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# A QUANTITATIVE ETHNOBOTANICAL STUDY OF COMMON HERBAL REMEDIES USED AGAINST 13 HUMAN AILMENTS CATERGORIES IN MAURITIUS

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## Abstract

**Background and aim:** Mauritius is a tropical multicultural island with a long-standing use of herbal remedies. The present ethnobotanical survey was geared towards documenting and preserving local knowledge pertaining to common medicinal plants (MP) used as therapeutic agents in Mauritius.
**Methods:** Interviews were conducted among local people and herbalists (n=318). Also, 7 quantitative ethnobotanical parameters (variety of use (VU), relative frequency of citation (RFC), informant consensus factor ($F_{IC}$), fidelity level (FL), index of agreement on remedies (IAR), relative importance (RI) and cultural importance index (CII)) were calculated for MP used.
**Results:** A total of 87 plants belonging to 45 families were reported to be used in formulating herbal remedies among which 3 endemic plants have been documented. *Mentha piperita* was found to be the most used plant against gastrointestinal diseases with an RFC index of 0.55. Holy basil (*Ocimum tenuiflorum*) had the highest RI value (RI=2.00), being cited for 9 different ailments. Therapeutic properties of some herbal remedies reported correlated to some extent with those of previous studies while others have open potential perspectives for further research as their chemistry and pharmacology have not been published.
**Conclusion:** From the information obtained, it can be suggested that the Mauritian population still relies heavily on MP for their primary health care. Nonetheless, further research is needed to investigate the possible active constituents that could be the basis of an evidence based investigation to discover new drugs.

**Key words:** Medicinal plants, ethnobotanical, therapeutic agents, Mauritius

## Introduction

From the World Health Organisation's (WHO) perspective, approximately 4000 million people in developing countries utilize herbal remedies on a regular basis. Despite the accessibility of modern medicine in these countries, medicinal plants (MP) have remained a popular therapy, owing to the belief in their efficacy (Alzweiri et al., 2011). Recently there has been a surge of interest in herbal remedies even within developed countries where people are turning towards phytotherapy where chronic conditions are involved. There is great possibility that medicinal plants may turn out to be much more significant source of bioactive molecules that has ever been imagined for developing novel drugs (Bougel, 2007).

Currently more research is being directed towards phytochemicals resulting from their therapeutic ability towards diseases like cancer, cardiovascular diseases, diabetes, arthritis, cataract, and aging amongst others. The underlying reason that has contributed to the re-emergence of interest in bioactive phytochemicals is scientific proof acquired from well-designed epidemiological and experimental studies conducted over a decade ago. Investigations that are being carried out with plants are being geared towards their antioxidant activities and these are due to flavonoids considered responsible for not only reducing free radical formation but also for their scavenging (Srivastava and Vankar, 2012).

Indeed chemical analysis in MP especially belonging to Myrtaceae family has awakened the inquisitiveness of researchers. This is due to the fact that *Eucalyptus globulus* has been one of the most exploited medicinal plants and its leaves have extensively been utilised for a number of therapeutic properties as well as folkloric use (antiseptic, deodorant, cough, asthma, fevers, bronchitis, diabetes, malaria, rhinitis, tuberculosis and for treatment of wounds) (Vankar and Srivastava, 2012). Furthermore, according to the current growth rate, by the year 2020, the world population is expected to reach 11.5 billion. The drastic increase in population, insufficient supply of drugs in certain regions of the globe, unaffordable cost of treatment for common diseases, side effects of numerous allopathic drugs presently used and not to mention the development of resistance to currently used drugs for infectious diseases have inevitably turned our attention towards phytotherapy for a broad range of diseases (DMAPR, 2012). Elujoba et al. (2005) study mentioned that MP have greatly contributed to the management of diseases for instance HIV /AIDS, malaria, diabetes, sickle-cell anemia and mental disorders. An example is *Illicium verum* (Star anise) which serves as the industrial source of shikimic acid, a principal ingredient used to produce the antiviral drug, Tamiflu (oseltamivir phosphate) which is so far, the only existing drug that may diminish the severity of bird flu (Wang et al., 2011).

Studies carried out have documented the therapeutic effect of many MP that are utilised worldwide and hence it cannot be denied that the knowledge of medicinal plants that tribes possess is a starting point for modern science to discover new drugs (Clark, 2012). Many studies have been carried out with the view to determining MP used in different regions of the globe, all with the same aim; that of ultimately discovering novel drugs. This study was aimed at investigating some MP that are used by the Mauritian population and was accomplished through an ethnopharmacological survey. Given the dearth of documented information on MP used among the population, this work will provide an opportunity to collect, preserve and document their use.

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## Materials and methods

### Study area and ethnobotanical survey

The island of Mauritius is part of Sub-Saharan Africa and lies in the southern hemisphere in the middle of the Indian Ocean.The population comprises Indo-Mauritians, people of mixed European and African origin and Sino-Mauritians. The survey was conducted all over the island in order to gather maximum MP used as therapeutic agents. Around sixteen different towns and villages spread over 9 districts were visited.

The survey was performed using semi structure questionnaire through face to face (direct contact) interview on selected local people during the academic year 2011-2012. The questionnaire was designed after carrying out an in depth literature review of similar studies and surveys conducted in other countries. The questions included in the survey were adapted from the works of Bussmann et al. (2006), Yineger et al. (2007), Holroyd et al.(2008), Rokaya et al. (2010), Yadav et al. (2011), and Wodah et al. (2012). The questionnaire developed was anonymous, confidential and non-compulsory.

Proper data was partly collected using the participatory rural appraisal method, as the key informants also became investigators themselves, participating in interviews, informal meetings, open and group discussions, and overt observations with semi-structured questionnaires.

The questionnaire consisted of 6 sections: Section A - Participant profile: age, sex, level of education, place of residence and average monthly household income; Section B - MP used: Reasons behind the use of MP as therapeutic agents, person involved in the preparation and method of acquaintances with the plant use; section C - MP preparation: Participants were asked to elaborate on MP employed including the conditions for which they make use of these plants, the part(s) of the plant(s) used, the length of time for which the treatment is made use of, whether additives were used in the preparations to improve palatability, place and time of collection of the plant(s) for preparation, Section D - Cultural ritual: This section focused on determining whether cultural rituals were made use of by participants during the preparation or administration of MP preparation and if ever they were carried out, how they were done; Section E - Efficacy: In this part, the efficacy of MP preparations was assesed; Section F - Adverse effect: The purpose of this section was to determine whether adverse effects have been experienced by users of MP, the type of adverse effects and any action taken following an adverse effect.

Prior to face to face interview, the potential participants were given comprehensive information about the project and its major aims. They were assured that all information provided would be used only for education purposes and would be confidential. The interview was conducted in the local languange ('Creole') so as to facilitate communication to local people with low literacy. The participants were free to drop out at any time without any compulsion and almost all the conversations were recorded.

During field visits, when a MP was mentioned by the participant, where possible, the participant was encouraged to show a sample of the plant which was collected and/or photographed. The collected sample was then identified by local botanists. A local database was constructed whereby plant samples were assigned a collection number for future reference. A personal local repository database has been constructed to store primary data for future data mining and sharing.

The data obtained during the survey was cross-checked (local names/ scientific names) according to locally published books (Gurib-Fakim and Gueho, 1995; Gurib-Fakim, 2002). Scientific names of plant species were identified according to the International Plant Name Index (IPNI: http://www.ipni.org).This documentation will fully recognize the contribution of the local people who have been using the indigenous knowledge, protection of community biodiversity and intellectual property rights, and benefits, if any comes out of the study and prior informed consent for publication of the work has been obtained during the survey. Also informants were assured that this research is not for commercial purpose, is for documentation and information dissemination on the traditional knowledge on MP."

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### Quantitative ethnobotanical data

The variety of use (VU) which indicates the number of different diseases that are treated with a particular species was assessed as decribed by Hajdu and Hohmann (2012).

Relative frequency of citation (RFC) shows the local importance of each species and it is given by the frequency of citation (FC, the number of informants mentioning the use of the species) divided by the total number of informants participating in the survey (N), without considering the use-categories (Tardío and Pardo-De-Santayana, 2008).

Calculation of a consensus factor ($F_{IC}$) for testing homogeneity on the informant's knowledge was followed by the method provided by Trotter and Logan (1986). A consensus factor of $F_{IC}$ is given by: $F_{IC} = N_{ur}-N_t/ (N_{ur}-1)$. The factor provides a range of 0 to 1, where a high value (close to 1) is indicative of a high rate of informant consensus. $N_{ur}$ is the number of use-reports of informants for particular illness usage, where a use-report is a single record for use of a plant mentioned by an individual, and $N_t$ refers to the number of species utilised for a particular illness category for all informants. Thus, the disorders were classified as (Mutheeswaran et al., 2011): disease of the ear and mastoid process; disease of the respiratory system; disease of the eye and adnea; disease of the circulatory system; injury and poisons of external causes; disease of the genitourinary system; infectious and parasitic diseases; disease of the skin and subcutaneous tissue; disease of the digestive system; endocrine, nutritional and metabolic disorders; disease of the musculoskeletal system and connective tissue, disease of the neurological system and immunological problems.

Relative importance (RI) is defined by the following formula: RI = NUC + NT; where, regardless of the number of informants citing the species, NUC = the number of use categories of a given species divided by the total number of use-categories of the most versatile species; NT = the number of types of uses attributed to a given species divided by the total number of types of uses attributed to the most important taxon (Albuquerque et al., 2006).

To assess the importance of individual species in each group, fidelity level (Abouzid and Mohamed, 2011) and index of agreement on remedies (IAR) (Trotter and Logan, 1986) were used during data processing.

The fidelity level (FL) was used to indicate the percentage of informants claiming the use of a certain animal/plant species for the same medicinal purpose. The FL is calculated as follows: FL (%) = (Np/ N) x 100; Where, Np: number of informants that claim use of a plant/animal species to treat a particular disease. N: number of informants that use the plant/ animal as medicine to treat any given disease.

