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Indigenous knowledge on medicinal plants used to treat various human ailments in Madurai District, Tamil Nadu, India

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Abstract

The traditional medical systems are generally based on the uses of natural and local products which are commonly related to the people's perspective on the world and life.

The present study was carried out to investigate the Indigenous knowledge on Medicinal plants used to treat various human ailments in Madurai district. The study deals with 158 plant species belonging to 62 families used to treat various human ailments. The information about the plants and their local names, parts used and duration were also documented using modified questionnaire method. Dominant families recorded in our study are Euphorbiaceae, Lamiaceae, Mimosaceae, Solanaceae, Asteraceae, Apocynaceae, Fabaceae, Rutaceae and Caesalpiniaceae are more frequently used for treatment of diseases.

Keywords: Human ailments, medicinal plants, indigenous knowledge, Tamil Nadu

1. Introduction

Medicinal plants, also called medicinal herbs, have been discovered and used in Traditional medicine practices since prehistoric times. Plants synthesise hundreds of chemical compounds for functions including defence against insect, fungi, diseases, and herbivorous mammals. Numerous phytochemicals with potential or established Biological activities have been identified. However, since a single plant contains widely diverse phytochemicals, the effects of using a whole plant as medicine are uncertain. Further, the phytochemical content and pharmacological actions, if any, of many plants having medicinal potential remain unassisted by rigorous scientific research to define efficacy and safety.

India is one of the leading countries in Asia in terms of the wealth of traditional knowledge systems related to the use of plant species and also known to a rich diversity of higher plant species of which 7500 are known as medicinal plants (Kala 2005) [24]. The tribal communities draw their sustenance largely from forests for food, medicine and other requirements. According to Uniyal *et al.* (2006) [48] in India more than 43% of the total flowering plants are reported to be of medicinal importance and utilization of plants for medicinal purposes in India has been documented long back in ancient literature.

The use of plants to alleviate human suffering is as old as the evolution of human suffering. As many as 4000 plants are collectively mentioned in these early works. Added to this, India also possesses a great heritage of other ancient systems of medicine such as Ayurveda, Siddha, Unani and Homeopathy. Nearly 2500 Species of plants are used in one way or other by some of these systems. In addition to these traditional systems, there also exists in India a vast knowledge of tribal and folk medicine which utilize around 7500 species of plants as medicinal. Medicinal plants continue to be an important therapeutic aid for alleviating ailments of human kind. The first generation of plant drugs were usually simple botanicals employed in more or less their crude form. According to the world health organisation over 80% of the world's populations rely upon such traditional plant based systems of medicine to provide them with primary health care (Calixto 2005) [6]. In the developed countries, they are used as templates for manufacturing modern pharmaceutical drugs whereas, in developing countries they are an important resource for the treatment of various illness, and are a major component of treatment within the Primary health care systems (Ngari *et al.* 2010) [41]. In the present study an attempt has been made to collect medicinal knowledge and medicinal uses of plants to cure various human diseases.

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2. Experimental Methods

2.1 Details of the study sites

Madurai is located at 9.93°N 78.12°E. It has an average elevation of 101 metres. The city of Madurai lies on the flat and fertile plain of the river Vaigai, which runs in the northwest-southeast direction through the city, dividing it into two almost equal halves. The Sirumalai and Nagamalai hills lie to the north and west of Madurai. Madurai lies southeast of the western ghats, and the surrounding region occupies the plains of South India and contains several mountain spurs. The soil type in central Madurai is predominantly clay loam, while red loam and black cotton types are widely prevalent in the outer fringes of the city.

2.2 Interview with informants

An extensive Survey was carried out in Madurai from October 2014- February 2015. The number of informants interviewed 17 (12 Male, 5 Female). The information of this

study was collected through questionnaire method from the villagers, elderly persons, traditional healers who are residing areas of the study to collect data on medicinal plants commonly used by them. This includes different common human ailments, their occurrence, symptoms, regular mode of treatment including herbal ones, plants and plant parts used for the treatment.

2.3 Botanical identification of plants

All the medicinal plants recorded during the field visits were botanically identified by referring Flora of Tamil Nadu Carnatic ^[5] and An Excursion Flora of Central Tamil Nadu, India ^[6].

