***Original Research Article***

**Ethnobotanical survey of medicinal plants used by traditional healers from the Yamoussoukro health district**

**Yamoussoukro (Ivory Coast)**

**Abstract:**

**Background :** Knowledge of plants used by traditional health practitioners is essential for safeguarding and promoting the traditional medicine. The aim of this study was to inventory the medicinal plants used by traditional healers from the health district of Yamoussoukro, Côte d'Ivoire.

**Material and methods :** An ethnobotanical survey was carried out with the traditional healers of the Yamoussoukro Traditional Healers Association. It is the association of traditional healers officially recognized by the Yamoussoukro health district authorities, with whom collaboration has already begun. The survey was conducted using the semi-structured interview method. A questionnaire covering the respondent's profile and the plants used was completed. The interview was used to gather information on the diseases treated and the plants (vernacular names, morphological types, parts used, process of preparation, mode and route of administration) used to treat those diseases.

**Results :** The survey enabled us to interview 06 traditional practitioners and to list 54 species divided into 28 botanical families. The most represented families were Apocynaceae 9.26%, Fabaceae 9.26% and Euphorbiaceae 7.41%. About half (48%) of the species cited were shrubs. Leaves were the most commonly used drugs (56.7%). The majority of plants were used in decoction form (45%), and were mainly administered orally. The therapeutic indications cited were mainly infectious pathologies (44%). Kalanchoe Crenata (5.26%) was the most widely used species in the study.

**Conclusion :** This study reveals the diversity of species used by traditional practitioners to treat various pathologies. These results could form a database for future studies evaluating the phytochemical and pharmacological potential of these plants.

Keywords : ethnobotanical survey, medicinal plants, Yamoussoukro.

1. **INTRODUCTION**

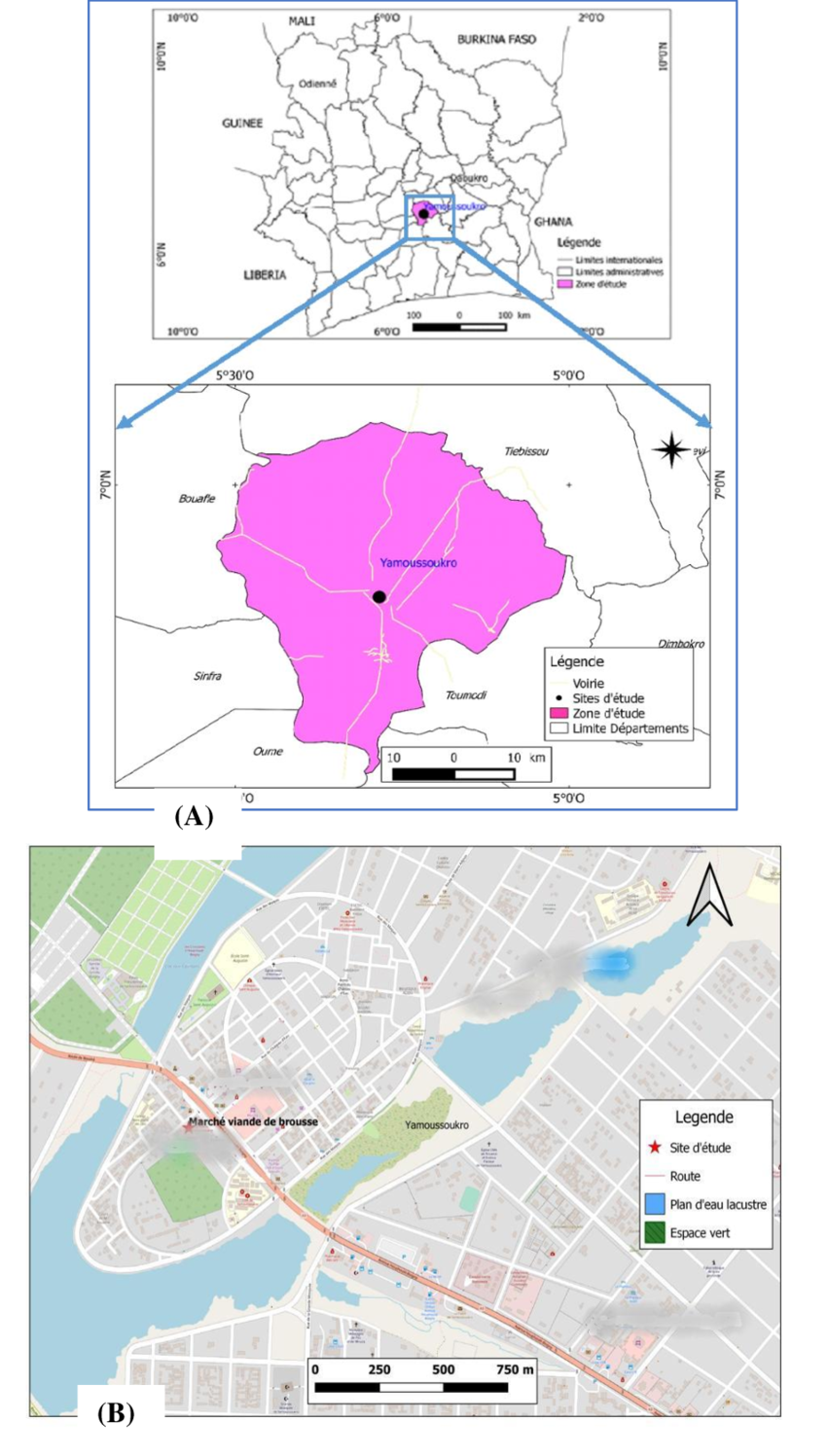
The World Health Organization (WHO) defines traditional medicine as the body of knowledge and practices used by practitioners of traditional medicine to diagnose, prevent or cure physical, mental or social imbalances, based on experience and observation handed down from generation to generation, orally or through writing (WHO, 2000). According to the WHO, the level of use of traditional medicine in developing countries remains high, estimated at between 65 and 80% for primary health care, due to poverty and unaffordability of modern medicine (WHO, 2002).

