         |           |    |
|                                                  |               |             | Drink the infusion              | Menstrual pain                               | +       |           |    |
|                                                  |               |             |                                |                                             |         |           |    |
|                                                  |               |             | Drink the infusion              | Malaria                                      | +       |           |    |
|                                                  |               |             |                                |                                             |         |           |    |
| Botanical taxon, family, and voucher specimen code | Local name(s)          | Part(s) used | Preparation and administration                                                                 | Folk medical use (used against/to regulate) | Healers | Laypeople | Qs |
|-----------------------------------------------|------------------------|--------------|------------------------------------------------------------------------------------------------|-------------------------------------------|---------|-----------|----|
| **Adansonia digitata** L. (Malvaceae) UNISGSEN20 | Baobab (f) Guy (w) Seeds | Leaf         | Powdered leaf applied to burn and bandaged together with the oil of *Arachis hypogaea*             | Burns                                      |         | +         | 12 |
|                                               |                        |              | Drink the seed juice together with the flowers of *Hibiscus sabdariffa*                           | Fatigue                                    | +       | +         |    |
|                                               |                        |              | Eat the seeds                                                                                   | Diarrhoea                                  |         | +         |    |
|                                               |                        |              | Eat the seeds together with *Citrus limon* juice                                                 | Lack of appetite                           |         | +         |    |
|                                               |                        |              | Use it with *Acacia albida, Guiera senegalensis, Parkia biglobosa, Annona senegalensis, Soora (nonidentified plant), and Ficus sycomorus* | Headache, sore throat, cold taken as result of wind |         | +         |    |
| **Allium cepa** L. (Amaryllidaceae) Oignon (f) | Ail (f) Ladji (w) Bulb | Infusion with leaves of *Citrus limon*                                                            | Sore throat                                 | +         |         | 1  |
| **Allium sativum** L. (Amaryllidaceae) Ail (f) | Darkasa (w) Bara diamboo (m) | Bulb | Drink the infusion in the morning                                                                | Blood pressure                             |         | +         | 8  |
|                                               |                        |              | Eat it raw in the morning                                                                        | Intestinal worms                           |         | +         |    |
|                                               |                        |              | Eat it while marabout recites verses of the Koran                                                | Depression                                 |         | +         |    |
| **Aloe vera** (L.) Burm. f. (Xanthorrhoeaceae) | Leaf gel               | Use it with *Vitellaria paradoxa*                                                                 | Tuberculosis                                | +         |         | 2  |
|                                               |                        | Use it with *Vitellaria paradoxa*                                                                 | Hair loss                                   | +         |         |    |
| **Anacardium occidentale** L. (Anacardiaceae) | Pomme-cajou (f) Darkasa (w) Bark | Use it with *Vitellaria paradoxa*                                                                 | Toothache                                   | +         |         | 3  |
|                                               |                        |              | Drink the infusion                                                                              | Toothache                                  |         | +         |    |
|                                               |                        |              | Put it in cold water for a while and drink it                                                   | Rheumatism                                 |         | +         |    |
|                                               |                        |              |                                                                                               | Toothache                                  |         | +         |    |
|                                               |                        |              |                                                                                               | Blood pressure                             |         | +         |    |
| Botanical taxon, family, and voucher specimen code | Local name(s) | Part(s) used | Preparation and administration | Folk medical use (used against/to regulate) | Healers | Laypeople | Qs |
|--------------------------------------------------|---------------|--------------|--------------------------------|--------------------------------------------|---------|-----------|----|
| **Annona senegalensis Pers. (Annonaceae) UNISGSEN36** | Sunkun (m) | Leaf | Drink the infusion | Diabetes | + | 3 |
| | | | Put the powder on the wound | Wounds | + | | |
| | | | Drink the infusion | Rheumatism | + | | |