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The index of agreement on remedies (IAR) was used to assess the importance of individual species in each group (Mutheeswaran et al., 2011). IAR was calculated as follows: IAR= ($n_r$ - $n_{a)}$ / (nr – 1), where, $n_r$: total number of citations registered for species *s*, $n_a$ : number of illness categories that are treated with this species. This value ranges between zero (when the number of illness categories equals the number of citations) and one (whereby all the participants agree upon the exclusive use of the species for the particular illness) (Chellappandian et al., 2012).

Culturally important species as medicines was identified by the Cultural Importance Index (CII). It is an objective index since it considers diversity of uses along with the consensus of informant. It was calculated as follows:

$$CII = \sum_{u=u_1}^{u_{nc}} \sum_{i=i_1}^{i_n} \frac{UR_{ui}}{N}$$

Where, NC: total number of different illness categories (of each *i* species), UR: total number of use reports for each species, N: total number of informants. The CII index is the sum of the proportion of informants that mention each of the use-categories for a given species. The maximum value of the index equals the total number of different use-categories (NC), which would occur if all informants would mention the use of a species in all use-categories. In this case, the maximum CII value would be 2.00. This index was used to estimate the cultural significance of each plant species and to verify, in quantitative terms, to what extent each plant species is present in the popular culture and in the memory of the inhabitants in the study (Tardio and Pardo-De-Santayana, 2008).

## Results

Table 1 provides demographic information (gender, age, residence, education level, and average monthly income) recorded from the 318 indigenous people who participated in the survey. Ninety six (30.2%) males and 222 (69.8%) females were recruited during the field survey, of which informants aged over 60 years were observed to have the highest (24.5%) participation rate. Considering the literacy background, it was found that individuals having secondary education were mostly (32.1%) involved in the study. The majority (50.9%) of the informants' monthly income was between10001–25000 Mauritian rupees.

**Table 1:** Socio-demographic characteristics of interviewee (n=318).

| **Background characteristics** | | **Frequency** | **(%)** |
|---|---|---|---|
| Gender | Male | 96 | 30.2 |
| | Female | 222 | 69.8 |
| Age | 20-30 | 72 | 22.6 |
| | 31-40 | 30 | 9.4 |
| | 41-50 | 72 | 22.6 |
| | 51-60 | 66 | 20.8 |
| | >60 | 78 | 24.5 |
| Residence | Rural | 204 | 64.2 |
| | Urban | 114 | 35.8 |
| Level of education | No formal education | 54 | 17.0 |
| | Primary | 60 | 18.9 |
| | Secondary | 102 | 32.1 |
| | Tertiary | 96 | 30.2 |
| | Others | 6 | 1.9 |
| Monthly Household income | <10,000 | 72 | 22.6 |
| | 10,001-25,000 | 162 | 50.9 |
| | 25,001-50,000 | 84 | 26.4 |
| | >50,000 | 0 | |

n: number of participants.

Primary ethnobotanical information (local/vernacular name(s), parts used, source, number of citations, dosage and method of preparation, VU, RFC and RI) for all the different herbal remedies were collected from the informants and summarized in Table 2. Additionally, an endeavour has been made to cite relevant scientific reference(s) on the quoted medicinal plants. A plethora of medicinal plants are commonly used by the local people as depicted in Table 2. A total of 87 plants belonging to 45 families were reported to be used in formulating herbal remedies among which 3 endemic plants were reported to be in common use among the local people.

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The highest RFC value (0.55) was recorded for *Mentha piperita* which tend to designate its preference and popularity for treating particular illnesses. The RI of the species cited by 318 informants ranged from 0.25 to 2.00. A total of 55 plant species had RI ≤ 0.5; 27 species, RI from 0.51 to 1.0; 4 species, RI from 1.01 to 1.5, and 1 species with RI from 1.51 to 2.0. The species with RI ≥ 1.5, was *Ocimum tenuiflorum* (RI= 2.00), and those with 1.01 < RI <1.5 included *Allium sativum* (RI=1.52), *Camellia sinensis* (RI=1.13), *Aloe vera* (RI=1.13) and *Zingiber officinale* Roscoe (RI=1.13).

Table 3: Depicts the $F_{IC}$ values for the ailments. The $F_{IC}$ values ranged from 0.80 to 1.00 with an average value of 0.93, showing high level of agreements among the informants. Based on the $F_{IC}$ in Table 3, infectious and parasitic diseases had the highest (1.00) $F_{IC}$ value followed by disease of the genitourinary system ($F_{IC}$ = 0.98) and immunological problems ($F_{IC}$ = 0.97). Disease of the musculoskeletal system and connective tissue had the lowest (0.80) $F_{IC}$.

**Table 3:** Categories of Ailments and Informant Consensus Factor.

| Category | Condition | $F_{IC}$ |
|---|---|---|
| Disease of the ear and mastoid process | Earache | 0.91 |
| Disease of the respiratory system | Sinusitis, asthma, cough, respiratory tract infection, influenza | 0.96 |
| Disease of the eye and adnea | Eye infection, Pimple on eyelid | 0.93 |
| Disease of the circulatory system | High blood pressure, inflammation, neonatal jaundice, hypercholesterolemia, varicose veins, water retention, anemia | 0.93 |
| Injury and poisons of external causes | Wound, sprain, trauma, allergy | 0.88 |
| Disease of the genitourinary system | Kidney stone, urinary tract infection | 0.98 |
| Undefined pains or illnes | fever, insomnia, infant colic, feet edema, loss of appetite, pain, headache | 0.95 |
| Disease during the postpartum period | New delivered, amenorrhea | 0.91 |
| Infectious and parasitic diseases | Helmintic condition, Measles | 1.00 |
| Disease of the skin and subcutaneous tissue | Skin eruptions, acne, dandruff, Cracked heals, dark spots, Eczema | 0.93 |
| Disease of the digestive system | Gastritis, stomach acidity, constipation, gum pain, diarrhea, toothache, bleeding of gums, stomach upset, indigestion, flatulence, stomach pain, nausea and vomiting, abdominal pain, hiccup. | 0.96 |
| Endocrine, nutritional and metabolic disorders | Diabetes, Hyperglycemia, cancer | 0.94 |
| Disease of the musculoskeletal system and connective tissue | Rheumatic pain | 0.80 |
| Disease of the neurological system | Convulsion, depression, Agitation in children, stress | 0.89 |
| Immunological problems | Weakened immune system | 0.97 |

$N_t$: Number of species used; $N_{ur}$: Use citation; $F_{IC}$: Informant consensus factor

**As shown in Table 4, the maximum FL of 1.00 was found for 26 species. FLs for plant species for a specific disease category varied widely, ranging between 0.36 and 1.00 for plants in the study area. Furthermore, Table 3 showed that IAR values ranged from 0.88 to 1.00. High values of IAR tend to indicate that the plants species are used for a small number of disease categories compared to those having low IAR values which is indicative of use in multiple disease categories. For instance, the lowest IAR value was for *Ocimum tenuiflorum* since it was used in 7 disease categories.**

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**Table 2:** Ethnopharmacological data relating to the 87 plants used by Mauritians.

| Family/Plant species | VN/CEN | Source | RFC,VU,RI | Indication | Method of preparation | Plant part used | Recorded literature use |
|---|---|---|---|---|---|---|---|
| **Amaryllidaceae** | | | | | | | |
| *Allium sativum* Linn | Lail/ Garlic | C/P | 0.21, 6, 1.52 | Rheumatic pain | Crush and soak in mustard oil. Apply onto the skin. | Bu | Antibacterial,antiviral, antiprotozoal,beneficial effect on cardiovascular and immune system.[1] |
| | | | | Helmintic condition | Rub 1 clove of *Allium sativum* around the navel. | | |
| | | | | Skin eruption | Prepare a poultice and apply onto the skin. | | |
| | | | | Convulsion | Prepare a poultice and bind around the wrist. | | |
| | | | | Earache | Heat *Allium sativum* in oil instill 1-2 drops in the ear. | | |
| | | | | High blood pressure | Prepare pickle of *Allium sativum* and *Citrus limonia*. Eat daily with meals | | |
| **Amaranthaceae** | | | | | | | |
| *Spinacia oleracea* Linn | Bred epinard/ Spinach | P | 0.04, 1, 0.25 | Inflammation | Extract the juice and sweeten with honey. | L & St | Antioxidant[2] |
| **Anacardiaceae** | | | | | | | |
| *Mangifera indica* Linn | Mangue/ Mango | C/P | 0.23, 1, 0.25 | Pimple onto eyelid | Rub the leaves onto the eyelid. | L | Laxative, headache, migraine, cicatrizant (internal)[3],Anti-infective.[4] |
| **Annonaceae** | | | | | | | |
| *Annona muricata* Linn | Corrosol/ Soursop | W | 0.02, 1, 0.25 | High blood pressure | Prepare an infusion of the leaves and drink occasionally. | L | Cough, dysentery, emetic, astringent, antispasmodic, parasiticidal.[5,6] |
| **Aphloiaceae** | | | | | | | |
| Aphloia *theiformis** (Vahl) Benn | Fendamane | W | 0.02, 1, 0.25 | Inflammation | Prepare a decoction of leaves and stem. Drink 2 to 3 cups per day occasionally. | L & St | Anti-infective[4] |
| **Apiaceae** | | | | | | | |
| *Foeniculum vulgare* Mill | Fenouil/ Fennel | P | 0.02, 1, 0.25 | Stomach upset | Prepare an infusion of the seeds of *Foeniculum vulgare* together with leaves of *Ocimum tenuiflorum* and *Mentha piperita*. Drink when required. | S | Diseases of chest, cough[7] |