The strategies of the WHO for traditional medicine recommend actions to ensure the quality, safety and efficiency of traditional medicine, by regulating products, practices and players.

In the city of Yamoussoukro, there is an association of Traditional Health Practitioners (THP). This collaboration has enabled TPS to be identified, to get their activities organized and their involvement in raising public awareness of health problems. These TPS are particularly knowledgeable about the medicinal use of plants, making them an alternative for populations seeking effective, affordable solutions. The present study consisted of an ethnobotanical survey of the traditional health practitioners (TPS) of the Association of Traditional healers from the Yamoussoukro health district, with a view to identifying the medicinal plants they use in their practice, and describing their characteristics and traditional therapeutic uses.

1. **MATERIALS AND METHODS**
   1. **Study context :**

The study was carried out from February to March 2022 in the Autonomous District of Yamoussoukro, the political capital of Côte d'Ivoire located in the center of the country (Figure 1). This district is located in zone 30 N between 725,000 m and 785,000 m north latitude and 220,000 m and 285,000 m west longitude, 248 km north of Abidjan, the economic capital. The town of Yamoussoukro, capital of the department, covers an area of around 3,500 km² and is bordered by the departments of Tiébissou to the north, Sinfra to the south, Toumodi to the east and Bouaflé to the west. The flora is dominated by pre-forest savannah dotted more or less densely with small trees. There are also copses, forest islands and gallery forests in the lowlands, along marshes and rivers. Numerous forage species belonging to the Panicum, Stylosanthes, Andropogon and other genera also colonize the Yamoussoukro district. The equatorial climate is characterized by four seasons. Average rainfall is between 900 and 1100 mm per year, with a spatial distribution that varies considerably from one year to the next. The region's average temperature is around 26°C (ANADER, 2006).



**Figure 1 :** Map of the city of Yamoussoukro

* 1. **Plant material**

The plant material consisted of all the plant species listed and collected in the Yamoussoukro district.

* 1. **Ethnobotanical survey**

An ethnobotanical pre-investigation was carried out with the health authorities of the city of Yamoussoukro, with a view to obtaining authorization for the study. An initial meeting to present the study was held during a meeting between the Departmental Health Directorate and the association of traditional medicine practitioners attached to the health district.

The association's practitioners are recognized by the health authorities and benefit from a framework for their activity. This meeting helped to establish a climate of trust and to explain how the survey would be carried out. Following the ethnobotanical pre-survey, initial contact visits and interviews were carried out, enabling the questionnaires to be completed.