| | | | Drink the infusion | Bloodstream | + | | |
| | | | Drink the infusion with *Musa paradisiaca* leaves and *Combretum micranthum* | Blood pressure | + | | |
| | | | Use it with *Piliostigma reticulatum* | Headache | + | | |
| | | | Use it with *Piliostigma reticulatum* | Tuberculosis | + | | |
| | | | Use it with *Acacia albida, Guiera senegalensis, Parkia biglobosa, Adansonia digitata, Soora (nonidentified plant), and Ficus sycomorus* | Headache, Sore throat, Cold taken as result of wind | + | | |
| | | | Leaf | | | | |
| | | | Use it with *Acacia albida and Parkia biglobosa* | Depression | + | | |
| **Arachis hypogaea L. (Fabaceae) UNISGSEN16** | Arachides (f) Gerte (w) Jamba katalig (m) | Fruit Leaf Seed → oil | Use it with oil of *Elaeis guineensis*’ oil | Hair | + | 3 |
| | | | Inhalate the infusion prepared together with the leaves of *Mangifera indica* | General health | + | | |
| | | | Mix peanut oil together with the powdered leaves of *Adansonia digitata* and apply to burns before bandaging | Burns | + | | |
| | | | Fruit | | | | |
| | | | Eat the fruit fresh, not toasted | Cold | + | | |
| **Azadirachta indica A. Juss. (Meliaceae) UNISGSEN63** | Cassia, Neem (f) Niim, Ni va (w) Bantare (m) | Leaf | Wrap the leaf around the head | Headache | + | 3 |
| | | | Infuse with hot water and inhale the steam | Fatigue | + | | |
| | | | Topical application of the infusion | Skin problems | + | | |
| | | | Use it with *Carica papaya and Citrus limon* | Cold | + | | |
| Botanical taxon, family, and voucher specimen code | Local name(s) | Part(s) used | Preparation and administration | Folk medical use (used against/to regulate) | Healers | Laypeople | Qs |
|-----------------------------------------------|--------------|-------------|--------------------------------|------------------------------------------|--------|----------|----|
| *Bambusa vulgaris* Schrad. ex J.C. Wendl. (Poaceae) UNISGSEN54 | Bambou (f) Lonk (w) | Leaf | Make an infusion with shade-dried leaves | Diabetes | + | + | 3 |
| | | | Drink the infusion with *Combretum micranthum* leaves | High blood pressure | + | | |
| | | | Make an infusion, drink some of it, and make aerosol with the resting water | Bloodstream | + | | |
| | | | Drink the infusion | Obesity | + | | |
| *Beta vulgaris* L. (Chenopodiaceae) | Betterave (f) Beteraaw (m) | Root | Eat it | Bloodstream | + | 1 | |
| | | | Eat it | | | | |
| | | Fruit | Burnt and pressed, pour resulting liquid into the ear | Earache | + | 1 | |
| | | Leaf | Warm the leaf up and wrap it around the neck | Malaria | + | 6 | |
| | | | | Fatigue | + | | |
| | | | Topical application of juice from leaf on tooth | Sore neck | + | | |
| | | | | Toothache | + | | |
| *Calotropis procera* (Aiton) W.T. Aiton (Apocynaceae) UNISGSEN55 | Pomme de Sodome (f) Poftan (m) Kipampaan (p) | Root | Wrap the leaf around the sore knee | Sore knees | + | | |
| | | | Wrap the leaf around the head | Headache | + | | |
| | | | Use it with *Ocimum basilicum* | Rheumatism | + | | |
| | | Leaf | Use it with Manganaso (unidentified plant) and *Jatropha curcas*. Drink it and vomit everything yellow | Yellow fever | + | | |
| | | | Use it with *Jatropha curcas* and Manganaso (unidentified plant) | Syphilis | + | | |
| Botanical taxon, family, and voucher specimen code | Local name(s) | Part(s) used | Preparation and administration | Folk medical use (used against/to regulate) | Healers | Laypeople | Qs |
|-------------------------------------------------|---------------|-------------|--------------------------------|--------------------------------------------|---------|-----------|----|
| Cannabis sativa L. (Cannabaceae)                  | Marijuana     | Seeds       | Drink the infusion             | Asthma +                                   | 1       |           |    |
|                                                 |               |             | Drink a glass of water with a chili pepper in it | Intestinal worms +                        |         |           |    |
|                                                 |               |             | Mix lemon juice (Citrus limo) together with a chili pepper and gargle with the solution | Sore throat +                             |         |           |    |
|                                                 |               |             | Put in a small pan with Jatropha curcas, and drink | Hair loss +                               |         |           |    |
|                                                 |               |             | Put it in lemon juice (Citrus limon) and drink | Constipation +                           |         |           |    |
|                                                 |               |             | Eat up the oil that comes out of the nut and dab it on the body three times a day with Vitellaria paradoxa butter | Sore back +                              |         |           |    |
|                                                 |               |             | Mix it with oil of Elaeis guineensis and butter of Vitellaria paradoxa and then dab it on hair | Strengthening the hair +                 |         |           |    |
|                                                 |               |             | Drink a spoonful every day       | Poor memory +                            |         |           |    |
|                                                 |               |             | Drink a spoonful of it           | Cough +                                   |         |           |    |
|                                                 |               |             | Drink a spoonful of it           | Sore throat +                             |         |           |    |
|                                                 |               |             | Topical application of the oil   | Eye problems +                           |         |           |    |
|                                                 |               |             | Instill oil into the ears        | Earache +                                |         |           |    |