3. Results and Discussion

The Details of collected plants are enumerated with their scientific name, family, local name, parts used, Diseases Cured were presented in Table 1.

Table 1: The Details of collected plants are enumerated with their scientific name, family, local name, parts used, Diseases Cured were presented

S. No	Binomial Name	Family	Local Name (Tamil)	Parts Used	Diseases Cured
1.	<i>Abutilon indicum</i> (L)	Malvaceae	Thuthi	Whole plant	Constipation and Inflammation of bladder
2.	<i>Acacia nilotica</i> (L) Willd ex Del	Mimosaceae	Karuvellam	Leaf	Skin diseases and Bleeding disorder
3.	<i>Acacia Sinuate</i> (Lour) Merr.	Mimosaceae	Shigaikai	Soap pod	Skin disorders, Psoriasis, itch
4.	<i>Acalypha indica</i> L.	Euphorbiaceae	Kuppai meni	Leaf extract	Skin diseases, Pimples
5.	<i>Achyranthes aspera</i> L.	Amaranthaceae	Nayuruvi	Root Extract	Hemorrhoids
6.	<i>Acorus calamus</i> L.	Araceae	Vasambu	Rhizome and leaves	Anti-microbial and insecticidal
7.	<i>Aegle marmelos</i>	Rutaceae	Vilvam	Leaf extract	Diabetes, Diarrhoea, Anti inflammatory
8.	<i>Allium cepa</i> L.	Amaryllidaceae	Vengayam	Dried bulb	Bronchitis, Cold, Fever and High blood pressure
9.	<i>Aloe vera</i> (L.) <i>Burm. f.</i>	Liliaceae	Sotrukkatralai	Leaf gel	Constipation, Diabetes and Skin diseases
10.	<i>Alternanthera sessilis</i> (L.) r. Br. ex DC	Amaranthaceae	Ponnanganni	Roots, Leaves	Stomach disorder Diarrhoea and dysentery
11.	<i>Amaranthus spinosus</i> L.	Amaranthaceae	Mullukkeerai	Root	Diarrhoea, Snake bites, Stomach disorder
12.	<i>Amorphophallus paeoniifolius</i> (Dennst) Nicol.	Araceae	Karunai thandu	Root	Piles and dysentery
13.	<i>Anacardium occidentale</i> L.	Anacardiaceae	Mundiri	Fruit, Bark and Nut	Piles, Dysentery, fever, Gingivitis
14.	<i>Anisomeles malabarica</i> (L.) R.Br. ex Sm	Lamiaceae	Peyimiratti	Whole plant	Asthma and Cough, Cancer
15.	<i>Argemone mexicana</i> L.	Papaveraceae	Brahma thandu	Flower	Urinary tract infection and Liver infection
16.	<i>Azadirachta indica</i> A. Juss.	Meliaceae	Vembu	Leaves	Wound healer, Intestinal worms, Skin diseases like itching and Eczema
17.	<i>Bacopa monnieri</i> (L.) Pennell.	Scrophulariaceae	Brahmi	Leaves	Memory enhancer, Anti-anxiety
18.	<i>Bambusa arundinacea</i> (Retz.) Roxb.	Poaceae	Munkil	Root and Dried resin	Cough, Skin diseases, Gynaecological disorder
19.	<i>Borassus flabellifer</i> L.	Arecaceae	Panai	Fruit	Cough, pulmonary infection and improves sexual vigor
20.	<i>Capsicum annum</i> L.	Solanaceae	Milagai	Fruit	Stomach pain, Diarrhea, Dilation blood vessels
21.	<i>Canna indica</i> L.	Cannaceae	Kalvaalai	Root	Diuretic, Diaphoretic and fever
22.	<i>Carica papaya</i> L.	Caricaceae	Pappali	Leaf extract, Fruit	Dengue fever, Birth control, Indigestion
23.	<i>Cassia auriculata</i> L.	Caesalpiniaceae	Aavaarai	Flower	Diabetes, Urinary problem, Kidney disorder
24.	<i>Cissus quadrangularis</i> L.	Vitaceae	pirandai	Stem	Bone fracture, Gastric ulcer and Constipation
25.	<i>Citrullus colocynthis</i> schrad.	Cucurbitaceae	Kumatti	Fruits	Asthma, Bronchitis, Tumors, Jaundice
26.	<i>Citrus limon</i> (L.) <i>Burm. f.</i>	Rutaceae	Elummichai	Fruits	Kidney stone, Cold and flu
27.	<i>Cocos nucifera</i> L.	Arecaceae	Thennai	Fruits	Asthma, Baldness, Constipation and dysentery
28.	<i>Coriandrum sativum</i> L.	Apiaceae	Kothumalli	Leaves and seeds	Anti-inflammatory, anti-anxiety and arthritis
29.	<i>Cucurbita moschata</i> (Decne ex Lam) Decne ex poir	Cucurbitaceae	Pucani	Leaves and flower	Haemorrhages, jaundice
30.	<i>Cyperus rotundus</i> L.	Cyperaceae	Korai	Tuber	Constipation, Typhoid fever, Malarial fever
31.	<i>Datura discolor</i> Bernh.	Solanaceae	Omathai	Leaves	Mind altering drug, Relieve pain, Ear ache