* + 1. **Collecting information**

The survey form collected information on the sex, age and academic level of the respondents. Information on the plants cited included the vernacular name in the local language (Baoulé), the part used, the process of preparation of the plants, the method of administration, the area where the drug is harvested and the diseases treated by these plants.

* + 1. **Collecting plants and making herbariums**

The plants were harvested with the help of a traditional healer. Using vernacular names (in the local language), samples of medicinal plants were taken from the area surrounding the city of Yamoussoukro and from certain sub-prefectures, with a view to compiling a herbarium of each species.

* + 1. **Botanical identification of the species**

Botanical identification of the plants was carried out at the National Floristic Center of the Université Felix Houphouët Boigny (Abidjan-Cocody).

The nomenclature according to APG IV (2016) was used to harmonize the scientific names of the species recorded.

* + 1. **Data processing**

The information gathered from the data analysis was used to generate a database on an Excel spreadsheet and analyzed using Excel 2010 software. The citation frequency (Fc) for each specific item was determined by the formula :

Fc = (Number of quotations for the plant considered/Total number of quotations for all plants) x 100

1. **RESULTS AND DISCUSSION**
   1. **Social profile of traditional healers surveyed**

At the end of the survey, the 6 traditional healers, members of the Traditional Healers Association (PMT) in the Yamoussoukro district were interviewed. Among them were both men and women, but with a majority of men (66.67%) (Table 1). Sylla et al. (2018) justify the preponderance of men among traditional health practitioners by the fact that in Côte d'Ivoire it is the herbalist profession, which consists of selling plants in markets, that is the activity generally carried out by women.

Bla et al. (2015), on the other hand, interviewed 9 exclusively male traditional healers in Toumodi.

The traditional healers interviewed were all over 40 years of age (Table 1). These results suggest that the traditional healers are of advanced age and have therefore acquired knowledge of plant use after many years of experience. This points to the need to pass on knowledge to younger people in order to perpetuate the knowledge and practices of traditional medicine.

Similar results were obtained by Anderson (2015) and Soumahoro (2021).

More than half of the traditional healers (66.7%) had secondary education (Figure 3). These results diverge from those of Gnagne et al, (2017) and Guinin et al, (2015) who reported, respectively, 64% and 90% of practitioners without schooling.

**Table 1 : Socio-demographic characteristics of registered traditional practitioners**

|  |  |
| --- | --- |
| **Parameters**  **Headcount** | 6 |
| **Gender (%)**  Masculin  Féminin | 67  33 |
| **Age range (%)**  [40-50[  > 50 | 33,33  66,67 |
| **Educational level (%)**  Out of school  Primairy  Secondairy | 16,67  16,67  66,66 |

* 1. **Characteristics of medicinal plants used by traditional practitioners.**

The survey identified 54 plant species from 53 genera and 28 botanical families, used in the treatment of various pathologies. Table 2 shows the plants listed, their scientific names, vernacular names (local names), drugs used, preparation methods, administration methods and therapeutic indications.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Plant Species** | **Family** | **local name (Baoulé)** | **Growth habit** | **Part used** | **Method of preparation** | **Administration route** | **Medicinal uses** | **Fréquency**  **(%)** |
| 1 | *Abrus precatorius* L. | Fabaceae | Labô labô | Liana | Leaves | Decoction | Oral route | Dysentery,  Cholera,  Dry cough | 2,5 |
| 2 | *Ageratum conyzoides* L. | Asteraceae | Kou n'dre | Tree | Leaves | Decoction, Grinding, Maceration | Oral route | Internal hemorrhoids,  Migraine,  Sexual weakness | 3,75 |
| 3 | *Alchornea cordifolia*  (Schumach. & Thonn.) Müll. Arg | Euphorbiaceae | Djeka | Herb | leafy stem | Decoction | Oral route | Rheumatism,  Lumbago,  Herniated disc | 1,25 |
| 4 | *Alstoni aboonei*  De Wild. | Apocynaceae | Mien | Shrub | Leaves | Decoction | Oral route | Insomnia,  Asthenia | 1,25 |
| 5 | *Alstonia congensis* Engl. | Apocynaceae | Amien | Tree | Bark | Powder | Oral route | Anemia,  Malaria | 2,5 |
| 6 | *Anthocleista djalonensis*  A.chev | Gentianaceae | Wowolouwo | Liana | Leaves | Grinding | Rectal route  (enema) | Typhoid fever | 2,5 |
| 7 | *Bambusa vulgaris* Schrad. Ex J.C.  Wendp. | Poaceae | Blofoue n'vle | Shrub | Leaves | Decoction | Oral route,  Cutaneous route  (a bath) | Typhoid fever | 2,5 |
| 8 | *Bombax buonopozense*  P.Beauv | Malvaceae | Kpouka | Tree | Bark | Grinding | Voie cutanée  (skin basting) | Mental disorders | 1,25 |
| 9 | *Caesalpinia bonduc* (L.)  Roxb | Fabaceae | Ale | Shrub | Leaves | petrissage | Vaginal route  (intimate hygiene) | painful periods | 1,25 |
| 10 | *Cardiospermum grandiflorum* Sw. | Sapindaceae | Akô | Liana | Leaves | Decoction | Oral route | Difficult delivery | 1,25 |