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|---|---|---|---|---|---|---|---|
| *Trachyspermum ammi* Linn | Jawain/ Ajwain | P | 0.08, 1, 0.25 | Wound | Prepare a poultice of the crushed seeds and apply on wound. | S | Antispasmodic, stimulant, tonic, carminative effect, kidney stone pain.[8] |
| *Coriandrum sativum* Linn | Cotomili/ Coriander | C/P | 0.08, 1, 0.25 | Indigestion | Prepare an infusion of the leaves and stem and drink. | L & St | Anti-anxiety activity.[9] |
| *Daucus carota* Linn | Carote/ Carrot | C/P | 0.09, 1, 0.25 | Neonatal jaundice | Prepare a decoction of *Daucus carota* L and mix with milk in feeding bottle if child is not being breastfed. Alternatively, if the child is being breastfed, then it is the mother who takes it. | F | Antibacterial, antifungal.[10] |
| **Apiaceae** | | | | | | | |
| *Petroselinum crispum* Mill | Persille/ Parsley | C/W | 0.11, 2, 0.37 | Hypercholesterolemia | Extract the juice from the leaves and stem.Administer once weekly. | L & St | Intestinal disorders[11], anti-inflammatory, hepatoprotective[12] |
| *Pimpinella anisum* Linn | Gro anis/ Anise | P | 0.43, 3, 0.48 | Flatulence | Prepare a decoction of the seeds. Drink when required. | S | Anti-spasmodic and relaxant effects[16], |
| | | | | Flatulence | Prepare a decoction of the seeds of *Pimpinella anisum* and leaves of *Mentha piperita*. Drink when required. | | antioxidant, antimicrobial.[17] |
| | | | | Flatulence | Prepare a decoction of *Pimpinella anisum* seeds, *Eupatorium triplinerve* Vahl. leaves and *Illicium verum* fruits. Drink when required. | | |
| | | | | Flatulence | Prepare a decoction of *Pimpinella anisum* seeds and Illicium verum fruits. Drink when required. | | |
| | | | | Flatulence | Prepare a decoction of *Pimpinella anisum* seeds, *Mentha piperita* leaves and *Illicium verum* fruits. Drink | | |

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|---|---|---|---|---|---|---|---|
| | | | | | when required. | | |
| **Apiaceae**<br>*Pimpinella anisum* | | | | | | | |
| Linn | Gro anis/ Anise | P | 0.43, 3, 0.48 | Flatulence | Prepare a decoction of *Pimpinella anisum* seeds, *Illicium verum* fruits, *Mentha piperita* leaves, *Ocimum tenuiflorum* leaves and *Zingiber officinale* root. Drink when required. | | Anti-spasmodic and relaxant effects[16], antioxidant, antimicrobial.[17] |
| | | | | Gastritis | Prepare a decoction of seeds. Drink till cured. | | |
| | | | | Stomach pain | Prepare a decoction of seeds. Drink when required. | | |
| **Arecaceae**<br>*Cocos nucifera* Linn | Coco/ Coconut | C | 0.05, 2, 0.51 | Inflammation | Prepare a decoction of the root and drink 1 glass once daily. | R | Malaria, fever[16] |
| **Araceae**<br>*Colocasia esculenta* (Linn) Schott | Songe blanc/ Taro | C | 0.02, 1, 0.25 | Fever | Apply warm oil on leaf and bind it on forehead. | L | |
| **Asteraceae**<br>*Eupatorium triplinerve* Vahl. | Ayapana | C | 0.34, 5, 0.84 | Nausea & vomitting | Prepare a decoction of the leaves. Drink as required. | L | Fever, high blood pressure, flu, vomiting, nausea[20] |
| | | | | Abdominal pain | Prepare an infusion of the leaves together with leaves of *Mentha piperita.* Drink 1 cup 2 to 3 times. | | |
| | | | | Flatulence | Prepare a decoction of *Eupatorium triplinerve* Vahl. leaves, *Pimpinella anisum* seeds and *Illicium verum* fruits. Drink 1 glass when required. | | |
| **Asteraceae**<br>*Eupatorium triplinerve* Vahl. | Ayapana | C | 0.34, 5, 0.84 | Indigestion | Prepare an infusion of the leaves. Drink 1 glass as required. | | Fever, high blood pressure, flu, vomiting, nausea[20] |
| | | | | Cracked heels | Prepare a poultice of the leaves and apply onto cracked heels. Use till cured. | | |

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|---|---|---|---|---|---|---|---|
| *Chamomilla recutita* Linn | Camomille/ Chamomile | C/W | 0.17, 3, 0.98 | Insomnia | Prepare an infusion of the flowers. Drink for 2 to 3 days | Fl | Depressive effect on CNS[21],spasmolytic, antimicrobial and disinfective properties.[22] |
| | | | | Infant colic | Prepare a decoction of the flowers. Mix with baby's milk for 2 to 3 days. | | |
| | | | | Indigestion | Prepare a decoction of the flowers. Drink 2 to 3 times. | | |
| | | | | Abdominal pain | Prepare a decoction of the flowers. Drink 2 to 3 times. | | |
| | | | | Sinusitis | Prepare an infusion of the whole plant. | W | |
| *Helianthus annuus* Linn | Sunflower | P | 0.02, 1, 0.25 | Weakened immune system | Eat the dried seeds raw twice weekly. | S | Antiglycative and antioxidant[23] |
| *Ageratum conyzoides* Linn | Herb de bouc/ Goat weed | W | 0.11, 1, 0.25 | Stomach acidity | Prepare a decoction of the whole plant. | W | Sleeping sickness,[24] stop internal bleeding, wound healing, anti- ulcer[25] |
| **Asteraceae** | | | | | | | |
| *Tagetes lucida* Cav. | Genda/ Marigold | C/W | 0.08, 2, 0.51 | Abdominal pain | Prepare a decoction of the flowers. Drink 1 glass as required | | Inflammation, conjunctivitis.[26] |
| | | | | Neonatal jaundice | Prepare a decoction of *Tagetes lucida* L and administer 1 glass to breastfeeding mother. | | |
| *Cynara cardunculus* var. scolymus | Artichaut/ Artichoke | P | 0.23, 2, 0.51 | Fever | Prepare an infusion of the leaves. Drink twice. | L | Antioxidant[27] |
| | | | | Inflammation | Prepare a decoction of the leaves. Drink once. | | |
| | | | | Flatulence | Eat raw. | | |
| **Brassicaceae** | | | | | | | |
| *Brassica rapa* Linn | Rave/ Turnip | P | 0.08, 1, 0.51 | Asthma | Extract the juice from the fruit and sweeten with honey. Administer for 2 to 3 days till symptoms subside. | F | Antioxidant, antimicrobial properties[28] |
| | | | | Flatulence | Eat raw. | | |
| *Nasturtium officinale* W.T Aiton | Cresson/ Watercress | P | 0.06, 1, 0.25 | Cough | Extract the juice and mix with cow's ghee. Administer for 2 to 3 days. | | |
| | | | | Cough | Extract the juice from the stem of *Nasturtium officinale* and from the fruit of *Citrus aurantiifolia* as well then sweeten with honey. | | |

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|---|---|---|---|---|---|---|---|
| | | | | | Administer for 2 to 3 days. | | |
| **Brassicaceae** | | | | | | | |
| *Nasturtium officinale* W.T Aiton | Cresson/ Watercress | P | 0.06, 1, 0.25 | Cough | Extract the juice and mix with cow's ghee. Administer for 2 to 3 days. | | |
| *Lepidium sativum* Linn | Chansur | P | 0.08, 1, 0.25 | New delivered | Boil the seeds in milk. Drink 3 to4 times. | S | Tonic, carminative in chronic liver enlargement and spleen disease,Anti-inflammatory, rheumatic pain.[30] |
| *Lepidium meyenii* Walp. | Maca | P | 0.02, 1, 0.25 | Water retention | Prepare an infusion of the tea bag which is sold and contain *Lepidium meyenii*, *Coffea canephora* and *Camelia sinensis* L. | S | Management of anemia, infertility, female hormonal imbalance,[31],[32] antioxidant[33] |
| | | | | Stomach acidity | Extract the juice from the fruit and drink. | | immunomodulatory effects[35], |
| | | | | Constipation | Eat the ripe fruit. | | antiulcerogenic effect[36] |
| **Crassulaceae** | | | | | | | |
| *Kalanchoe pinnata* Lam Pers. | Sulfaf | W | 0.08, 2, 0.51 | Feet edema | Soak feet in an infusion of the leaves. | L | Skin diseases, wounds,[37] scabies, stop bleeding[38] |
| | | | | Feet edema | Soak feet in an infusion of the leaves with salt. | | |
| | | | | Sprain | Soak feet in an infusion of the leaves with salt. | | |
| **Cucurbitaceae** | | | | | | | |
| *Lagenaria siceraria* Molina Standl. | Calebasse/ Bottlegourd | P | 0.11, 1, 0.25 | Diabetes | Prepare a decoction of the skin of the fruit. Drink thrice daily. | | Prevent fat amassment[39], free radical scavenging.[40] |
| *Momordica charantia* Linn | Margoze/ Bitter melon | P | 0.04, 1, 0.25 | Diabetes | Extract the juice from the fruit. Drink once weekly. | F | Anti-hyperglycemic effect[41] |
| *Sechium edule* Jacq. Sw. | Chouchou/ Chayote | C/P | 0.02, 1, 0.25 | Hypercholesterolemia | Prepare a decoction of the stem. Drink twice weekly. | St | Antioxidant[42], ACE inhibitory activity.[43] |
| **Erythroxylaceae** | | | | | | | |
| *Erythroxylum laurifolium* Lam* | Bois de Ronde | W | 0.17, 2, 0.37 | Kidney stone | Allow the bark to soak in water. Drink 2 to 3 times daily till pain subsides. | B | Anti-infective[4] |
| | | | | Urinary tract infection | Allow the bark to soak in water. Drink 2 to 3 times daily till cured. | | |
| **Fabaceae** | | | | | | | |
| *Millettia pinnata* | Coqueluche | W | 0.02, 1, 0.25 | Cough | Wrap the seed in a cloth and | S | Rheumatic pain[44] |