32.	<i>Datura metal</i> L.	Solanaceae	Omathai	Flower	Infertility in women
33.	<i>Delonix elata</i> (L.) Gamble	Caesalpiniaceae	Perungondrai	Flower	Intestinal worm, Skin diseases, Earache
34.	<i>Eclipta prostrata</i> (L.)	Asteraceae	Karisalankanni	Aerial parts	Asthma, Bronchitis, Cough, Amoebiasis
35.	<i>Elettaria cardamomum</i> (L.) <i>maton.</i>	Zingiberaceae	Elakkai	Fruits and seeds	Stomach disorder, Indigestion, Muscular spasm
36.	<i>Eucalyptus globulus</i> Labill.	Myrtaceae	Karpuramaram	Leaves and roots	Pneumonia fever, Wound healing, Cold
37.	<i>Ficus bengalensis</i> L.	Moraceae	Aalamaram	Leaves, Bark, Latex	Dysentery, diarrhea, Arthritis, Pile
38.	<i>Ficus racemosa</i> L.	Moraceae	Arasa maram	Leaves, Bark, Seeds	Inflammation of wound, Constipation
39.	<i>Gloriosa superba</i> L.	Liliaceae	Kalappai kilangu	Tuber, Leaves	Snake bite, Asthma
40.	<i>Gymnema sylvestre</i> (retz.) R. Br. <i>ex Schutt.</i>	Asclepiadaceae	Sirukurinjan	Whole plant	Diuretic and Diabetes
41.	<i>Hemidesmus indicus</i> (L.) R.Br	Asclepiadaceae	Nannaari	Root and Bark	Induce Sweating, Fever, Skin diseases
42.	<i>Hibiscus rosa sinensis</i> L.	Malvaceae	Semparuthi	Leaves and Flower	Pain killer, Baldness, whitening of hair, Menstrual disorder
43.	<i>Justicia adathoda</i> L.	Acanthaceae	Adathodai	Whole plant	Phlegm, Tumour, Nervous pain
44.	<i>Lawsonia inermis</i> L.	Lythraceae	Marudhani	Leaves, Bark and Fruits	Muscular spasm, internal bleeding, Dying agent
45.	<i>Leucas aspera</i> L.	Lamiaceae	Thumbai	Leaves	Asthma, Cold, Cough and abnormal bleeding at Menstruation
46.	<i>Manihot esculenta</i> C. Rantz.	Euphorbiaceae	Maravalli kilangu	Root	Tiredness Dehydration
47.	<i>Mimosa pudica</i> L.	Mimosaceae	Thottal suringi	Leaves and Root	Sinus, Piles wound and kidney disorder
48.	<i>Morinda tinctoria</i> Nauct.	Moringaceae	Manjanathi	Leaves Root	Ulceration, Diarrhea Inflammation
49.	<i>Moringa oleifera</i> auct.	Moringaceae	Murungai	Leaves	Induce vomiting, Flu fever, Hypertension
50.	<i>Ocimum sanctum</i> L.	Lamiaceae	Thulasi	Leaves	Cold, intestinal disorder, Prolonged fever, Ear ache
51.	<i>Pergularia daemia</i> (Forsk.) <i>Chiov.</i>	Asclepiadaceae	Velipparuthi	Leaves and Young stem	Liver problem, Fainting and dysentery
52.	<i>Phyla nodiflora</i> (L) Greene.	Verbenaceae	Poduthalai	Whole plant	Indigestion, Diuretic, fever,
53.	<i>Phyllanthus amarus</i> Schum & <i>Thonn</i>	Euphorbiaceae	Keelanelli	Whole plant	Jaundice, Intestinal pain, Fainting, Reproductive diseases
54.	<i>Phyllanthus emblica</i> L.	Euphorbiaceae	Nelli	Leaves and fruits	Wound healing, Stomach disorder, Scurvy, Anaemia