**Table 2 :** List of plants used by traditional healers to treat pathologies

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11 | *Carica papaya* L. | Caricaceae | Oflê yassoua | Tree | Bark | Decoction | Oral route | Asthma,  Cough | 1,25 |
| 12 | *Citrus limon* (L.) Burn | Rutaceae | Wawle lomi | Tree | Fruit | Decoction | Oral route | Slimming, Hypercholesterolemia, Hyperglycemia | 1,25 |
| 13 | *Cnestis ferruginea* DC. | Connaraceae | Kplêkêssou kplêkêssê | Liana | Leaf | Decoction | Oral route,  Vaginal route  (vaporization) | Dental infections,  Gynaecological infections | 2,5 |
| 14 | *Cochlospermum planchonii* Hook. f. ex  Planch. | Cochlospermaceae | Kale n'dja | Shrub | Root | Grinding | Rectal route | Severe malaria | 2,5 |
| 15 | *Cola cordifolia* (Cav.) R. Br. | Malvaceae | Walê | Tree | Leaf | Grinding | Cutaneous route | Scabies | 1,25 |
| 16 | *Coleus monostachyus*  (P.Beauv) A.J. Paton | Lamiaceae | Lolowlê | Shrub | Leaf | Grinding | Cutaneous route (skin basting) | Convulsions | 1,25 |
| 17 | Combretum molle R. Br. ex G. Don | Combretaceae | Yassoua waka | Small shrub | Root | Decoction | Cutaneous route  (a bath) | Mental disorders | 1,25 |
| 18 | *Crossopteryx febrifuga*  (Afzel.ex G.Don) Benth | Rubiaceae | Krokro | Shrub | Leaf | Decoction | Oral route | Malaria | 3,75 |
| 19 | *Cryptolepis nigrescens*  (Wennberg) L. Joubert & Bruyns | Apocynaceae | Djamla | Liana | Leaf | Petrissage | Oral route | Angina,  Otorhinolaryngology infections | 1,25 |
| 20 | *Dichrostachys cinerea* (L.) Wight & Am. | Fabaceae |  | Shrub | Root | Grinding | Rectal route | Viral infections,  Shingles | 1,25 |
| 21 | *Elaeis guineensis* Jacq. | Arecaceae | M'me | Tree | Root | Decoction | Cutaneous route  (a bath) | humpback disease | 1,25 |
| 22 | *Euphorbia hirta* L. | Euphorbiaceae | Akô lolo | Herb | Leaf | Petrissage, Grinding | Oral route, rectal route | Urinary tract infections,  Gonorrhea,  Abdominal pain | 2,5 |
| *23* | *Ficus exasperata* Vahl | Moraceae | Ye n'gle | Shrub | Leaf | Petrissage, Grinding | Ocular route,  Nasal route,  Rectal route (enema) | Blurred vision,  Difficult delivery,  Envenomation | 3,75 |
| 24 | *Gymnanthemum coloratum* (Willd.) H. Rob. & B. Kahn | Asteraceae | Abôwi | Shrub | Leaf | Grinding | Rectale route | Internal hemorrhoid,  Hemorrhage,  Lack of appetite | 1,25 |
| 25 | *Harrisonia abyssinica* Oliv. | Rutaceae | Pebou'n | Shrub | Root | Grinding | Rectale route | Hemorrhoids | 1,25 |
| *26* | *Heliotropium indicum* L. | Boraginaceae | Lolowlê loa | Herb | Leaf | Grinding, Decoction | Cutaneous route (massage), Oral route | Vascular accident,  Asthma,  Breathing difficulties,  Cough | 2,5 |
| *27* | *Jatropha curcas* L. | Euphorbiaceae | Plôplô oufoue | Shrub | Root | Grinding | Rectale route (enema) | Haemorrhage,  Menstrual disorders | 1,25 |
| *28* | *Justicia secunda* Vahl | Acanthaceae |  | Shrub | Leaf | Decoction | Oral route | Anemia | 1,25 |
| *29* | *Kalanchoe crenata*  (Andrews) Haw | Crassulaceae | Kpole n'gbli | Shrub | Root | Petrissage | Voie nasale | Colds,  Cough,  Bronchitis | 5 |
| *30* | *Kigelia africana* (Lam.)  Benth. | Bignoniaceae | Meme doun | Shrub | Bark | Decoction | Cutaneous route (a bath) | Epilepsy | 1,25 |
| 31 | *Lonchocarpus sericeus*  (Poir) Kunth ex DC. | Fabaceae | Akpê | Shrub | Leaf | Grinding | Cutaneous route (skin basting), Rectale route | viral infections | 1,25 |