|                                                 |               |             | Drink a spoonful of it           | Fever +                                   |         |           |    |
|                                                 |               |             | Drink a spoonful of it           | Flu +                                    |         |           |    |
|                                                 |               |             | Dab it on the skin in the area over the kidneys | Kidneys problems +                      |         |           |    |
|                                                 |               |             | Drink a spoonful of it           | Bellyache +                              |         |           |    |
|                                                 |               |             | Use it before breakfast          | Tapeworm +                               |         |           |    |
|                                                 |               |             | Dab it on affected muscles       | Sore muscles +                           |         |           |    |
|                                                 |               |             | Peel it and apply to the sore tooth | Toothache +                              |         |           |    |
|                                                 |               |             | Use it with Citrus limon and Azadirachta indica | Cold +                                  |         |           |    |
| Carapa procera DC. (Meliaceae) UNISGSEN43        | Tulukuna (m)  | Seed → oil | Drink the infusion, adding salt | Syphilis (2) |         |           |    |
|                                                 |               |             |                                   |                                         |         |           |    |
| Botanical taxon, family, and voucher specimen code | Local name(s) | Part(s) used | Preparation and administration | Folk medical use (used against/to regulate) | Healers | Laypeople | Qs |
|-------------------------------------------------|---------------|--------------|--------------------------------|---------------------------------------------|---------|-----------|----|
| *Carica papaya* L. (*Caricaceae*) UNISGSEN21    | Papayer (f)   | Leaf         | Drink the infusion             | Anemia +                                   |         | +         |    |
|                                                 | Papaayo (w)   |              | Use it together with *Psidium guajava* leaves | Cystitis +                                 |         |           |    |
|                                                 |              | Seeds        | Dry the seeds in the sun, powder, and add to food | Intestinal worms +                        |         | +         |    |
|                                                 |              | Fruit        | Eat a soup with a ripe papaya in it together with chicken and a root of *Tinospora bakis* | Yellow fever +                           |         | +         |    |
|                                                 |              |              | Boil the unripe fruit with undecorticated rice or simply eat the fruit, raw. Another remedy is to crack an egg over the unripe papaya and eat it | Yellow fever +                           | +       | +         |    |
|                                                 |              | Leaf         | Drink the infusion together with the buds | Yellow fever +                           |         | +         |    |
|                                                 |              |              | Add the following to water: dry leaves of *Musa paradisiaca*, little unripe fruits and leaves of *Citrus limon*, leaves of *Cassia occidentalis*, leaves of *Mangifera indica*, leaves of *Ziziphus mauritiana* and drink | Malaria +                                 |         |           |    |
|                                                 |              | Fruit        | Eat it together with *Parkia biglobosa* leaves | Yellow fever +                           |         | +         |    |
|                                                 |              | Flower       | Crumble flower into the water and drink | Headache +                                | +       |           | 14 |
|                                                 |              | Leaf         | Wrap around the head             | Headache +                                | +       |           |    |
| Botanical taxon, family, and voucher specimen code | Local name(s) | Part(s) used | Preparation and administration | Folk medical use (used against/to regulate) | Healers | Laypeople | Qs |
|-------------------------------------------------|---------------|--------------|--------------------------------|--------------------------------------------|---------|-----------|----|
| **Cassia occidentalis L. (Fabaceae) UNISGSEN11** | Mbanta xobi or Adiana (w) Kasilaa (m) Bentamaré (s) | Leaf | Wrap around the head | Conjunctivitis | + |
| | | Flower? | Drink the infusion | Menstrual pain | + |
| | | Leaf | Put it in water for a while and wash yourself with it | Cold (Especially for children) | + |
| | | Flower? | Drink the infusion | For pregnant women | + |
| | | Leaf | Drop juice from pressed leaves into the ear | Problems of the eardrum | + |
| | | | Add the following to water: dry leaves of *Musa paradisiaca*, little unripe fruits and leaves of *Citrus limon*, leaves of *Carica papaya*, and leaves of *Ziziphus mauritiana* | Malaria | + |
| **Cassia tora L. (Fabaceae) UNISGSEN76** | Cassepuante (f) Ndur (w) | | Use it with *Ficus umbellata* | Blemishes on scalp which may extend to the whole body | + | 2 |
| | | Fruit | Eat it | Bellyache | + | 3 |
| | | | | | | | |
| | | Root | Put little plants’ roots in water and then drink the water It is going to fizz | Fatigue | + |
| | | Bark | Use infusion made with the bark as a mouthwash | Toothache | + |
| | | Root? | | Cancer | + |