55.	<i>Piper betel</i> L.	Piperaceae	Vettilai	Leaves	Bronchitis, Anti-microbial agent, Indigestion induce saliva
56.	<i>Pithecellobium dulce</i> (ROxb.) Benth.	Mimosaceae	Kodukkapuli	Fruit Pulp, Bark	Haemoptysis, Dysentery and diarrhea
57.	<i>Plectranthus amboinicus</i> (Lour.)	Lamiaceae	Karpuravalli	Flowers and fruits	Kidney stone, Muscular spasm, Indigestion
58.	<i>Plumbago zeylanica</i> L.	Plumbaginaceae	Chittiramoolam	Roots	Weak digestion, Piles, Abdominal pain
59.	<i>Prosopis juliflora</i>	Mimosaceae	Seemai karuvelam	Ground Pod	Digestive disorder, Wound healing, Dysentery
60.	<i>Psidium guajava</i> L.	Punicaceae	Koyya	Leaves, Bark, Fruits	Anti-cancer, Anti-inflammatory, Dysentery, Diarrhea
61.	<i>Ricinus communis</i> L.	Euphorbiaceae	Aamanaku	Seed oil, Root	Constipation, Birth control, Worm infestation and liver disorder
62.	<i>Syzygium cumini</i> L <i>skeels</i>	Myrtaceae	Naval	Fruits	Cough, Asthma, Digestive problem, diarrhea and Piles
63.	<i>Tectona grandis</i> L. <i>f</i>	Verbenaceae	Tekku	Flowers	Bronchitis, Congestion of liver and Diuretic
64.	<i>Terminalia arjuna</i> (roxn.) <i>ex</i> <i>DC. Wight & Arn</i>	Combretaceae	Maruthamaram	Bark, leaf	Heart diseases, Asthma, Ear ache
65.	<i>Tinospora cordifolia</i> (wild.) <i>Miers. Ex Hook & Thomson.</i>	Menispermaceae	Shinola kodi	Powdered root, Decoction of plant, stem	Mouth ulcer, Diarrhoea, control blood sugar
66.	<i>Trichosanthes cucumerina</i> L.	Cucurbitaceae	Pudalankaai	Root, fruit, seed	bronchitis, headache and boils, anthelmintic, stomach disorders
67.	<i>Tridax procumbens</i> L.	Asteraceae	Vettukkaaya thalai	Leaf	Skin diseases, wounds, boils
68.	<i>Vetiveria zizanioides</i> (L) <i>Nash.</i>	Poaceae	Vettiver	Root, stem and leaf	Cooling, anti-asthmatic, urinary tract infection, parasitic infection
69.	<i>Withania somnifera</i> (L.) <i>Dunal.</i>	Solanaceae	Ammukkara	Roots, leaves and bark	Rheumatic pain, inflammation of joints, nervous disorders and epilepsy, inflammation and swellings, asthma
70.	<i>Piper longum</i> L.	Piperaceae	Tippili	Roots, fruits	Diseases of respiratory tract
71.	<i>Piper nigrum</i> L.	Piperaceae	Milagu	Seed	Anti-microbial, reducing cholesterol, indigestion
72.	<i>Plumbago zeylanica</i> L.	Plumbaginaceae	Chittiramoolam	Root, whole plant,	Weak digestion, piles, abdominal pain, skin diseases
73.	<i>Aerva lanata</i> (L.)	Amaranthaceae	Poolaipoo	Aerial part, root, seed	Urinary stone, head ache, wounds
74.	<i>Alangium salvifolium</i> (L.f.)	Alanginaceae	Alincil	Stem, leaves, fruits	Diarrhoea and vomiting, asthma,