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| Linn Panigrahi | | | | | tie it around the neck. | | |
| *Trigonella foenum-graecum* Linn | Methi/ Fenugreek | P | 0.06, 1, 0.25 | Diabetes | Prepare a decoction of 1 tablespoon of the seeds. Drink once weekly. | S | Antidiabetic,[45] Acethycholinesterase inhibitor[46], Antiallergic effect.[47] |
| *Aspalathus linearis* (N.L.Burm.) R.Dahlgr. | Rooibos tea | P | 0.02, 1, 0.25 | Weakened immune system | Prepare an infusion of the tea bag which is sold. | | Chemoprotective property.[48] |
| **Fabaceae** | | | | | | | |
| *Phaseolus vulgaris* Linn | Haricot/ Common bean | P | 0.02, 1, 0.25 | Depression | Extract the juice from the fruit. Drink once weekly. | | Reduction of food intake.[49] |
| *Senna tora* Linn Roxb. | Sene | C | 0.08, 1, 0.51 | Inflammation | Prepare a decoction of a handful of the leaves. Drink 1 cup when required. | L | Antigenotoxic properties[50], reduction of lipid |
| | | | | Constipation | Prepare a decoction of a handful of the leaves. Drink 1 cup in the morning. | | accumulation.[50] |
| | | | | Agitation in children | Place 3 leaves under the pillow. | | |
| | | | | Convulsion | Place 3 leaves under the pillow. | | |
| | | | | Convulsion | Prepare a decoction using 2 to 3 leaves. | | |
| *Mimosa pudica* Linn | Sensisive/ Sensitive | C/W | 0.08, 2, 0.37 | Agitation in children | Prepare a decoction using 2 to 3 leaves. Administer for 1 week. | L | Anticonvulsant,[52] wound healing activity.[53] |
| | | | | Agitation in children | Place 3 leaves under the pillow. | | |
| | | | | Convulsion | Place 3 leaves under the pillow. | | |
| | | | | Convulsion | Prepare a decoction using 2 to 3 leaves. | | |
| *Tamarindus indica* Linn | Tamarin/ | C | 0.13, 1, 0.25 | Gum pain | Rub a paste of the fruit onto | F | Antioxidant property,[54] |

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| | Tamarind | | | | the gum. | | antidiabetic property[55] |
| **Gentianaceae** | | | | | | | |
| *Swertia chirata* Linn | Chiraita | P | 0.36, 3, 0.62 | Fever | Prepare an infusion of the leaves. Drink 1 cup twice daily. | L | Hepatoprotective agent, antifungal, antimalarial, anti-inflammatory.[56] |
| **Gentianaceae** | | | | | | | |
| *Swertia chirata* Linn | Chiraita | P | 0.36, 3, 0.62 | Fever | Prepare an infusion of the whole plant. Drink 1 cup daily for 2 to 3 days. | W | |
| | | | | Fever | Prepare an infusion of the stem. Drink 1 cup twice daily. | St | |
| | | | | Loss of appetite | Prepare an infusion of the stem. Drink 1 cup once monthly. | St | |
| **Lamiaceae** | | | | | | | |
| *Plectranthus aromaticus* Lour. Spreng | Baume du Perou | C | 0.45, 2, 0.37 | Respiratory tract infection | Extract the juice from the leaves and sweeten with honey. Then heat with cow's ghee. Drink once at bedtime till cured. | L | Antioxidant,[57]antimicrobial,[58] antihelmintic,[59]antidiabetic.[60] |
| | | | | Cough | Prepare an infusion of *Plectranhus aromaticus* leaves and *Piper betle* L. leaves. Drink once daily at night. | | |
| | | | | Respiratory tract infection | Extract the juice from leaves of *Plectranhus aromaticus* and leaves of *Piper betle* L. Drink once at night till cured. | | |
| | | | | Cough | Heat the leaves then extract the juice and sweeten with honey. | | |
| **Lamiaceae** | | | | | | | |
| *Plectranthus aromaticus* Lour. Spreng | Baume du Perou | C | 0.45, 2, 0.37 | Cough | Extract the juice form the leaves, mix with *Citrus limonia*, honey and butter. Drink once at night. | | |
| *Mentha piperita* Linn | La menthe/ Peppermint | C/P | 0.55, 5, 0.59 | Stomach acidity | Prepare a decoction of the leaves. Drink 1 cup as required | L | Antispasmodic effect,[61] antibacterial and |
| | | | | Abdominal pain | Prepare an infusion of the leaves together with leaves of *Eupatorium triplinerve* Vahl. Drink 1 cup as required | | antioxidant activities[62] |

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| | | | | Flatulence | Prepare a decoction of the leaves. Drink 1 cup twice daily. | | |
| | | | | Flatulence | Preapare a decoction of the leaves, *Pimpinella anisum* seeds and *Illicium verum* fruits. Drink 1 cup as required. | | |
| | | | | Flatulence | Prepare a decoction of the leaves and the seeds of *Pimpinella anisum. Illicium verum* fruits, *Ocimum tenuiflorum* leaves and *Zingiber officinale* root. Drink when required. | | |
| *Thymus. vulgaris* Linn | Di tin/ Thyme | C/P | 0.04, 3, 0.62 | Influenza | Prepare a decoction of the stem and leaves. Drink 1 cup for 1 week. | L & St | Expectorant,antitussive, anthelmintic, diuretic properties,[63] heals |
| | Di tin/ Thyme | C/P | 0.04, 3, 0.62 | Cough | Prepare a decoction of the stem and leaves.Sweeten with honey. Drink 1 cup daily till cured. | L & St | wound of mouth, evil tripe.[64] |
| | | | | Flatulence | Prepare an infusion of the leaves. Drink 2 to 3 cups. | | |
| *Ocimum tenuiflorum* Linn | Tulsi/ Holy basil | C | 0.17, 9, 2 | Stomach acidity | Prepare a decoction of a handful of the leaves. Drink 1 cup twice daily as required. | L | Antihyperglycaemic,[65] antioxidant,[66] antistress,[67]antimicrobial,[68] mosquito repellant activity,[69] hypertension.[70] |
| | | | | Insomnia | Prepare an infusion of the leaves. Drink 1 cup for 2 to 3 days. | | |
| | | | | Abdominal pain | Prepare a decoction of the leaves. Drink 1 cup twice daily. | | |
| | | | | Dark spots | Prepare a poultice of *Ocimum tenuiflorum* leaves together with *Mentha piperita* leaves. Apply the paste on dark spots. | | |
| | | | | High blood pressure | Prepare an infusion of the leaves. Drink 1 cup once weekly. | | |
| | | | | Stress | Prepare a decoction of the leaves. Drink 1 cup daily. | | |
| | | | | Diabetes | Prepare a decoction of the leaves. Drink 1 cup daily. | | |
| | | | | Influenza | Prepare an infusion of the | | |

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| | | | | | leaves. Drink 1 cup once daily. | | |
| **Lamiaceae** | | | | | | | |
| *Ocimum tenuiflorum* Linn | Tulsi/ Holy basil | C | 0.17, 9, 2 | Flatulence | Prepare a decoction of *Ocimum tenuiflorum* leaves, *Pimpinella anisum* seeds, *Illicium verum* fruits, *Mentha piperita* leaves and *Zingiber officinale* root. Drink when required. | L | Antihyperglycaemic,[65] antioxidant,[66] antistress,[67]antimicrobial,[68] mosquito repellant activity,[69] hypertension.[70] |
| *Rosmarinus officinalis* Linn | Romarin | C | 0.02, 2, 0.51 | Stress<br>Insomnia | Prepare an infusion of the leaves. Drink 1 cup daily.<br>Inhale the aroma. | L | Antidepressant-like effect[71], antidiabetic and anti-inflammatory[73], spasmolytic activity[74]. |
| *Salvia hispanica* Linn | Tourkmarya/ Chia seeds | P | 0.02, 1, 0.25 | Inflammation | Place 1 teaspoonful of the seeds in water then drink. | S | Antioxidant[75] |
| **Lauraceae** | | | | | | | |
| *Litsea glutinosa* Lour. C.B. Rob. | Bois d'oiseau/ Indian laurel | W | 0.04, 2, 0.51 | Urinary tract infection<br>Inflammation | Prepare an infusion of the leaves. Drink thrice daily.<br>Prepare an infusion of the leaves. | L | Antibacterial[76], anti-inflammatory and anti-hyperalgesic properties[77]. |
| *Cinnamomum verum* J. Presl | Canelle/ Cinnamon | P | 0.06, 2, 0.51 | Hyperglycemia<br>Cough | Prepare an infusion of the bark. Drink ½ cup every 2 days.<br>Add the powdered form of the bark in milk. Drink 1 cup daily. | B | Antioxidant activity and scavenging effects.[78] |
| **Liliaceae** | | | | | | | |
| *Allium cepa* Linn | Zoiyuon /Onion | C/P | 0.04, 1, 0.25 | Earache | Extract the juice from the bulb. After warming, instill 1 drop in the ear. | Bu | Dental infections, cancer, antihypertensive.[79] |
| *Allium cepa* Linn | Zoiyuon blanc/White onion | | 0.17, 1, 0.25 | Dandruff | Extract the juice from the bulb and apply with a piece of cotton onto the scalp. | | |
| **Linaceae** | | | | | | | |
| *Linum usitatissimum* Linn | Graine de lin/Flaxseed | P | 0.19, 2, 0.37 | Inflammation<br>Inflammation | Prepare a decoction of *Linum usitatissimum*, *Hordeum vulgare* seeds and *Illicium verum* fruits. Drink 2 to 3 times.<br>Prepare a decoction of *Linum usitatissimum* and *Hordeum vulgare* seeds. Drink 2 to 3 | S | Antihyperglycaemic effect, inhibition of ROS level,[80] phytosterols accumulation.[81] |