| | | Bark? | Pour the infusion on the baby’s head during baptism | Infant strength and protection | + |
| | | Root | Good for the blood because of the red colour | Blood | + | + |
| Botanical taxon, family, and voucher specimen code | Local name(s) | Part(s) used | Preparation and administration | Folk medical use (used against/to regulate) | Healers | Laypeople | Qs |
|--------------------------------------------------|----------------|--------------|---------------------------------|---------------------------------------------|---------|-----------|----|
| Leaf                                             | Make an infusion together with leaves of *Allium cepa* | Sore throat | + | 9 |
| Fruit                                            | Drink the juice | Sore throat | + |  |
| Fruit                                            | Drink the juice | To lose weight | + |  |
| Fruit                                            | Use the juice together with *Capsicum* to gargle | Sore throat | + |  |
| Leaf and Fruit                                   | Drink a beverage made with lemon leaf and fruit (*Citrus limon*) | Headache | + |  |
| Fruit                                            | Put the juice on the affected part together with *Panicum miliaceum* flour | Herpes | + |  |
| Fruit                                            | Drink the infusion with lemon juice (*Citrus limon*) together with two roots of the *Gossypium barbadense* | Sexual weakness | + |  |
| *Citrus limon* (L.) Burm. (Rutaceae)              | Leaf and Fruit | Drink a beverage made with little lemons and leaves | Cold | + |  |
| Fruit                                            | Drink the juice | Cold | + |  |
| Fruit                                            | Use it with *Carica papaya* and *Azadirachta indica* | Cold | + |  |
| Fruit                                            | Add the following to water: dry leaves of *Musa paradisiaca*, little unripe fruits and leaves of *Citrus limon*, leaves of *Mangifera indica*, leaves of *Carica papaya*, leaves of *Cassia occidentalis*, leaves of *Ziziphus mauritiana* and drink | Malaria | + |  |
| Leaf and fruit                                   | Eaten with *Carica papaya* | Malaria | + |  |
| Fruit                                            | Use it with *Guiera senegalensis* | Yellow fever | + |  |
| Fruit                                            | Drink the juice | Asthma | + |  |
| Fruit                                            | Drink the infusion together with *Gossypium barbadense* | Obesity | + |  |
| Fruit                                            | Drink the juice with honey | High blood pressure | + |  |
| Fruit                                            | | Liver | + |  |
| Botanical taxon, family, and voucher specimen code | Local name(s) | Part(s) used | Preparation and administration | Folk medical use (used against/to regulate) | Healers | Laypeople | Qs |
|---|---|---|---|---|---|---|---|
| Cola cordifolia (Cav.) R. Br. (Malvaceae) | Kaba/Taba | Leaf | Drink the infusion | Malnutrition | + | 1 |
| Cola nitida (Vent.) Schott & Endl. (Malvaceae) UNISGSEN85 | Ptit cola (f) Kola (w) Goro (p) | Seed | Chew it | Stimulant | + | 1 |
| Combretum glutinosum Perr. ex DC. (Combretaceae) | Chigommier (f) Rat (w) | Leaf | Drink the infusion | Cough | + | 2 |
| | | | Drink the infusion | Bronchitis | + | |
| | | | Drink the infusion | Sore throat | + | |
| | | | Drink the infusion | Cold | + | |
| | | Leaf | Ingested together with *Tamarindus indica* fruit pulp | Blood pressure | + | + | 9 |
| | | | Drink the infusion with *Musa paradisiaca*’s leaf and *Annona senegalensis* | Blood pressure | + | |
| | | | Drink the infusion | Diabetes | + | |
| | | | Use it with *Tamarindus indica* | Asthma | + | |
| | | | Ingested together with *Tamarindus indica* fruit pulp | Blood pressure | + | + | 9 |
| | | | Drink the infusion | Diabetes | + | |
| | | | Use it with *Tamarindus indica* | Asthma | + | |
| | | | Ingested together with *Tamarindus indica* fruit pulp | Blood pressure | + | + | 9 |
| | | | Drink the infusion | Diabetes | + | |
| | | | Use it with *Tamarindus indica* | Asthma | + | |
| Combretum micranthum G. Don (Combretaceae) UNISGSEN10 | Kinkeliba (f) Sekhaw (w) | Leaf | Drink the infusion | Bloodstream | + | + | |
| | | | Drink the infusion with these leaves together with *Bambusa vulgaris* leaves | High blood pressure | + | |
| | | | Drink the infusion without sugar | Malnutrition | + | |
| | | Flower | Drink the infusion with cloves (*Eugenia caryophyllata*) and *Xylopia aethiopica* seeds | Vision problems | + | |
| | | Leaf | Drink the infusion | Bellyache | + | |
| Diakium guineense Willd. (Fabaceae) UNISGSEN17 | Solom (w) | Bark | Make aerosol with the infusion | Asthma | + | 1 |
| Datura inoxia Mill. (Solanaceae) UNISGSEN91 | Datura (f) Kubejaara | Leaf | Burn the wood and mix the wood ash with powdered leaf ash External Use only—highly hallucinogenic if used internally | Allergies | + | 1 |
| Botanical taxon, family, and voucher specimen code | Local name(s) | Part(s) used | Preparation and administration | Folk medical use (used against/to regulate) | Healers | Laypeople | Qs |
|---|---|---|---|---|---|---|---|
| *Daucus carota* L. (Apiaceae) | Carotte (f) | Leaf | Drink the infusion | Breast cancer | + | 1 |
| *Dioscorea* spp. (Dioscoreaceae) UNISGSEN83 | Imuam | Root | Eat it | To gain weight | + | 2 |
| | Igname (f) | Leaf | Boil the leaves | Asthma | + |
| | Yam (w) | | | | |
| | | | Put the oil on the hair | Hair | + | 6 |
| | | | Topical application | Toothache | |
| | | | Pour in the ears | Earache | + |
| | | | Use the palm oil together with *Sooto noir* (*Ficus capensis* Thumb.) powdered root | Liver problems | + |
| | | | Attach the root of *Moringa oleifera* to the affected area and then cover the sore part with palm oil. Do not leave the root in place too long or it will cause an infection. | Rheumatism | + |
| *Elaeis guineensis* Jacq. (Areaceae) | Palmier `a huile` (f) | Seeds | Wear a necklace made out of these seeds | Sore throat | + |
| | Tiir (w) | Root | Break the seed and eat the internal part | Gastritis | + |