| 32 | *Lophira lanceolata* Tiegh. ex Keay | Ochnaceae | N'gouin | Tree | Bark | Decoction | Cutaneous route (a bath) | Mental disorders | 1,25 |
| 33 | *Manihot esculenta* Crantz | Euphorbiaceae | Agba | Shrub | Leaf | Petrissage | Oral route | Angina | 1,25 |
| 34 | *Margaritaria discoidea* (Baill.) G.L. Webster | Phyllanthaceae | Kpê kpê sia | Shrub | Leaf | Maceration | Oral route | Menstrual troubles | 1,25 |
| 35 | *Milicia excelsa* (Welw.) C.C. Berg | Moraceae | Ala | Tree | Bark | Decoction | Cutaneous route (a bath) | Malaria,  Ulcer | 1,25 |
| 36 | *Morinda lucida* Benth | Rubiaceae | Kouia | Shrub | Root | Decoction | Oral route | Typhoid fever | 2,5 |
| 37 | *Moringa oleifera* Lam. | Moringaceae | Morenga | Shrub | Leaf | Decoction, Maceration | Oral route | Malaria,  Diabetes,  Constipation,  Sexual weakness | 1,25 |
| 38 | *Nauclea latifolia* Sm. | Rubiaceae | Dolê | Sarmentous | Leaf | Decoction,  Grinding | Oral route, Rectale route (enema) | Severe malaria,  Typhoid fever | 3,75 |
| 39 | *Newbouldia laevis* (P.Beauv) Seem | Bignoniaceae | Tou n'zue | Shrub | Leaf | Petrissage | Nasal route | Sinusitis | 2,5 |
| 40 | *Nicotiana tabacum* L. | Solanaceae | Gbo sou n'gna | Herb | Leaf | Petrissage | Ocular route | Mental disorders | 1,25 |
| 41 | *Ocimum gratissimum* L. | Lamiaceae | Aromangnrin | Shrub | Leaf | Decoction | Oral route, Nasal route | Rhinitis,  Bronchitis,  Epistaxis | 1,25 |
| 42 | *Olax subscorpioidea* Oliv. | Olacaceae | Aklindje | Shrub | Leaf | Decoction | Oral route | Malaria | 3,75 |
| 43 | *Cenchrus purpureus* (Schumach.) Morrone | Poaceae | N'de | Herb | Leaf | Decoction | Ocular route | Blurred vision | 1,25 |
| 44 | Phragmanthrera capitata (Spreng) Balle | Loranthaceae | Adjroua | Shrub | Leaf | Grinding | Cutaneous route (skin basting) | humpback disease | 1,25 |
| 45 | *Phyllanthus amarus* Schumach & Thonn. | Phyllanthaceae | Sou n'gna sin | Shrub | Leaf | Petrissage, Decoction, Maceration | Oral route | Diarrhea,  Lung infection,  Cough,  Malaria, | 3,75 |
| 46 | *Saccharum officinarum* L. | Poaceae | Anglanan | Herb | Leaf | Decoction | Oral route | difficulty urinating | 1,25 |
| 47 | *Secamone afzelii* (Roem. & Schult) K. Schum. | Apocynaceae | Golifle | Liana | Leaf | Decoction | Cutaneous route (a bath) | Fever | 1,25 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 48 | *Senna occidentalis* (L.) Link | Fabaceae | Mantouankan n'gna | Small shrub | Leaf | Petrissage | Auricular route,  Oral route | Infections and pain  pain,  Dental pain | 1,25 |
| 49 | *Solanum torvum* Sw. | Solanaceae | Koffi kan n'droi | Shrub | Leaf | Decoction | Cutaneous route | Panariasis | 1,25 |
| 50 | *Spathodea campanulata* P. Beauv. | Bignoniaceae | Bie bie siri | Shrub | Bark | Decoction | Cutaneous route (a bath) | Malaria,  Ulcer | 1,25 |
| 51 | *Spondias mombin* L. | Anacardiaceae | Tronman | Shrub | Leaf | Powder | Oral route,  Cutaneous route | Hemorrhoids,  Itchy skin | 1,25 |
| 52 | *Strophantus hispidus* DC. | Apocynaceae |  | Liana | Leaf | Grinding, Decoction | Oral route, Cutaneous route (poultice) | Ulcers,  Wound healing | 1,25 |
| 53 | *Terminalia schimperiana* Hochst. | Combretaceae | Kpandji | Tree | Bark | Grinding | Oral route | Sexual weakness | 1,25 |
| 54 | *Zanthoxylum zanthoxyloides* (Lam) Zepern. & Timler | Rutaceae | Tche n'dje | Tree | Bark | Powder Maceration | Oral route | Gonococcal infections, Sickle cell disease,  Premature ejaculation | 2,5 |