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| | | | | | times. | | |
| | | | | Hypercholesterolemia | Crush the seeds and drink with water. | | |
| | | | | Hypercholesterolemia | Crush the seeds and eat with honey. | | |
| **Apiaceae** | | | | | | | |
| *Centella asiatica* Linn | Herbe boileau/Centella | W | 0.02, 2, 0.51 | Inflammation | Prepare a decoction of the leaves. Drink 1 glass. | L | Antioxidant[82], Cytotoxic and anti-tumour properties.[83] |
| **Mackinlayaceae** | | | | | | | |
| *Centella asiatica* Linn | Herbe boileau/Centella | W | 0.02, 2, 0.51 | Skin eruptions | Prepare a decoction of the leaves. Bathe with the decoction until itching stops. | L | Antioxidant[82], Cytotoxic and anti-tumour properties.[83] |
| **Malvaceae** | | | | | | | |
| *Abelmoschus esculentus* Linn Moench | Lalo/Okra | P | 0.02, 1, 0.25 | Inflammation | Soak the fruit in water. Drink 1 glass. | F | Antioxidant[84] |
| **Marantaceae** | | | | | | | |
| *Maranta arundinacea* Linn | Arrow root | P | 0.08, 1, 0.25 | Diarrhea | Add the powdered fruit in water. Drink 2 to 3 times daily. | F | Tuberculosis,injury[85], weakness.[86] |
| **Meliaceae** | | | | | | | |
| *Azadirachta indica* A.Juss | Neem | C/P | 0.06, 2, 0.51 | Acne | Prepare a paste of the leaves and apply on affected area. Apply 3 to 4 times weekly. | L | Diarrhea,cholera[87], malaria,skin disorders, ulcers,[88] antidiabetic.[89] |
| | | | | Diabetes | Prepare a decoction of the leaves. Administer 1 glass for 5 days. | | |
| *Melia azedarach* Linn | Lilas des Perse/ Chinaberry tress | C/W | 0.19, 4, 0.87 | Diabetes | Crush the leaves and prepare small pellets. Drink 1 pellet with water. | L | Antiphagocytic effect[90], antiviral[91], antifungal.[92] |
| | | | | Inflammation | Prepare a decoction of the leaves. Drink 1 glass monthly. | | |
| | | | | Skin eruption | Prepare a decoction of the leaves. Bathe with the decoction till itching stops. | | |
| | | | | Measles | Prepare a decoction of the leaves. Bathe till cured. | | |
| **Moraceae** | | | | | | | |
| *Artocarpus heterophyllus* Lam | Zak/ Jackfruit | C/W | 0.02, 1, 0.25 | Diabetes | Prepare a decoction of the unripe fruit. Drink 1 cup once or twice weekly | F | Antioxidant property,[93] roots in diarrhea and fever, leaves as antisyphilic and vermifuge, ulcers and wound healing, leaves and stem barks against anemia, asthma, dermatitis, |

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| | | | | | | | diarrhea, cough.[94] |
| **Musaceae** | | | | | | | |
| *Musa acuminate* Colla | Banane/ Banana | C | 0.04, 1, 0.25 | Fever | Apply warm oil on leaf and bind it to forehead. | L | Rheumatism,[95] leshmaniasis.[96] |
| **Moringaceae** | | | | | | | |
| *Moringa oleifera* Lam | Bred mouroungue/ Drumstick tree | C | 0.08, 1, 0.25 | Skin eruption | Prepare a decoction of the leaf and stem. Drink 2 to 3 times daily. | L & St | |
| **Myrtaceae** | | | | | | | |
| *Eucalyptus globulus* Labill. | Eucalyptis / Eucalyptus | W | 0.06, 1, 0.25 | Asthma | Prepare a hot infusion of leaves and inhale vapour. | L | Expectorant, cough[7], antibacterial activity.[99] |
| *Psidium guajava* Linn | Goyave/ Guava | C/W | 0.11, 1, 0.25 | Diarrhea | Prepare a decoction of the leaves and drink 1 cup once daily. | L | Dysentery[100],cough, pre-hepatic jaundice, diarrhea[101] |
| *Syzygium aromaticum* Linn | Girrofle/ Clove | p | 0.09, 3, 0.62 | Cough | Boil the dried flower buds in milk. Drink once at night until cough subsides. | Fl | Antimicrobial, analgesic, anti-inflammatory and healing agent.[102] |
| | | | | Sinusitis | Mix the powdered dried flower buds of Syzygium aromaticum with powdred *Zingiber officinale* Roscoe. Administer with honey once daily. | Fl | Antimicrobial, analgesic, anti-inflammatory and healing agent.[102] |
| | | | | Toothache | Apply oil of clove which is sold. | | |
| *Syzygium cumini* Linn Skeels | Jamblon/ Jambul | C/W | 0.08, 1, 0.25 | Diabetes | Prepare a decoction of the leaves. Drink 1 cup once per week. | L | Diabetes[103] |
| | | | | Diabetes | Prepare an infusion of the seeds. Drink 1 cup twice per week. | S | |
| **Oleaceae** | | | | | | | |
| *Olea europaea* Linn | Zolive/Olive | C/W | 0.06, 1, 0.25 | High blood pressure | Prepare an infusion of the leaves. Drink twice or thrice per day for 1 week. | L | Supression of L- type calcium channel[104], antioxidant activity.[105] |
| **Piperaceae** | | | | | | | |
| *Piper betel* Linn | Betel | C | 0.28, 4, 0.87 | Cough | Prepare a decoction of the leaves. Drink 1 cup daily at night. | L | Leprosy, bronchitis, asthma[5], antidiabetic activity[106]. |
| | | | | Cough | Extract the juice and sweeten with honey. Administer once at night for 3 days. | | |
| | | | | Cough | Prepare an infusion of the leaves together with leaves of | | |

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| | | | | | *Plectranhus aromaticus.* Drink 1 cup once at night for 3 days. | | |
| | | | | Fever | Apply warm oil on leaf and bind it to forehead. | | |
| | | | | Respiratory tract infection | Extract the juice from the leaves and sweeten with honey. Administer once at night for 3 days. | | |
| | | | | Respiratory tract infection | Extract the juice from the leaves of the plant and that from leaves of *Plectranhus aromaticus.* as well. Administer for 3 days. | | |
| | | | | Eczema | Extract the juice from the leaves and apply onto affected area. | | |
| *Piper nigrum* Linn | Di poivre/ Black pepper | P | 0.06, 2, 0.37 | Cough | Add the seeds in milk and allow to boil. Sweeten with honey. | S | Asthma, diseases of the throat,[5] Cough.[107,108] |
| | | | | Influenza | Add 1 tablespoon of seeds in milk together with roots of *Curcuma longa* L and allowto boil. Sweeten with honey and drink 1 cup before going to bed for 2 to 3 days. | | |
| **Plantaginaceae** | | | | | | | |
| *Plantago lanceolata* Linn | Plantain/ English plantain | C | 0.06, 1, 0.25 | Eye infection | Prepare an infusion of the leaves then use to wash the eyes. | | Antioxidant, anti inflammatory, cytotoxic activity[109], antispasmodic activity.[110] |
| **Poaceae** | | | | | | | |
| *Cymbopogon nardus* Linn Rendle | Citronelle / Citronella | C | 0.42, 2, 0.62 | Cough | Prepare a decoction of the Leaves. Drink 1 cup at night. | L | Foul smelling belch[101], uterus shifting[111], infertility in men[112]. |
| | | | | Cough | Prepare a decoction of the leaves and stem together with *Zingiber officinale* Roscoe and *Curcuma longa* L. Drink 1 cup at night. | L & St | |
| | | | | Fever | Prepare a decoction of the leaves and stem together with leaves of *Toddalia asiatica* L. and *Zingiber officinale* Roscoe root. Drink 1 cup at night. | | |
| | | | | | Prepare a decoction of the | | |

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| | | | | | leaves and stem together with *Zingiber officinale* Roscoe. Drink 1 cup at night. Prepare a decoction of the leaves and stem together with *Zingiber officinale* Roscoe. Sweeten with honey. Drink 1 cup at night. | | |
| *Cymbopogon citratus* DC. Stapf | Lemongrass | C/W | 0.02, 1, 0.25 | Influenza | Prepare an infusion of the stem and leaves. Drink 1 cup daily till cured. | L & St | Cardiopathy, hypertension, nervousness,[113] antimicrobial activity[114]. |
| *Bambusa bambos* Linn | Bamboo | W | 0.04, 1, 0.25 | Pimple onto eyelid | Rub the leaves onto the pimple. | L | As emmenagogue[115], antithrombotic[116]. |
| **Poaceae** | | | | | | | |
| *Triticum aestivum* Linn | Sirdar/ Wheatgrass | W | 0.04, 2, 0.51 | Cancer | Extract the juice from the leaves. Drink 1 cup daily. | L | Anti-cancer, anti-ulcer activity, antioxidant activity, anti-arthritic activity, blood building activity in Thalassemia major.[117] |
| | | | | Weakened immune system | Extract the juice from the leaves. Drink 1 cup per month. | | |
| *Triticum monococcum* Linn | La farine/ Flour | P | 0.08, 1, 0.25 | Diarrhea | Add flour in soft drink. Drink 2 or 3 times. | S | Malaria[118] |
| **Punicaceae** | | | | | | | |
| *Punica granatum* Linn | grenade/ Pomegrenate | C | 0.15, 2, 0.37 | Diarrhea | Prepare a decoction of the mesocarp of the unripe fruit. Drink 1 cup twice daily. | F | Diarrhea,[119] bronchitis, sore throat, chest troubles[5] |
| | | | | Bleeding of gums | Prepare a decoction of the mesocarp of the unripe fruit and once cooled use to wash the gums. | F | |
| **Ranunculaceae** | | | | | | | |
| *Nigella sativa* Linn | Blackseed | P | 0.02, 1, 0.25 | Weakened immune system | Crush the seeds to powder form and administer with honey. | S | Lung complaints, cough, fever.[7] |
| **Rosaseae** | | | | | | | |
| *Prunus persica* Linn Stokes | Peche/Peach | C | 0.02, 1, 0.25 | Diarrhea | Eat the unripe fruit. | F | Remove maggots from wounds, demulcent, lubricant,[120] cough, bronchitis, expectorant[5]. |
| **Rubiaceae** | | | | | | | |
| *Paederia tomentosa* Blume | La liane lingue | W | 0.04, 2, 0.37 | Stomach acidity | Prepare an infusion of the leaves and drink 1 glass as required. | L | Eczema, indigestion,ulcers.[121] |
| | | | | Abdominal pain | Prepare an infusion of the | | |