| | | | Put them in wine and drink it | Sterility | + |
| | | | Skin fungus | |
| | | | Use the palm oil together with peanuts (*Arachis hypogea*) and dab on hair. | Hair | + |
| | | | Use it together with *Vitellaria paradoxa* butter and *Carapa procera*, dab on hair | |
| | | | Apply it on the cuts together with *Hessawane* | | |
| | | | Drink the infusion with *Jatropha curcas* | Cough | + | 1 |
| *Erythrina senegalensis* DC. (Fabaceae) UNISGSEN34 | Erythrine du Senegal (f) | Root | Drink the infusion | Syphilis | + |
| | Dolliw fatu | | | Menstrual pain | + |
| *Eucalyptus globulus* Labill. (Myrtaceae) UNISGSEN88 | Eucaliptus (f) | Leaf | Drink the infusion | Blood pressure | + | 1 |
| Botanical taxon, family, and voucher specimen code | Local name(s) | Part(s) used | Preparation and administration | Folk medical use (used against/to regulate) | Healers | Laypeople | Qs |
|--------------------------------------------------|---------------|--------------|--------------------------------|-------------------------------------------|---------|-----------|----|
| *Eugenia caryophyllata* Thunb. (Myrtaceae) UNISGSEN38 | Girofle (f) Xorompole (w) | Flower bud | Make an infusion and use it as mouthwash | Toothache | + | 3 |
| *Euphorbia balsamifera* Ait. (Euphorbiaceae) | Salan Salana Salan Mbedi | Branch | Cut a branch and put the lymph on the wound | Wounds | + | 3 |
| *Ficus elastica* Roxb. ex Hornem. (Moraceae) UNISGSEN59 | Yirif asotu | Leaf and bark | Drink the infusion | Low blood pressure | + | 2 |
| *Ficus sycomorus* ssp. gnaphalocarpa (Miq.) C.C. Berg (Moraceae) UNISGSEN42 | Ficus (f) Sooto (m) | Root Leaf | Drink the infusion Powder branches and leaves together with *Jamba Saboo* leaves and drink some of it. Wash yourself with the rest of it. Do not eat fish in the meantime. | Fatigue | + | 2 |
| *Ficus umbellata* Vahl (Moraceae) UNISGSEN68 | Nokolokotô (m) | Leaf | Use it with *Cassia tora* | Skin fungus | + | 1 |
| *Gossypium barbadense* L. (Malvaceae) | Cotonnier (f) Uiten (w) | Root | Drink the infusion made with two roots together with lemon juice (*Citrus limon*) | High blood pressure | + | |
| *Guiera senegalensis* J.F. Gmel (Combretaceae) UNISGSEN18 | Guiera du Senegal (f) Ngeer (w) Mamakumkoyo (m) | Leaf | Make an infusion together with the lemon leaves (*Citrus limon*) | Asthma | + | |
| | | | Drink the infusion made with Valda pastille (industrial pastille based on menthol and eucalyptus essential oil) | Cold | + | |
| | | | Make infusion and apply to hair | Hair | + | |
| | | | Drink the infusion | Insomnia | + | |
| Botanical taxon, family, and voucher specimen code | Local name(s) | Part(s) used | Preparation and administration | Folk medical use (used against/to regulate) | Healers | Laypeople | Qs |
|-------------------------------------------------|---------------|-------------|--------------------------------|------------------------------------------|---------|-----------|----|
| Holarrhena floribunda T. Durand & Schinz (Apocynaceae) UNISGSEN67 | Jarko (m) | Leaf and Flower | Drink the infusion | Bloodstream | + | 2 |
| *Hibiscus sabdariffa* L. (Malvaceae) UNISGSEN12 | Karkadé (f) Bisaab (w) | Flower | Drink the infusion | Flu | + |
| | | Fruit | Make a juice together with *Adansonia digitata* seeds | Fatigue | + | + |
| | | Flower | Use it with *Tamarindus indica* and *Acacia nilotica* | Fatigue | + |
| | | Flower | Use it with *Phaseolus vulgaris* seeds | Anemia | + |
| | | Fruit | Remove the seeds and squeeze the fruit juice into the eyes. | Conjunctivitis | + |
| | | Leaf | Make an infusion together with the young leaves of *Psidium guajava*, drink it, and eat the leaves | Diarrhoea | + | + |
| Holarrhena floribunda T. Durand & Schinz (Apocynaceae) UNISGSEN67 | Jarko (m) | Leaf | Drink the tisane | Sexually transmitted diseases | + | 2 |

**Table 2: Continued.**
| Botanical taxon, family, and voucher specimen code | Local name(s) | Part(s) used | Preparation and administration | Folk medical use (used against/to regulate) | Healers | Laypeople | Qs |
|--------------------------------------------------|---------------|-------------|--------------------------------|---------------------------------------------|---------|-----------|----|
| *Jatropha curcas* L. (Euphorbiaceae) | Pignon d’Inde (f) Tabanana (w) Tabanano (m) | Bark and Root | Collect pieces of bark that face east during sunset and then drink it in 5 litres of water | Cancer | + | 6 |
| | | | Collect pieces of bark that face east during sunset and then drink it in 5 litres of water | Syphilis | + | |
| | | | Drink the infusion together with roots of *Erythrina senegalensis* in it | Cough | + | |
| | | | Put it in a small pan with *Capsicum* and drink | Hair loss | + | |
| | | | Powder it together with *Kunjurburun* and eat it on rice | Syphilis | + | |
| | | | Use it with *Calotropis procera* and *Mánganaso* (unidentified plant) | Yellow fever | + | |
| | | | Drink a tisane made with the bark together with *Acacia tortilis.* | Intestinal worms | + | 5 |
| | | | Boil it in the water or put it into cold water for 2 hours and then drink it. | Fatigue | + | |
| | | | Make aerosol with it | Fatigue | + | |
| | | | Put in water and drink it | “Makes blood” | + | |
| | | | Make cold infusion and drink | Kidney problems | + | |
| | | | Put the bark in a bottle and drink it. | Tuberculosis | + | |
| *Khaya senegalensis* (Destr.) A. Juss. (Meliaceae) | Caïsdrat (f) Xai, kay (w) | Bark | | | |
| | | | | | |
| *Lawsonia inermis* L. (Lythraceae) | Hennè (f) Fuden (w) | Leaf? | | | |
| | | | Soak it together with the leaves of *Psidium guajava* and then drink it. The leaves needs to be fresh, not dried. | Stomachache | + | 1 |
| Botanical taxon, family, and voucher specimen code | Local name(s) | Part(s) used | Preparation and administration | Folk medical use (used against/to regulate) | Healers | Laypeople | Qs |
|-------------------------------------------------|---------------|--------------|--------------------------------|-------------------------------------------|--------|-----------|----|