	<i>Wangerin</i>				rheumatic pains, antidote for poisoning, cure eye diseases
75.	<i>Albizia lebbek</i> (L.)	Mimosaceae	Vegiai	Leaves, seeds,	Earache, diarrhea, dysentery
76.	<i>Alpinia calcarata</i> Roscoe	Zingiberaceae	Chitharathai	Rhizome	Rheumatoid arthritis, coughs, stomachic diseases, heart diseases, snake bites
77.	<i>Alstonia venenata</i> R.Br.	Apocynaceae	Sinnappalai	Roots, fruits	Skin diseases, leprosy, cobra and other venomous bites, epilepsy, Psychiatric diseases and syphilis
78.	<i>Ammannia baccifera</i> L.	Lythraceae	Kalluruvi	Leaves	Skin diseases, rheumatic pain, and external remedy for ring worm
79.	<i>Annona squamosa</i> L.	Annonaceae	Seethapalam	Leaves, fruits and seed	Urinary tract infection, ulcers and malignant sores, diarrhoea and dysentery
80.	<i>Aristolochia bracteolata</i> Lam.	Aristolochiaceae	Aaduthinapalai	Dried leaves, seeds	Skin itch, or insect bites, antibacterial, anti-inflammatory
81.	<i>Asparagus racemosus</i> Willd.	Liliaceae	Shimaishadavari or Inli-chedi	Root	Liver disorders, jaundice, dysentery, chronic fevers, infertility and enhance lactation
82.	<i>Boerhaavia diffusa</i> L.	Nyctaginaceae	Chattarani	Roots	Cough, fever, asthma, jaundice, skin infections, piles
83.	<i>Cadaba trifoliata</i> (Roxb.) Wight & Arn	Capparidaceae	Kattagatti	Leaves, stem and roots	Anti-rheumatic, anthelmintic, antibacterial, viral infection Anti-rheumatic, anthelmintic, antibacterial, viral infection Anti-rheumatic, anthelmintic, antibacterial, viral infection Anti-rheumatic, anthelmintic, antibacterial, viral infection Anti-rheumatic, anthelmintic, antibacterial, viral infection Anti-rheumatic, anthelmintic, antibacterial, viral infection Anti-rheumatic, anthelmintic, antibacterial, viral infection Anti-rheumatic, anthelmintic, antibacterial, viral infection Anti-rheumatic, anthelmintic, antibacterial, viral infection Anti-rheumatic, anthelmintic, antibacterial, viral infection Anti-rheumatic, anthelmintic, antibacterial, viral infection Anti-rheumatic, anthelmintic, antibacterial, viral infection
84.	<i>Caesalpinia pulcherrima</i> (L.)	Caesalpiniaceae	Paal perukki	Leaves, bark and flowers	ulcers and hepatitis, intestinal inflammation, diarrhoea and dysentery, uterine disinfection
85.	<i>Calotropis gigantea</i> (L.) R.Br.	Asclepiadaceae	Erukku	whole plant, Root, bark latex	health tonic, anthelmintic and expectorant, bronchitis, asthma, leprosy, eczema and elephantiasis, vertigo, baldness, hair fall, tooth ache and wounds
86.	<i>Cardiospermum halicacabum</i> L.	Sapindaceae	Mudakathan keerai	Whole plant	Diuretic, Laxative, Rheumatism and Nervous disorder
87.	<i>Carissa carandas</i> L.	Apocynaceae	Kalakkai	Fruit	Appetite and Digestion
88.	<i>Cassia obtusifolia</i> (Roxb.) W. & A.	Caesalpiniaceae	Payaverai	Leaves	Laxative, Stomachache, Skin infection and insect bite
89.	<i>Cassia occidentalis</i> L.	Caesalpiniaceae	Nattam takarai	Leaves	Cough, Cold, Eczema and Filariasis.
90.	<i>Catharanthus pusillus</i> (murr.)	Apocynaceae	Paalaich Chettai	Leaves Root	Diabetes, Sore throat, Eczema, Cancer
91.	<i>Centella asiatica</i> (L.)	Apiaceae	Vallarai	Leaves	Fever, Ulcers, Diabetes
92.	<i>Citrus medica</i> L.	Rutaceae	Koti Narattai	Fruits Roots	Malaria, Cough, Cold Respiratory problem
93.	<i>Cleome aspera</i> J. Koeing ex DC	Capparidaceae	Naai kadugu	Leaves	Colic and Dysentery, Wound and Ulcer
94.	<i>Cleodendrum inerme</i> (L.) Gaertn.	Verbenaceae	Sangam Kuppi	Leaves	Flu with headache, Pregnancy and Umbilical cord infection
95.	<i>Coccinia grandis</i> (L.) J. Voigt	Cucurbitaceae	Kovakkai	Leaves and Fruits	Diabetes, Jaundice, Eczema, Mouth Ulcer
96.	<i>Coleus amboinicus</i> Lour.	Lamiaceae	Karpooravalli	Leaves	Cold, Cough, Asthma and Bronchitis
97.	<i>Corallocarpus epigaeus</i> *(Rottler) c.B. Clarke	Cucurbitaceae	Akhasa karudan kodi	Tubers	Obesity, Tumours, Cough and Cold
98.	<i>Cuscuta chinensis</i> Lam.	Convolvulaceae	Manjapulluruvi	stem	Bone fracture
99.	<i>Cyanotis arachnoidea</i> C.B. Clarke	Commelinaceae	Vallukkai	leaf	swelling to reduce itching
100.	<i>Cymbidium aloifolium</i> (L.) Sw.	Orchidaceae	Panai pulluruvi	leaves	Earache
101.	<i>Cyanodon dactylon</i> (L.) Pers	Poaceae	Arugam pillu	whole plant	body heat and to lower the blood pressure
102.	<i>Dichrostachys cinerea</i> (L.)	Mimosaceae	Vedathalai	whole plant	Rheumatic pains
103.	<i>Dodonaea angustifolia</i> L. f.	Sapindaceae	Virali	leaf	haematoma
104.	<i>Eleusine coracana</i> (L.) Gaertn.	Poaceae	Kaelvaragu	Seeds	Viral fevers and colds