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| | | | | | leaves and drink 1 glass as required. | | |
| *Morinda citrifolia* Linn | Feuille tortue/ Noni | W | 0.2, 2, 0.51 | Diabetes | Eat the fruit in the morning. | F | Antioxidant activity[122], treatment of gastro esophageal disease.[123] |
| | | | | Diabetes | Extract the juice from the fruit. Drink once daily. | | |
| | | | | Pain | Heat the leaf and spread oil onto it, then bind to body part where there is pain. | L | |
| **Rutaceae** | | | | | | | |
| *Toddalia asiatica* Lam* | La patte poule | W | 0.04, 2, 0.51 | Fever | Prepare a decoction of the leaves together with *Cymbopogon nardus L. and Zingiber officinale* Roscoe root. Drink 1 cup at night. | L | Malaria, cough, influenza,lung disease, rheumatism, nasal and bronchial pain,stomach ache, snake bites.[124] |
| | | | | Trauma | Prepare a poultice of *Toddalia asiatica* L.leaves together with *Curcuma longa* L and apply on wound | | |
| *Murraya koenigii* Linn Sprengel | Carripoule/ Curry leaf | C/P | 0.13, 1, 0.25 | High blood pressure | Prepare an infusion of the leaves.Drink 1 cup once per week. | L | Nephroprotective agent in kidney infirmities among diabetics[125],anti-obesity and hypoglycemic effect.[126] |
| **Rutaceae** | | | | | | | |
| *Citrus limonia* Osbeck | Limon/ Lemon | P | 0.17, 3, 0.62 | Cough | Add a slice of *Citrus limonia, Curcuma longa* L.and cow's ghee to milk and allow to boil. Sweeten with sugar and honey. Drink 1cup a night till cured | F | Antioxidant, anti inflammatory, anti- carcinogenic activities carminative and antimicrobial effect.[127] |
| | | | | High blood pressure | Prepare the fruit together with *Allium sativum* L. in the form of pickle. Eat daily. | | |
| | | | | Influenza | Extract the juice from the fruit and add few drops in *Camellia sinensis L.* Drink 2 or 3 times daily till cured. | | |
| | | | | Cough | Extract the juice from the fruit and add few drops in *Camellia sinensis L.* Drink 2 or 3 times daily till cured | | |
| *Citrus aurantiifolia* Christm. Swingle | Orange | P | 0.02, 1, 0.25 | Cough | Extract the juice from the fruit of *Citrus aurantiifolia* and additionally from the stem of | F | Antidiabetic,[128]antimalarial.[129,130] |

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| | | | | | *Nasturtium officinale.* Then sweeten with honey. Administer for 2 to 3 days. | | |
| **Sapindaceae** | | | | | | | |
| *Cardiospermum halicacabum* Linn | Feuille pok pok / Ballon plant | W | 0.26, 1, 0.25 | Skin eruption | Prepare a decoction of the leaves and bathe with it.Use the leaves to rub onto affected area. | L | Rheumatism,nervous diseases,demulcent,[131] treatment of abscesses and septic wounds.[132] |
| **Schisandraceae** | | | | | | | |
| *Illicium verum* Hook.f. | Anis etoile/ Star anise | P | 0.23, 2, 0.37 | Inflammation | Prepare a decoction of *Illicium verum* fruits,' *Hordeum vulgare* seeds and *Linum usitatissium* seeds, Drink 2 to 3 times. | F | Cold, pain,[133] antiinflammatory.[134] |
| | | | | Flatulence | Prepare a decoction of *Pimpinella anisum* seeds, *Eupatorium triplinerve* Vahl. leaves and *Illicium verum* fruits. Drink when required. | | |
| | | | | Flatulence | Prepare a decoction of *Illicium verum* fruits and *Pimpinella anisum* seeds. Drink when required. | | |
| | | | | Flatulence | Prepare a decoction of *Illicium verum* fruits, *Pimpinella anisum* seeds, *Mentha piperita* leaves, *Ocimum tenuiflorum* leaves and *Zingiber officinale* root.Drink when required. | | |
| **Theaceae** | | | | | | | |
| *Camellia sinensis* Linn Kuntze | Di the/ Tea | P | 0.04, 5, 1.13 | Influenza | Extract the juice from the fruit of *Citrus limonia* and add few drops in *Camellia sinensis L* infusion. Drink 2 or 3 times daily till cured. | L | Potent diuretic activity, urinary inconsistency, common cold,suppress anxiety, improve sexual function,[135] anticancer activity, lipid lowering activity, anticataract activity, hepatoprotective and antioxidant.[136] |
| | | | | Eye infection | Prepare a decoction of the tea bag and when decoction cools use to wash eye twice daily. | | |
| | | | | Cough | Extract the juice from the fruit of *Citrus limonia* and add few drops in *Camellia sinensis L* infusion. Drink 2 or 3 times daily till cured. | | |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | Indigestion | Prepare an infusion of the tea bag. Drink 1 cup after a heavy meal. | | |
| | | | | Water retention | Prepare an infusion of the tea bag which is sold and contain *Lepidium meyenii* together with Coffea canephora and Camellia sinensis L. | | Potent diuretic activity, urinary inconsistency, common cold,suppress anxiety, improve sexual function,[135] anticancer activity, lipid lowering activity, anticataract activity, hepatoprotective and antioxidant.[136] |
| **Thymelaeaceae** | | | | | | | |
| *Wikstroemia viridiflora* Meissn | Herbe tourterelle | W | 0.06, 1, 0.25 | Anemia | Prepare a decoction of the leaves together with seeds of *Lens culinaris*. Administer twice. | L | Anemia.[137] |
| **Xanthorrhoeaceae** | | | | | | | |
| *Aloe vera* Linn Burm.f. | Aloe vera | C | 0.23, 5, | Acne | Remove the skin from the leaves and apply the gel onto the affected area. | L | Antioxidant activity,[138]Anti-inflammatory activity,[139] hypoglycemic and hypolipidemic activity,[140] wound healing activity,[141] gastroprotective activity,[142] immunomodulatory activity,[143] antifungal.[144] |
| | | | | Pain | Remove the skin from the leaves and apply the gel onto the affected area. | | |
| | | | | Diabetes | Remove the skin and eat the gel daily. | | |
| | | | | Constipation | Remove the skin and eat the gel. | | |
| | | | | Stomach acidity | Remove the skin and eat the gel 2 to 3 times daily. | | |
| *Lomatophyllum purpureum* Lam | Mazambron marron | C | 0.04, 1, 0.25 | Ear ache | Heat the leaf then extract juice and instill 1 drop in the ear | L | |
| **Zingiberaceae** | | | | | | | |
| *Curcuma longa* Linn | Saffran vert/ Turmeric | C/P | 0.36, 5, 0.98 | Influenza | Crush the roots of *Curcuma longa* L.then boil in milk together with *Piper nigrum and* 1 tablespoon of honey. Drink hot before going to bed for 2 to3 days. | R | Resolves phlegm, relieves depression,[145] stomach tonic, blood, skin diseases, wound healing.[146] |
| | | | | Cough | Crush the roots and boil with milk. Drink once daily at night for 1 week. | | |
| | | | | Cough | Mix the juice obtained from crushed *Curcuma longa* L.with milk. Drink once daily at night | | |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | Cough | Grate the roots of *Curcuma longa* roots of *Zingiber officinale.*Then, boil in milk. Drink once daily at night. | | |
| | | | | Trauma | Crush the roots and boil with milk. Drink 2 to 3 times. | | |
| | | | | Trauma | Prepare a poultice of *Curcuma longa* L. together with the leaves of *Toddalia asiatica* L. and apply on wound. | | |
| **Zingiberaceae** | | | | | | | |
| *Curcuma longa* Linn | Saffran vert/ Turmeric | C/P | 0.36, 5, 0.98 | Pain | Prepare a poultice of the roots, mix with oil and bind onto affected area | R | Resolves phlegm, relieves depression,[145] stomach tonic, blood, skin diseases, wound healing.[146] |
| | | | | Acne | Cruhs the roots and mix with besan powder and water. Apply on face 2 to 3 times weekly. | | |
| | | | | Fever | Prepare a decoction of the root together with *Cymbopogon nardus* L. *and Toddalia asiatica* L. *leaves.*Drink 1 cup at night. | | |
| **Zingiberaceae** | | | | | | | |
| *Zingiber officinale* Roscoe | Gingembre/ Ginger | C/P | 0.39, 5, 1.13 | Amenorrhea | Prepare an infusion of the root. Drink ½ cup for 1 week. | R | Cough,stomach pains caused by heavy colds, carminative, digestive, improving circulation, aphrodisiac.[147] |
| | | | | Cough | Prepare an infusion of the crushed root. Drink at 1 cup. | | |
| | | | | Cough | Prepare a decoction of the crushed root. Drink at 1 cup | | |
| | | | | Cough | Prepare an infusion of the root with *Camellia sinensis* L. Drink 1 cup at night till cured. | | |
| | | | | Sinusitis | Mix the powdered dried flower buds of *Syzygium aromaticum* with powdered *Zingiber officinale* Roscoe root.Administer with honey once daily. | | |
| | | | | Cough | Prepare a decoction of the stem and leaves of *Cymbopogon nardus L.* and *Zingiber officinale* Roscoe. | | |

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| | | |
|---|---|---|
| | | Sweeten with honey. Drink 1 cup at night |
| | Cough | Prepare a decoction of the stem and the leaves of *Cymbopogon nardus L.*together with *Zingiber officinale* Roscoe root and *Curcuma longa* L.Drink 1 cup at night. |
| | Hiccup | Prepare a decoction of the root. Drink 1 cup. |

*Source*: C, Cultivated; W, Wild; P, Purchased; RFC: Relative frequency of citation, VU: Variety of use, RI: Relative importance; *Plant part used*: L, Leaf; R, Root; S, Seed; F, Fruit; Fl, Flower, St, Stem ; Bu, Bulb; B; Bark; W, Whole; VN/CEN: Vernacular name/ common English name. * indicates plants that are endemic to Mauritius