| *Leptadenia hastata* Vatke (Apocynaceae)        | Mboom (w)     | Leaf         | Attach the leaves to the back together with hawk's bones | Kidney problems                         | +      | 1         |    |
|                                                 | Duto (m)      | Root         | Scrape at the bark, put it into water, and drink it      | Snakebite                                |        |           |    |
| *Lippia chevalieri* Moldenke (Verbenaceae)      | M`ango joolaa (w) | Leaf       | Drink the infusion                                       | Boils                                    | +      | 1         |    |
| *Maerua crassifolia* Forssk. (Capparaceae)      | Sothiou (w)   | Branch      | Rub the stick on the teeth                                | Clean teeth                              | +      | 2         |    |
|                                                 | Sothiou suukar| Branch      | Chew the branch. Its bark tastes like sugar               | Haemorrhoids                             |        |           |    |
|                                                 | Leaf          | Make an infusion, with 1.5 L water and a handful of leaves (some say to use only the ones on the floor, others to add salt to the infusion) | Tetanus                                  | +      | +         | 13 |
| *Mangifera indica* L. (Anacardiaceae)           | Manguier (f)  | Leaf        | Drink infusion                                            | Poor memory                              | +      |           |    |
| UNISGSEN37                                       | M`ango joolaa (w) | Bark?      | Hot infusion and inhale it together with peanut (*Arachis hypogaea*) leaves | General health                           | +      |           |    |
|                                                 | Bark          | Make aerosol with it                                  | Toothache                                | +      |           |    |
|                                                 | Leaf          | Make aerosol with it                                  | Toothache                                | +      | +         |    |
|                                                 | Leaf          | Add to water: dry leaves of *Musa paradisiaca*, little unripe fruits and leaves of *Citrus limon*, leaves of *Mangifera indica*, leaves of *Carica papaya*, leaves of *Cassia occidentalis*, and leaves of *Ziziphus mauritiana* | Malaria                                  |        | +         |    |
|                                                 | Fruit         | Eat three fruits                                      | Constipation                             | +      |           |    |
| *Manihot esculenta* Crantz (Euphorbiaceae)      | Manioc (f)    | Leaf        | Drink the infusion together with milk curdle and then massage the chest | Lung cancer                             | +      | 1         |    |
| UNISGSEN07                                       | Gnambi (w)    | Leaf        | Make aerosol with the infusion                           | Asthma                                   | +      |           |    |
|                                                 | Ma`nok (m)    | Leaf        |                                                    |                                           |        |           |    |
| Botanical taxon, family, and voucher specimen code | Local name(s) | Part(s) used | Preparation and administration | Folk medical use (used against/to regulate) | Healers | Laypeople | Qs |
|--------------------------------------------------|---------------|--------------|--------------------------------|-------------------------------------------|---------|-----------|----|
| Moringa oleifera Lam. (Moringaceae) UNISGSEN39   | Moringa (f) Nebedaay (w) Nebedayo (m) | Leaf         | Dry in the shade, powder, and eat with food | Diabetes                                | +       | 12        |    |
|                                                  |               | Leaf         | Dry it in the shade and then crush it and eat in on rice | Diabetes                                | +       |           |    |
|                                                  |               | Seed         | Dry the seeds on the fire, powder, mix with water, and drink | Diabetes                                | +       |           |    |
|                                                  |               | Root         | Grind the root and put it on the fire then dab and bandage | Sore knees                              | +       |           |    |
|                                                  |               | Bark         | Soak the root in water for few seconds and then drink | Sore neck                              | +       |           |    |
|                                                  |               | Leaf         | Put the leaf in water and wash your eyes with it | Eye allergies                           | +       |           |    |
|                                                  |               | Bark         | Soak it in warm (not boiling) water and then drink it | Kidney problems | +       |           |    |
|                                                  |               | Root         | Attach the root to the affected area, with Elaeis guineensis oil. Do not leave it too long or the root will cause an infection on the sore part. | Rheumatism                              | +       |           |    |
|                                                  |               | Leaf         | Dry the leaves in the shade and eat it with Phaseolus vulgaris | Blood pressure                          | +       |           |    |
|                                                  |               | Seed         | Put the seeds on the fire, grind into a powder and drink with water | Blood pressure                          | +       |           |    |
|                                                  |               | Leaf         | Cut the leaves and dry them in the sun for 24 hours | General health                          | +       | 4         |    |