105.	<i>Enicostemma axillare (Lam.) A. Raynal</i>	Gentianaceae	Vellaragu	Leaves	white discharge, fertility in man
106.	<i>Erythrina variegata L.</i>	Fabaceae	Mullumurungai	Leaves	Cold and cough
107.	<i>Eucalyptus tereticornis Smith</i>	Myrtaceae	Thailamaram	Leaves, oil from the plant	coughs and a cold, dry cough and chest pain
108.	<i>Evolvulus alsinoides (L.)</i>	Convolvulaceae	Vishnukiranthi	Whole plant	Fever and worms
109.	<i>Hypanthus ennaspermus (L.) F. Muell.</i>	Violaceae	Orithal thamarai	Leaves, Whole plant	Fever and aphrasiadic, reduce body heat, male fertility
110.	<i>Hygrophila auriculata (Schumach.) Heine.</i>	Acanthaceae	Neermulli	Seeds	Menstrual problems
111.	<i>Hyptis suaveolens (L.) Poit.</i>	Lamiaceae	Karunchsatachi	Leaves	Eczema
112.	<i>Indigofera tinctoria L.</i>	Fabaceae	Avuri	Leaf	Skin diseases
113.	<i>Leonotis nepetaefolia (L.) R.Br.</i>	Lamiaceae	Theanthumpai	Leaf	Eczema
114.	<i>Mangifera indica L.</i>	Anacardiaceae	Maankai	Latex of the plant	Wounds on the legs
115.	<i>Marsilea minuta L.</i>	Marsileaceae	Kaatukkeerai, Aarakkerai	Leaves	Diabetes.
116.	<i>Melia azedarach L.</i>	Meliaceae	Malai vembu	Bark	Stomach pain, anthelmintic
117.	<i>Mollugo nudicaulis Lam.</i>	Aizoaceae	Parpaadagam	Whole plant, leaf	Cold, skin diseases
118.	<i>Mukia madraspatana (L.) M. Roemer</i>	Cucurbitaceae	Mosumosukkai	Leaf	Piles, blacken gray hair
119.	<i>Musa paradisiaca L.</i>	Musaceae	Vazhai	Whole plant	Snake bite and also for burns
120.	<i>Notonia grandiflora DC.</i>	Asteraceae	Muyalkathu	Leaves	Earache, eczema
121.	<i>Ocimum canum Sims</i>	Lamiaceae	Naithulasi	Leaves	Headache and fever
122.	<i>Ocimum Teniflorum L.</i>	Lamiaceae	Nallathulasi	Leaves	Cold and coughing
123.	<i>Oldenlandia umbellata L.</i>	Rubiaceae	Impural	Whole plant	Asthma
124.	<i>Pavetta indica L.</i>	Rubiaceae	Therani	Leaves	Snakebite
125.	<i>Pedaliium murex L.</i>	Pedaliaceae	Yaanainerunji	Leaves	Itching
126.	<i>Polygala arvensis Willd.</i>	Polygalaceae	Chankankolakacceti	Root	Inflammations
127.	<i>Pongamia pinnata (L.) Pierre</i>	Fabaceae	Pungam	Seed	Rheumatic pains and swellings
128.	<i>Sesbania grandiflora (L.) Poiret</i>	Fabaceae	Agaththi	Leaves	Vermifuge, peptic ulcer
129.	<i>Solanum nigrum L.</i>	Solanaceae	Milaguthakkali	Plant, leaf	Stomach ulcer, rabies
130.	<i>Solanum surattense Burm.f.</i>	Solanaceae	Kandankathiri	whole plant	Colds and wheezing
131.	<i>Solanum torvum L.</i>	Solanaceae	Sundaikkai	Leaves	Infections