* + 1. **Morphological types of species**

As for the morphological types of species recorded, 48% were shrubs (Figure 5). This predominance of shrubs could be explained by the fact that the city of Yamoussoukro, where the survey was carried out, is geographically located in a transition zone between forest and savannah. These results are similar to those of Monnet (2013), who reveals in his study that shrubs were the most represented with 44.44%. He also justifies this by the strong presence of shrubs in the practitioners' immediate environment and the ease of harvesting organs from this type of plant. Béné et al. (2016) also obtained similar results during their surveys, with 51.09% of shrubs among the species recorded. However, some authors obtained a predominance of trees during their surveys (N'guessan *et al*. 2010).

**Figure 2 :** Classification of species based on the morphological types

* + 1. **Families of species recorded**

Apocynaceae (9.26%), Fabaceae (9.26%) and Euphorbiaceae (7.41%) were the families most frequently encountered (figure 4). This predominance of families such as Fabaceae and Euphorbiaceae is justified by the fact that they are among the most numerous plant families in the Ivorian flora (Aké-Assi, 2001). Also, the presence of the Fabaceae among the main families can be explained by the use of APG IV nomenclature, which now groups the Mimosaceae and Caesalpiniaceae families in the Fabaceae family belonging to the Fabales order (APG, 2016).

Ambé (2006) also explains this by the fact that, from a quantitative point of view, these families are among the most important in the flora of Côte d'Ivoire.

These results, apart from a few differences, are similar to those of many authors who have carried out surveys in other regions of Côte d'Ivoire. Indeed, Bla et al. (2015) indicate that Euphorbiaceae, Rubiaceae and Fabaceae were the most represented families in Toumodi.

**Figure 3 :** Classification of plant species based on botanical families

* + 1. **Plant parts used**

More types of organ were used as drugs. Leaves were the most popular plant parts (56.7%) (Figure 6). Bitsindou (1986) suggests that the ease and speed of harvesting leaves may be the reason for this preference. Surveys by Bla et al. (2015) and Ouattara et al. (2021) arrived at similar results. Excessive use of plant leaves could be a cause for concern, but Poffenberger et al. (1992) have shown that removing 50% of a tree's leaves does not significantly affect its survival. However, the removal of roots, which were the second most used organ group (20%) in this study, hinders the nutrient processes of the plant, which draws its nutrients from them, unlike leaves, whose removal is tolerable for the plant (Yapi, 2013).