| Musa paradisiaca L. (Musaceae)                   | Bananier (f)  | Fruit        | Eat it | Stomachache | + | |
|                                                  |               | Leaf         | Infusion with Combretum micranthum and Annona senegalensis | Blood pressure                          | +       |           |    |
|                                                  |               | Leaf         | Add to water: dry leaves of Musa paradisiaca, little unripe fruits and leaves of Citrus limon, leaves of Mangifera indica, leaves of Carica papaya, leaves of Cassia occidentalis, and leaves of Ziziphus mauritiana | Malaria | +       |           |    |
| Botanical taxon, family, and voucher specimen code | Local name(s) | Part(s) used | Preparation and administration | Folk medical use (used against/to regulate) | Healers | Laypeople | Qs |
|-----------------------------------------------|---------------|-------------|-------------------------------|---------------------------------------------|---------|-----------|----|
| **Ocimum basilicum** L. (Lamiaceae) UNISGSEN13 | Basilic (f) Ngungun (m) | Leaf | Drink the infusion | Headache | + | 3 |
| | | Seeds | Put the seed into the eyes and everything comes out | Eye problems | + | |
| | | Leaf? | Use it with *Calotropis procera* | Rheumatism | + | |
| **Panicum miliaceum** L. (Poaceae) Mil (f) | | Fruit | Use the powder (pollen) that falls down during the harvest to massage the body with water and salt. Leave it on half an hour and then wash it away. | Allergies | + | 2 |
| | | | Apply millet powder together with lemon juice (*Citrus limon*) on the affected area | Herpes | + | |
| **Parinari macrophylla** Sabine (Chrysobalanaceae) New (w) Tamba | | Bark | Cut the bark into pieces, boil, and use the water as mouthwash | Toothache | + | 2 |
| | | | Make an infusion and drink | Sore throat | + | |
| | | | Make an infusion and drink it before meals | Helps in digestion | + | |
| **Burkea biglobosa** (Jacq.) R.Br. ex G. Don (Fabaceae) UNISGSEN87 | Minosa purpre (f) Uul (w) Nete, Nere (m) | Leaf | Put the leaf powder on the burns | Burns | + | 5 |
| | | | Eat the leaves together with *Carica papaya* fruit | Yellow fever | + | |
| | | | Drink the infusion with powdered leaf and milk | Ulcer | + | |
| | | | Use it together with *Acacia albida* and *Annona senegalensis* | Depression | + | |
| | | | Use it with *Acacia albida*, *Guiera senegalensis*, *Annona senegalensis*, *Adansonia digitata*, *Soora* (nonidentified plant), and *Ficus sycomorus* | Headache, sore throat, and cold taken as result of the wind | + | |
| | Seed | Cook them with rice | Diabetes | + | |
| Botanical taxon, family, and voucher specimen code | Local name(s) | Part(s) used | Preparation and administration | Folk medical use (used against/to regulate) | Healers | Laypeople | Qs |
|-------------------------------------------------|---------------|-------------|--------------------------------|-------------------------------------------|---------|-----------|----|
| *Phaseolus vulgaris* L. (Fabaceae) UNISGSEN35    | Harricot blanche (f) Niebè (w) Nebbe | Seeds | Make an infusion with seven seeds and eat them | Breast cancer | + |
|                                                 |              | Leaf? | Use it with *Hibiscus sabdariffa* | Anaemia | + |
|                                                 |              |      | Eat it together with *Moringa oleifera*’s sundried leaves | Blood pressure | + |
|                                                 |              |      | Put the red liquid inside the bark on the wound then powder the bark and put it on the wound | Wounds | + + 3 |
| *Piliostigma reticulatum* (DC.) Hochst. (Fabaceae) UNISGSEN77 | Fara (m) Kankuran (p) | Bark | Use it with *Annona senegalensis* | Tuberculosis | + |
|                                                 |              |      | Drink the infusion | Chronic cough | + |
| *Piper nigrum* L. (Piperaceae) Poivre noir (f) Mex Pobare (w) | Seed | Drink boiled milk with pepper in it | Sore throat | + |
| *Prosopis africana* (Guill. & Perr.) Taub. (Fabaceae) Yiir (w) | Bark | Drink the decoction | Anaemia | + 1 |
|                                                 | Leaf          | Make aerosol useful to swat and then drink the water | Vertigo | + 1 |
| *Prosopis juliflora* (Sw.) DC. (Fabaceae) UNISGSEN26 | Banaana golo (w) | Leaf | Make aerosol useful to swat and then drink the water | Pregnant women | + |
|                                                 |              | Leaf | Drink the infusion | Bellyache | + |
|                                                 |              |      | Make an infusion with *Hibiscus sabdariffa* leaves, drink it, and eat the leaves | Diarrhoea | + + 10 |
|                                                 |              |      | Drink the infusion | Bellyache | + |
|                                                |              |      | Use it together with *Carica papaya* leaf | Cystitis | + |
|                                                 |              | Fruit | Eat the fruit | Bellyache | + |
|                                                 |              |      | Drink the infusion | Diarrhoea | + |
|                                                 |              |      | Drink the infusion made with young leaves | Diarrhoea | + |
|                                                |              |      | Soak the leaves together with *Lawsonia inermis*, and then drink it. The leaves need to be fresh, not dried | Stomachache | + |
| Botanical taxon, family, and voucher specimen code | Local name(s) | Part(s) used | Preparation and administration | Folk medical use (used against/to regulate) | Healers | Laypeople | Qs |
|--------------------------------------------------|--------------|--------------|--------------------------------|---------------------------------------------|---------|-----------|----|
| *Saba senegalensis* (A.DC.) Pichon (Apocynaceae) UNISGSEN76 | Mâdd (w) Mat mat (m) | Leaf | Drink the infusion | Intestinal worms | + | 2 |