1: Harris et al. 2001; 2: Bergman et al. 2001; 3: Ceuterick et al. 2008; 4: Rangasamy et al. 2007; 5: Kirtikar et al. 1935; 6: Antoun et al. 2001; 7: Newton et al. 2002; 8:Kaur et al. 2009 ; 9 : Mahendra et al. 2011 ; 10 : Tavare et al. 2008; 11 : Moazedi et al. 2007 ; 12 : Al-Howiriny et al. 2003; 13: : Ozsoy-Sacan et al. 2006; 14: Kreydiyyeh et al. 2001; 15: Wong et al. 2006;16:Tirapelli et al. 2007; 17:Gulcin et al. 2003; 18: Singhal et al. 2012; 19: Al-Adhroey et al. 2011 ; 20: Jonville et al. 2011 ; 21 : Loggia et al. 1982 ; 22 : Murti et al. 2013 ; 23 : Sun et al. 2012 ; 24 : Harel et al. 2011; 25: Nweze et al. 2009; 26 : Kaisoon et al. 2011; 27: Gouveia. et al. 2012; 28: Tenore et al. 2012; 29: Yazdanparast et al. 2008; 30: Bigoniya et al. 2011; 31: Hudson. 2008; 32:Lentz et al. 2006; 33: Sandoval et al. 2002; 34: Amazu et al. 2010; 35: Otsuki et al. 2010; 36: Ologundudu et al.2008; 37: Muzitano et al. 2011; 38: Namsa et al. 2009 ; 39 : Nadeem et al. 2012 ; 40 : Mayakrishnan et al. 2013; 41: Virdi et al. 2003; 42: Ordoñez et al. 2006; 43: Hansen et al. 1996; 44: Rajakumar et al. 2009 ; 45: Hamza et al. 2012; 46: Satheeshkumar et al. 2010 ; 47 :Bae et al. 2012 ; 48 : Marnewick et al. 2008 ; 49 : Loi et al. 2013 ;50 :Wu et al. 2004 ; 51 : Tzeng et al. 2013 ; 52 : Bum et al. 2004 ; 53 : Kokane et al. 2009 ; 54 : Komutarin et al. 2004 ; 55 :Maiti et al. 2004 ; 56 : Chen et al. 2011 ; 57 :Palani et al. 2010; 58: Koba et al. 2007; 59: Hussein et al. 2012; 60: Candrappa et al. 2009; 61: Sydney de Sousa et al. 2010; 62: Singh et al. 2011; 63: Al-Bayati, 2008; 64: Calvo et al. 2011 ; 65 : Arenal et al. 2012; 66: Juntachote et al. 2005; 67: Saxena et al. 2012; 68: Sermakkani et al. 2011; 69: Chokechaijaroenporn et al. 1994; 70: Paulino de Albuquerque et al. 2007 ; 71 : Machado et al. 2012 ; 72 : Bakirel et al. 2008 ; 73 : Beninca et al. 2011 ; 74 : Martinez et al. 2011 ; 75 : Caudillo et al. 2008 ;76; Mandal et al. 2000 ;77 : Simao da Silva et al. 2012 ; 78 : Mathew et al. 2006 ; 79: Aburjai et al. 2007 ; 80 : Ghule et al. 2012 ; 81 : Herchi et al. 2009 ; 82 : Hamid et al. 2002 ; 83 : Babu et al. 1995 ; 84 : Adelakun et al. 2011 ; 85 : Coelho-Ferreira. 2009; 86: Zheng et al. 2009 ; 87 : Thakurta et al. 2007; 88: Vinod et al. 2011 ; 89 : Courreges et al. 1994;90: Dallaqua et al. 2012; 91: Wachsman et al .1987; 92: Carpinella et al. 1999; 93: Jagtap et al. 2011; 94: Jagtap et al. 2010 ; 95: Marc et al. 2008; 96: Gachet et al. 2010 ; 97 : Moyo et al. 2012 ; 98 : Hamza, 2010 ; 99 : Bachin and Benali, 2012 ; 100 : Au *et al*. 2008; 101: Ssegawa and Kasenene, 2007 ; 102 : Panahi et al. 2012 ; 103 : Muniappan et al. 2012 ; 104 : Scheffler et al. 2008 ; 105 : Ferreira et al. 2007 ; 106 : Arambewela et al. 2005 ; 107 : Prasad et al. 1984 ; 108 :Mukherjee et al. 1987 ; 109 : Beara et al. 2012 ; 110 : Fleer et al. 2007 ; 111 : Polio et al. 2008; 112: Namukobe et al. 2011 ; 113 : Hajdu and Hohmann, 2012 ; 114 : Bassole et al. 2011 ; 115 : Kumar et al. 2012a; 116 : Pandikumar et al. 2011 ; 117 : Singh et al. 2012a ; 118 : Adams et al. 2011; 119 : Boulogne et al. 2011 ; 120 : Abbasi et al. 2010 ; 121 : Sussman. 1980 ; 122 : Liu et al. 2007 ; 123 : Mahattanadul et al. 2011; 124: Orwa et al. 2008;125 : Yanzuko et al. 2011 ;126 : Tembhurne et al. 2012 ; 127 : Murali et al. 2012 ; 128 : Gbolade. 2009 ; 129 : Ajibesin et al. 2008 ; 130 : Kaou et al. 2008 ; 131 : Huang et al. 2011; 132: Maregesi et al. 2008; 133 : Wang et al. 2011 ; 134 : Sung et al. 2012 ; 135 : Ratnasooriya et al. 2008; 136 : Kumar et al. 2012b ; 137 : Chintamunnee and Mahoomoodally 2010 ; 138 : El-Shemy et al. 2010; 139: Langmead et al. 2004; 140: Kim et al.2009; 141: Davis et al. 1989; 142: Snezana, 2007; 143: Yusuf et al. 2004; 144: Jasso de Rodriguez et al. 2005; 145: Xia et al. 2007; 146: Habiboallah et al. 2008; 147: Jaric et al. 2011

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**Table 4** : Fidelity level and index of agreement on remedies of plants with a minimum of 10 citations for an illness category.

| Disease category | Species | FL | IAR |
|---|---|---|---|
| Disease of the ear and mastoid process | *Lomatophyllum purpureum* | 1.00 | 1.00 |
| | | 1.00 | 0.98 |
| Disease of the respiratory system | *Curcuma longa* | | |
| | *Cymbopogon nardus* | 0.72 | 1.00 |
| | *Piper betle* | 0.36 | 0.98 |
| | *Plectranhus aromaticus* | 1.00 | 1.00 |
| | *Nasturtium officinale* | 1.00 | 1.00 |
| | *Zingiber officinale* Roscoe | 0.90 | 0.98 |
| | | 1.00 | 1.00 |
| Disease of the eye and adnea | *Plantago lanceolata* | | |
| | *Mangifera indica* | 1.00 | 1.00 |
| | | 0.80 | 1.00 |
| Disease of the circulatory system | *Linum usitatissimum* | | |
| | *Tagetes lucida* | 0.80 | 0.95 |
| | *Wikstroemia viridiflora* Meissn | 1.00 | 1.00 |
| | *Daucus carota* | 1.00 | 1.00 |
| | *Melia azedarach* | 0.50 | 0.98 |
| | *Petroselinum crispum* | 0.83 | 1.00 |
| | *Olea europaea* | 1.00 | 1.00 |
| | *Litsea glutinosa* | 1.00 | 0.91 |
| Injury and poisons of external causes | *Moringa oleifera* | 1.00 | 1.00 |
| | *Erythroxylum laurifolium* | 1.00 | 1.00 |
| Disease of the genitourinary system | | | |
| | *Chamomilla recutita* | 0.56 | 0.96 |
| Undefined pains or illnes | | | |
| | *Piper betle* | 0.50 | 0.98 |
| | *Swertia chirata* | 0.79 | 0.99 |
| | *Cynara cardunculus* var. *scolymus* | 0.75 | 0.99 |
| | *Kalanchoe pinnata* | 1.00 | 0.96 |
| | *Morinda citrifolia* | 0.50 | 0.98 |
| Disease during the postpartum period | *Lepidium sativum* | 1.00 | 1.00 |
| Infectious and parasitic diseases | *Allium sativum* | 0.60 | 0.92 |
| Disease of the skin and subcutaneous tissue | *Cardiospermum halicacabum* | 1.00 | 1.00 |
| | *Nerium oleander* | 1.00 | 1.00 |
| Disease of the digestive system | *Mentha piperita* | 0.65 | 1.00 |
| | *Eupatorium triplinerve* | 0.89 | 0.99 |
| | *Pimpinella anisum* | 0.91 | 1.00 |
| | *Psidium guajava* | 1.00 | 1.00 |
| | *Illicium verum* | 0.91 | 1.00 |
| | *Ocimum tenuiflorum* | 0.75 | 0.88 |
| | *Punica granatum* | 1.00 | 1.00 |
| | *Aloe vera* | 0.40 | 0.96 |
| | *Brassica rapa* | 0.75 | 0.96 |
| | *Tamarindus indica* | 1.00 | 1.00 |
| | *Carica papaya* | 1.00 | 1.00 |
| | *Ageratum conyzoides* | 1.00 | 1.00 |
| | *Triticum monococcum* | 1.00 | 0.91 |
| Endocrine, nutritional and metabolic disorders | *Morinda citrifolia* | 0.50 | 0.98 |
| | *Lagenaria siceraria* | 1.00 | 1.00 |
| | *Momordica charantia* | 1.00 | 1.00 |
| | *Syzygium cuminii* | 1.00 | 1.00 |
| | *Trigonella foenum-graecum* | 1.00 | 1.00 |
| | *Azadirachta indica* | 0.60 | 0.94 |
| Disease of the neurological system | *Mimosa pudica* | 0.80 | 1.00 |

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Table 5 summarises the CII values in the study which ranged from 0.09 to 0.58. Culturally important plants were *Curcuma longa L*, CII=0.30*; Cymbopogon nardus* L.CII=0.43 and *Zingiber officinale* Roscoe, CII=0.42 for category diseases of the respiratory system. Culturally important plant in the category undefined pains or illness was *Chamomilla recutita* having CII value of 0.56 and finally *Mentha piperita* with CII value of 0.58 for disease of the digestive system.