**Figure 4 :** Classification based on the nature of drugs used

**3.2.4 Methods of preparing remedies**

Various techniques were used to prepare the remedies. Decoction (45%) was the most frequently cited method (Figure 7). The water used for decoction is the most accessible and least expensive solvent. In addition, decoction may constitute a form of sterilization of the preparation, since the heat source used can prevent possible microbial contamination. This result is in line with those of Ambé et al. (2015). Guinnin et al. (2015) also obtained similar results in Benin with the decoction used at 39.5%.

**Figure 5 :** Method of preparation of remedies

* + 1. **Route of administration**

The oral route was the most frequently cited (44.1%) (Figure 8). The preferential use of this route is due to its suitability for treating pathologies localized in internal organs, notably bacterial, fungal and/or parasitic infections (Tra Bi et al, 2008). Several studies concur with this finding, including that of Saraka et al. (2018), who showed that the oral route (44%) was the most widely used for the administration of medicinal Euphorbiaceae in Yamoussoukro. Sylla et al. (2018) also indicate the oral route as the most cited by healers. In contrast, Diatta et al. (2013) revealed the predominance of the percutaneous route.

**Figure 6** **:** Classification of differents routes of administration

**3.2.7 Groups of pathologies treated**

A breakdown by pathology group revealed the predominance of infectious diseases (44%) (Figure 9). Malaria was the most frequently cited disease (13.84%). These results correspond to the health profile of the Yamoussoukro district, which is dominated by malaria, the main reason for consultation in basic health centers, but also to that of Côte d'Ivoire, which is essentially dominated by infectious and parasitic diseases (PNLP, 2005). Collaboration between modern and traditional medicine needs to be stepped up and better organized, in order to capitalize on the knowledge that can help eradicate these diseases.

**Figure 7 :** Distribution of pathology groups treated by traditional healers

**3.2.2 Most frequently used plant species.**

Of the plant species listed, Kalanchoe crenata was the most frequently cited (66.67%) (Table 2). Extracts from the roots and leaves of this plant were cited by traditional practitioners for the treatment of coughs, colds and bronchitis. Its antimicrobial activity and anti-inflammatory effects justify its use in the treatment of coughs (Kablan, 2008).

Nauclea latifolia, Phyllantus amarus and Ageratum conyzoides were the other most commonly used species.

The aqueous extract of Nauclea latifolia is said to be rich in chemical groups that may explain the use of this plant in the treatment of malaria (Anowi et al, 2015).

The decoction, macerate or extract after pressing of Phyllantus amarus leaves can be used to treat malaria, typhoid fever, pulmonary infections and coughs, according to the traditional practitioners surveyed. Coulibaly et al (2011) have shown that this plant contains substances that could also justify its traditional use in tuberculosis.

Ageratum conizoydes was cited in the treatment of sexual weakness and internal hemorrhoids. This traditional use for the treatment of hemorrhoids has already been mentioned in a survey (Sidio et al. 2020).

**3.2.8 Plant sourcing location**

All the traditional healers we met harvested medicinal plants from the nature for the preparation of their remedies. These results reveal the great accessibility of traditional healers to plant drugs. This availability of plants in the immediate natural environment of traditional health practitioners represents an enormous advantage for the practice of traditional medicine. Soumahoro obtained a similar result in his study, in which 84.5% of plants came from nature (Soumahoro, 2021).

Also in Senegal's Ziguinchor region, 100% of the traditional health practitioners we met turned to nature for their plant supplies (Diedhiou, 2017). However, overexploitation of forests and urbanization of cities are at the root of deforestation and species extinction. As a result, practitioners face enormous difficulties in obtaining plant supplies, which are becoming increasingly difficult, sometimes necessitating relocation to other parts of the country. Given the above-mentioned problems, the current challenge is to find solutions that will enable the survival of these species for therapeutic use. One effective and sustainable solution is cultivation, which remains the only method of obtaining sufficient quantities of plants (WHO, 1993).

**CONCLUSION**

This study identified 54 species belonging to 53 genera. Shrubs were the most abundant (48%). Leaves were the most commonly used organs (56.7%), and decoction (45%) was the most common method of preparation. The oral route (44.1%) was the most popular for the preparation of remedies. Infectious diseases (41%) were the most commonly treated diseases.

These data could provide a source of information for research into phytochemistry and pharmacology. The identification of active metabolites and the evaluation of activities will enable us to define the scientific basis for the traditional use of these plants, with the aim of adding value to the traditional pharmacopoeia through the development of improved traditional medicines that are safe, effective and financially accessible to the population.

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