| | | Fruit | Boil the fruit | Malnutrition | + | | |
| | | Leaf | Make an infusion | Skin fungus | + | 5 |
| | | | Crush the leaf and put the juice and the leaf inside the ear | Earache | + | | |
| | | Fruit | Apply tomato sauce on the wound | Wounds | + | | |
| | | | Eat it raw | Smallpox | + | | |
| *Solanum tuberosum* L. (Solanaceae) | Pomme de terre (f) Pombiteer (w) | Leaf | Make an infusion and give it to the 1-week-old baby to drink | Strong child | + | 1 |
| | | Fruit | Eat it raw | Menstrual pain | + | | |
| | | Fruit | Use it with *Combretum micranthum* | Asthma | + | | |
| | | | Boil it and wash your eyes with it | Vision problems | + | 4 |
| | | | Add salt and rinse your mouth with it | Toothache | + | | |
| | | | Karité butter together with the bark of *Tamarindus indica* | Bruises | + | | |
| | | Bark | Use it with *Hibiscus sabdariffa* and the bark of *Acacia nilotica* | Fatigue | + | | |
| | | | Use it with *Combretum micranthum* | Blood pressure | + | | |
| *Tinospora bakis* (A. Rich.) Miers (Menispermaceae) | Bakis (w) | Root | Eat the root in a soup with a ripe *Carica papaya* and chicken | Yellow fever | + | 1 |
| Botanical taxon, family, and voucher specimen code | Local name(s) | Part(s) used | Preparation and administration | Folk medical use (used against/to regulate) | Healers | Laypeople | Qs |
|--------------------------------------------------|--------------|-------------|--------------------------------|---------------------------------------------|---------|-----------|----|
| *Vitellaria paradoxa* C.F. Gaertn. (Sapotaceae)   | Karité (f)   | Seed — butter | Massage the neck              | Sore neck (2)                              | +       | +         | 11 |
|                                                  |              |             | Massage the body              | Cold                                        | +       |           |    |
|                                                  |              |             | Put it on the sore part       | Bruises                                    | +       |           |    |
|                                                  |              |             | Massage the chest with Karité butter | Chronic cough                            | +       |           |    |
|                                                  |              |             | Add salt to the butter and dab on the back | Backache                                | +       |           |    |
|                                                  |              |             | Karité butter together with the bark of *Tamarindus indica* | Bruises                                    | +       |           |    |
|                                                  |              |             | Massage and dab the sore part of the body | Rheumatism                                | +       |           |    |
|                                                  |              |             | Apply on herpes               | Herpes                                      | +       |           |    |
|                                                  |              |             | Use it with *Carapa procera* and *Elaeis guineensis*’ oil | Hair loss                                  | +       |           |    |
|                                                  |              |             | Use it together with *Carapa procera*’s nut oil and dab it on the body three times a day | Backache                                    | +       |           |    |
|                                                  |              |             | Dab on the hair               | Stronger hair                               | +       |           |    |
|                                                  |              |             | Use it together with a stick to apply this part | Fractures                                  | +       |           |    |
|                                                  |              |             | Add coffee and tyr (red oil)  | To get rid of the dead blood, against fatigue | +       |           |    |
|                                                  |              |             | Use it with *Aloe vera*       | Tuberculosis                                | +       |           |    |
|                                                  |              |             | Use it with *Aloe vera*       | Hair loss                                   | +       |           |    |
| *Xylopia aethiopica* (Dunal) A. Rich. (Annonaceae) | Diar (w)     | Fruit       | The seeds are used to prepare the "Touba Coffee" | Blood pressure                            | +       |           | 3  |
| UNISIGSEN70                                      | Jar          | Seed        |                                |                                             |        |           |    |

(f): French; (m): Mandingo; (p): Pulaar; (w): Wolof; Qs: quotations (number of informants, who have quoted a specific taxon); ?: uncertain information.
the ones in charge of TM and “health” foods in the domestic setting.

The issues relevant to primary TM practice in migrant communities are often compounded by a lack of specific health policies, which are able to address migrant needs. This problem is, of course, not isolated to the case of migrants in Italy, but is also relevant to many other Western countries, where the healthcare needs of burgeoning migrant populations are often conspicuously absent in health policy and legislation.

By having a better understanding of both the migrant folk pharmacopoeia and the state of TK transmission with regard to health, more culturally sensitive health policies could be developed. In particular, the increasing occurrence of newcomers in Italy should foster more pluralistic approaches in the management of CAMs by the regional authorities, as well as consequently addressing measures aimed to improve the information on potentialities and risks of “home-made” herbal remedies.

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