**Table 5**: Cultural importance index of plants with a minimum of 25 citations for an illness category.

| Disease category | Species | CII |
|---|---|---|
| Disease of the respiratory system | *Curcuma longa* | 0.30 |
| | *Cymbopogon nardus* | 0.43 |
| | *Piper betle* | 0.28 |
| | *Plectranhus aromaticus* | 0.23 |
| | *Zingiber officinale* | 0.42 |
| Disease of the eye and adnea | *Mangifera indica* | 0.23 |
| Disease of the circulatory system | *Linum usitatissimum* | 0.15 |
| | *Melia azedarach* | 0.21 |
| | *Petroselinum crispum* | 0.13 |
| Disease of the genitourinary system | *Erythroxylum laurifolium* | 0.19 |
| Undefined pains or illnes | *Chamomilla recutita* | 0.56 |
| Infectious and parasitic diseases | *Allium sativum* | 0.25 |
| Disease of the skin and subcutaneous tissue | *Cardiospermum halicacabum* | 0.23 |
| Disease of the digestive system | *Mentha piperita* | 0.58 |
| | *Eupatorium triplinerve* | 0.37 |
| | *Pimpinella anisum* | 0.47 |
| | *Psidium guajava* | 0.11 |
| | *Illicium verum* | 0.26 |
| | *Ocimum tenuiflorum* | 0.23 |
| | *Punica granatum* | 0.15 |
| | *Aloe vera* | 0.19 |
| | *Carica papaya* | 0.13 |
| | *Ageratum Conyzoides* | 0.11 |
| Endocrine, nutritional and metabolic disorders | *Morinda citrifolia* | 0.11 |
| Disease of the neurological system | *Mimosa pudica* | 0.09 |

CII: Cultural importance index

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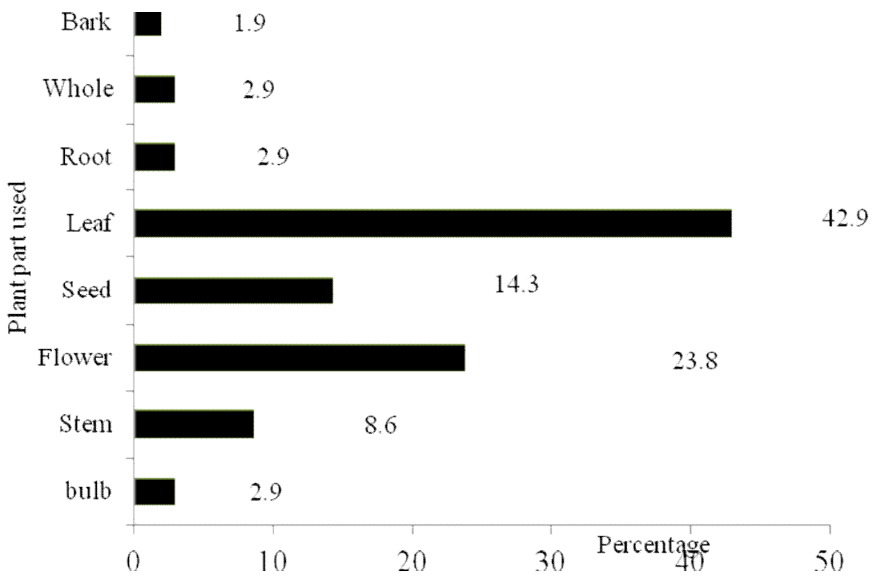


**Figure 1:** Plant parts used in MP preparations.

From Figure 1 it can be deduced that the majority (42.9%) of participants made use of leaves for preparations. The next plant part that was mostly (23.8%) employed was flowers. Barks (1.9%), whole plants (2.9%), roots (2.9%) and bulbs (2.9%) were the least used plant parts.

## Discussion

In the present survey, local people were interviewed and information concerning the use of MP was gathered. Fourty five plant families have been documented in this study. Mauritius being an island that is abundant in plant resources, its population possesses an ancient tradition in the use of ethnomedicine, which is yet exploited in the treatment of minor conditions (Gurib-Fakim 2002). The uses of plants obtained were weighed against published data from other countries and it was noted that their therapeutic effect were quite similar. Plant families Fabaceae, Asteraceae, Apiaceae, Lamiaceae, and Poaceae were more popular in the present study. Among these the Asteraceae, Apiaceae and Lamiaceae family form part of some key plant families having yielded molecules of therapeutic importance. Phytochemically, the Asteraceae family is characterised by the presence of polyfructanes (especially inulin) as storage carbohydrates as opposed to polysaccharides, in the perennial taxa. The Lamiaceae family, with over 5000 species, has been one of the most significant ones in the contribution of medicinally important and culinary species. They are aromatic and have also yielded commercially important essential oils. Several species accumulate Rosmarinic acid and other derivatives of Caffeic acid. Rosmarinic acid is of pharmaceutical importance because of its non-specific complement activation and inhibition of leukotrienes (leading to an anti-inflammatory effect) (Gurib-Fakim 2006).

Out of 87 MP, 3 endemic plants have been documented namely *Erythroxylum laurifolium*, *Aphloia theiformis* and *Toddalia asiatica*. Use of *Erythroxylum laurifolium* and *Aphloia theiformis* coincide with a previous study carried out by Neergheen et al. (2005). As far as *Toddalia asiatica* is concerned, its extracts have exhibited antimicrobial activity hence, validating ethnobotanical data pertaining to the plant (Narod et al., 2004). As observed in the present study, the key source of knowledge reported by the informants was normally gathered by observation and experiences and transferred to the next generation by words of mouth. This coincides with studies done by Behera et al. (2005), Longuefosse et al. (1996), Rajkumar et al. (2006) and Saikia et al. (2006).

Preparations were mainly in the form of infusions or decoctions in the current study. Hence, water was the most popular solvent that was employed. A likely explanation might be that water is a universal solvent and one that is most easily accessible as well as cheap. Interestingly it was found that infusions or decoctions of the plant's various parts are recommended for their antibacterial, antifungal, antihelminthic, anti-amoebic, antischistosomal, antimalarial, anti-inflammatory, anti-tussive, purgative activities, hypoglycemic, laxative, and cholesterol-lowering properties (Gurib-Fakim and Guého 1995). Honey was also commonly added to preparations with the view of enhancing palatability and thereby improving compliance towards therapy. A study carried out by Yineger et al. (2007) found that in most of remedy preparations, sugar, honey, tea, coffee, edible oil and garlic were the additives that were used. In the present study, various parts of plants were found to be utilised for the herbal formulations, with leaves being the most commonly used plant parts. Indeed, leaves of plants have been reported to accumulate inulins, tannins and other alkaloids (Okoegwale et al., 2001) which may be accountable for their various medicinal properties thus, explaining their wide use. Furthermore, the fact that the most frequently utilised plant parts were leaves is a more sustainable practice compared to where roots and/or the bark are used (Amri and Kisangau 2012).

Based on RFC values, it was found that *Mentha piperita* had the highest RFC value. RFC varies from 0 to 1. High values of RFC designate preference and popularity of plant species for treating particular illnesses. *Mentha piperita* is common for its use in gastrointestinal diseases and

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studies have confirmed its antispasmodic effect of the peppermint oil on the digestive and vascular systems (Ody 2000). An analysis of the essential oil led to the identification of 20 compounds, representing 100% of the total oil. The major constituents were menthol (49.97%), menthone (19.08%), methyl acetate (5.29%), isomenthol (4.56%) and isomenthone (4.06%). Other representative compounds were ε-cariophylene (1.32%), neo-isomenthol (1.24%) and pulegone (1.16%) (Sydney de Sousa et al., 2010). *Mentha piperita* was prepared in combination with other plants namely *Pimpinella anisum*, *Illicium verum*, *Ocimum tenuiflorum* and *Zingiber officinale* with the view of achieving better results.

In ethnobotanical studies, $F_{IC}$ analysis provides a measure of reliability for any given claim providing consistent proof. The product of FIC ranges from 0 to 1. High value of FIC is indicative of agreement of selection of taxa between informants, whereas a low value indicates disagreement (Singh et al., 2012b; Ragupathy et al., 2008). A likely explanation might be that Mauritius is an island where much importance is given to family ties. Moreover, people maintain good interrelationships with neighbours and friends and thus knowledge is easily propagated. *Ocimum tenuiflorum* had the highest RI value and RFC value being cited for 9 different ailments that fall into 7 categories. Indeed some studies have demonstrated its (1) antioxidant activity due to flavonoids (orientin and vicenin), phenolic compounds comprising cirsilineol, cirsimaritin, isothymusin, apigenin, rosmarinic acid and appreciable quantities of eugenol, (2) antihypertensive and cardioprotective activities provided by essential fatty acids like linoleic and linolenic acids, contained in the oil produce series 1 and 3 (PGE1 and PGE3) prostaglandins and inhibit the formation of series 2 prostaglandins, and (3) antimicrobial activity supplied by the fixed oil showed good antibacterial activity against *Bacillus pumilus*, *Pseudomonas aeruginosa* and *S. aureus*. Higher content of linolenic acid in the fixed oil could contribute towards its antibacterial activity. Furthermore *Ocimum tenuiflorum* is one of the most effective adaptogen known. Its immunostimulant capacity may be responsible for the adaptogenic action of the plant (Singh et al., 2012c). Nonetheless, only few of its pharmacological properties have been mentioned here. Other plants with high RI values consisted of *Allium sativum*, *Camellia sinensis* L., *Aloe vera* and *Zingiber officinale* Roscoe. The current study recorded a large number of plants with high FL values. Most of the plants with high FL values have pharmacological effects that have been demonstrated scientifically (Koba et al., 2007; Simao da Silva et al., 2012; Ologundudu et al., 2008; Virdi et al., 2003). On the other hand, low FL, indicated less-preferred species for treating specific ailments. In contrast, these plants have been widely used against several diseases. High $F_{IC}$ and FLs for specific species suggest that the plants might contain valuable phytochemical compounds. These traditional medicines handed down have high $F_{IC}$ and FLs because of their efficacy and safety (Abe et al., 2012). Based on IAR values from the study, it was found that the lowest IAR value was for *Ocimum tenuiflorum* which in fact was used in the highest disease categories. High IAR values indicate that the plants species are used for a small number of disease categories compared to those having low IAR values which is indicative of use in multiple disease categories. The fact that most of the plants had high IAR values pinpoint to their specificity in treating particular disease categories. Results from the study show that according to CII index, culturally important plants were *Curcuma longa L*, *Cymbopogon nardus* and *Zingiber officinale* Roscoe for category diseases of the respiratory system. In the category undefined pains or illness *Chamomilla recutita* had highest CII value and for disease of the digestive system, *Mentha piperita*. High CII values of easily available plants in this study indicated the significance of availability of resources on the maintenance of knowledge over their usage (Mutheeswaran et al., 2011).

**Conclusion**

This study has generated a broad spectrum of information concerning common MP used by the Mauritian population. It was observed that the local population still relies to a great extent on MP. Despite the fact that several medicinal plants have been documented in this study, many still lack comprehensive phyto-therapeutic evidence. Characterising the phytochemicals responsible for the medicinally useful properties and determining their pharmacological properties might help in the discovery of new therapeutic agents.

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