132.	<i>Solanum tilobatum L.</i>	Solanaceae	Thudhuvaelai	Leaves	Coughs and colds
133.	<i>Sphaeranthus indicus L.</i>	Asteraceae	Kottaikaranthi	Whole plant	Blacken gray hair
134.	<i>Tamarindus indica L.</i>	Caesalpinaceae	Pulia maram	Seed coat, scratched seed	scorpion bite
135.	<i>Tephrosia purpurea (L.) Pers,</i>	Fabaceae	Kozhunji	root bark	Stomach pain
136.	<i>Tribulus terrestris L.</i>	Zygophyllaceae	Nerunji	Whole plant	kidney stones
137.	<i>Vernonia cinera L.</i>	Asteraceae	Mukuttiipoondu	Whole plant	Paralysis
138.	<i>Vitex negundo L.</i>	Asteraceae	Nochi	Leaves	Running nose and headache
139.	<i>Wrightia tinctoria (Roxb.) Br.</i>	Apocynaceae	Vetpalai	Leaves	Eczema
140.	<i>Zayeya decandra (L.) Burm.f.</i>	Aizoaceae	Sathasaaranetti	Leaves	Gas trouble
141.	<i>Zingiber roseum Rosc.</i>	Zingiberaceae	Inji	Rhizome	digestion and to relieve giddiness (piththamayakam)
142.	<i>Abrus precatorius L.</i>	Fabaceae	Kundumani	Seeds	Eczema
143.	<i>Adenantha pavonina L.</i>	Mimucaceae	Ani kundamani	young leaves and bark, seeds	Diarrhoea, inflammation
144.	<i>Aristolochia indica L.</i>	Aristolochiaceae	Isvaramuli	Leaf, root	Diarrhoea & dysentery, Constipation and abdominal colic
145.	<i>Asparagus racemosus Willd.</i>	Asparagaceae	Thanneervittan Kilangu	Bulbs, root	urinary troubles
146.	<i>Atalantia monophylla (L.) Correa</i>	Rutaceae	Kattuelumichai.	Leaf,	Paralysis, rheumatic pain
147.	<i>Carmona retusa (vahl) Masmune</i>	Boraginaceae	Kurangu Vetrilai	Leaf	Diarrhea, stomach-ache
148.	<i>Catharanthus roseus (L.) G. Don</i>	Apocynaceae	Nithya kalyani	Whole plant, leaves, root	Cancer, Hodgkin's disease, menorrhagia
149.	<i>Cissampelos pareira L. Var.</i>	Menispermaceae	ponmusutai	Whole plant, leaf and root, flowers	Snakebite, toothache, redness of the eyes
150.	<i>Cleistanthus collinus (Roxb.) Benth. Ex Hook.f</i>	Euphorbiaceae	Nilaiपालai	Stem bark	wounds as antiseptic
151.	<i>Croton bonplandianum Baill.</i>	Euphorbiaceae	Rail Poondu	Leaves, seeds, whole plant	cut and wounds, venereal sores and cholera, jaundice, headache
152.	<i>Dipteracanthus prostratus (poir.) Nees</i>	Acanthaceae	Pottakanchi	Roots, Leaf	syphilis and renal affections, ear maladies
153.	<i>Drypetes sepiaria (wight & Arn) Pax & Hofin.</i>	Euphorbiaceae	Veerai	Fruit and bark	Fever and diarrhea
154.	<i>Euphorbia tirucalli L.</i>	Euphorbiaceae	Kalli	Whole plant, Bark, Roots	Biliousness, leprosy and leucorrhea, fractures, snake-bite and for infertility in women

155.	<i>Kalanchoe pinnata</i> (Lam.) Pers.	Crassulaceae	Ranakalli	Leaves,	wound, bruises, swelling and insect bite, urinary bladder
156.	<i>Ocimum basilicum</i> L.	Lamiaceae	Tirunittru pachai	Leaves and seeds.	Nausea, dysentery, and flatulence, skin infections, snake bites and insect stings
157.	<i>Allium sativum</i> L.	Amaryllidaceae	Vellaippoindu	Bulb	High blood pressure, Cardiovascular diseases, Prevent cancer
158.	<i>Rauwolfia tetraphylla</i> L.	Apocynaceae	Nagamani, Sarpagandha	whole plant, leaves	Skin diseases, urinary retention, epilepsy, insomnia, wounds, and fever

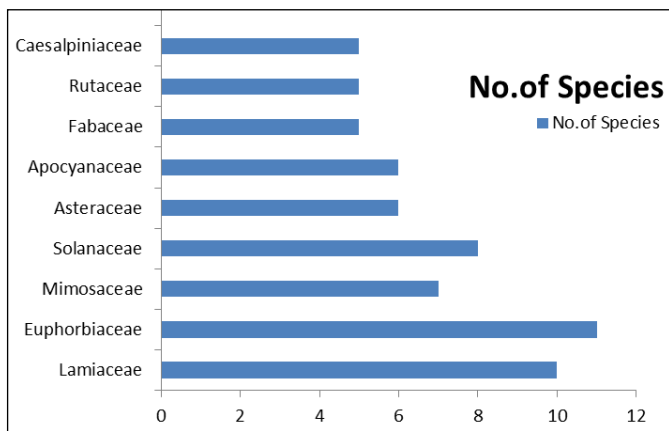


Fig 1: Dominant families with Number of Species

A total of 158 plant species belonging to 62 families were identified for curing human ailments in Madurai. Dominant families are Lamiaceae, Euphorbiaceae, Mimosaceae, Solanaceae, Asteraceae, Apocynaceae, Fabaceae, Rutaceae and Caesalpiniaceae are more frequently used for human diseases. Different plant parts such as Root, Leaves, Seeds, Fruit, wood bark and Flowers were used for herbal preparation. The herbal preparations were in the form of Powder, Decoction, Oil and Juice. Traditional medical knowledge of medicinal plants and their use by indigenous cultures are not only useful for conservation of cultural traditions and biodiversity but also for community care and drug development in the present and future.

4. Conclusion

The findings of the present investigation mainly focused on Indigenous knowledge of medicinal plants which are closely associated with Rural, Tribal community, and also Traditional healers. It can be concluded that local people of Madurai district who have rich traditional knowledge and documentation of knowledge has provided information from the area. They still depend on the plants for medicinal purposes and are very much concerned about their degradation in wild as they now have to travel even more far to collect these plants

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