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Potential of medicinal plants for curing human ailments in Natham, Dindigul district, Tamil Nadu, India

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Abstract

The present study was carried out to investigate the potential of medicinal plants for curing various ailments of human in Natham taluk Dindigul district. The study deals with 60 plant species belonging to 36 families used for the treatment of diseases and diseases of human beings. Sixty plants species are used to cure 86 human diseases. 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 Rutaceae, Asclepiadaceae, Piperaceae, Lamiaceae and Euphorbiaceae are more frequently used for treatment of diseases.

Keywords: human ailments, medicinal plants, documented wealth, Tamil Nadu

1. Introduction

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) ^[9]. The tribal communities draw their sustenance largely from forests for food, medicine and other requirements. According to Uniyal *et al.* (2006) ^[14] 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, these 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) ^[3]. 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) ^[13]. In the present study an attempt has been made to collect medicinal knowledge and medicinal uses of plants to cure various human diseases.

2. Experimental Methods

2.1 details of the study sites

Study area is carried out in Natham which is a Taluka in Dindigul district of Tamil Nadu, which covers three villages on the Karandhaimalai hills and about 40 others dispersed over the hill side and foot hills.

2.2 Interview with informants

An extensive Survey was carried out in Natham from September 2015- May 2016.

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The number of informants interviewed 18 (12Male, 6 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 include different common human ailments, their occurrence, symptoms, regular mode of treatment including herbal ones, plants and plant parts used for the treatment.

2.4 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>Aegle marmelos</i> (L.) Correa	Rutaceae	Vilvam	Fruit	Dyspepsia
2	<i>Anogeissus latifolia</i> Wall	Combretaceae	Namai	Gum	Skin diseases
3	<i>Artocarpus heterophyllus</i> Lamk.	Moraceae	Pala	Fruit	To increase immunity
4	<i>Azadirachta indica</i> A. juss	Meliaceae	Vembu	Leaf paste	Treat acne, Antibacterial, Anti viral
6	<i>Atalantia racemosa</i> , wright & Arn	Rutaceae	Kaattu elumpichai	Fruit oil	Cure paralysis, Chronic rheumatism
7	<i>Borassus flabellifer</i> L.	Palmaceae	Panai	Fruit	Haemorrhage, Hyper dipsia
8	<i>Calophyllum inophyllum</i> Linn	Cluciaceae	Punnai	Seed oil	Wound healing, growth of healthy skin
9	<i>Calotropis gigantea</i> (L)R.Br Ex Ait	Asclepiadaceae	Erukku	Root bark	Cough, Cold, and Constipation
10	<i>Carica papaya</i>	Caricaceae	Pappali	Leaves	Nervous pain, Elephantoid growth
11	<i>Cassia fistula</i> L.	Caesalpinaceae	Kontrai	Cassia pulp	Constipation, Aguesia
12	<i>Cassia tora</i> Linn	Caesalpinaceae	Tagarai	Paste of leaf and Root	Eczema
13	<i>Centella asiatica</i> L.	Apiaceae	Vallarai	Whole plant	Improving memory, psychiatric disorder
14	<i>Coleus aromaticus</i> Benth	Lamiaceae	Karpura valli	Whole plant	Cough, fever and liver tonic
15	<i>Commiphora caudata</i> Engl.	Burseraceae	Guggulu	Leaf and bark	Rheumatoid arthritis
16	<i>Curcuma aromatica</i> Sal.	Zingiberaceae	Kasthuri Manjal	Rhizome	Leucoderma, Skin eruptions and cosmetics
17	<i>Cymbopogon citrates</i> Stapf.	Poaceae	Lemon grass	Whole plant	Fever, Headache, gastric irritation
18	<i>Decalepis hamiltonii</i> wight & Arn	Asclepiadaceae	Mahali Kizhangu	Tuberous root	Cooling agent, Indigestion, Blood purifier
19	<i>Embllica officinalis</i> Gaetn	Euphorbiaceae	Nelli	Leaves and fruit	Anti oxidant, tonic and Cosmetic
20	<i>Eugenia sigampattiana</i> Bedd	Myrtaceae	Wild clove	Leaves and Fruit	Toothache, Digestive and Mouth freshner
21	<i>Garcinia indica</i> Chois.	Rubiaceae	Marukalam	Fruit and bark	Hair tonic and Soap
22	<i>Gloriosa superb</i> L.	Liliaceae	Kalappa kilangu	Rhizome and seed	Intestinal worms, Snake bite and baldness
23	<i>Gymnema sylvestris</i> (Retz). Shult.	Asclepiadaceae	Sakkarai Kollu	Leaves	Diabetes, Liver tonic
24	<i>Hemidesmus indicus</i> L.	Asclepiadaceae	Nannari	Root	Hepatopathy, Nephropathy, Leucoderma
25	<i>Hugonia Mystax</i> L	Linaceae	Mothira kanni	Leaves and root	Fever and Inflammation
26	<i>Justicia adhatoda</i> L.	Acanthaceae	Vasambu	Leaves	Cold and Cough
27	<i>Jasminum angustifolium</i> Vahl.	Oleaceae	Kattu malligai	Flowers, and leaves	Ring worm and Cosmetics
28	<i>Kalanchoe pinnata</i> (Lamk) Pers.	Crassulaceae	Rana Kalli	Leaves	Diuretics, Hepato Protective
29	<i>Lantana camera</i> L.	Verbinaceae	Arisimalar	Whole plant	Dysentery, Swellings and Tumour
30	<i>Leptadenia reticulata</i> W & A	Asclepiadaceae	Palaikkodi	Root	Skin diseases, and inflammation
31	<i>Leucas aspera</i> Spreng	Lamiaceae	Thumbai	Leaves and flowers	Chronic skin eruption, Psoriasis and Cough
32	<i>Manihot esculenta</i> C. Rantz.	Euphorbiaceae	Maravallikkilangu	Leaves and root	Tumours
33	<i>Mimosa pudica</i> L.	Mimosaceae	Thottal Suringi	Root	Jaundice, Piles and Leprosy
34	<i>Morinda Pubescens</i> Sm	Rubiaceae	Nunaa	Root, Unripe fruit	Inflammation, Rheumatism
35	<i>Murraya paniculata</i> L.	Rutaceae	Wild curry leaf	Leaf and Bark	Diuretic, Carminative
36	<i>Myrstica dactyloides</i> Gaert.	Myrtaceae	Kattu Jatikkai	Leaf and Fruit	Sedative, Cough, bronchitis
37	<i>Moringa oleifera</i> Auct.	Moringaceae	Murungai	Leaves and fruits	Anti tumour, Anti inflammatory, and Anti hepatoprotective
38	<i>Ocimum sanctum</i> L.	Lamiaceae	Tulsi	Leaves	Asthma, Bronchitis, Stomachache
39	<i>Oroxylum indicum</i> V ent	Bignoniaceae	Palaiyutaichi	Leaves, Roots and Fruits	Digestive, Anthelmintic and Stomache
40	<i>Passiflora foetida</i> L.	Passifloraceae	Siruppunaikkali	Whole plant	Anxiety, Hypertension
41	<i>Peperomia tetraphylla</i> (Forst. f) hook & ar	Piperaceae	Vanabrahmi	Whole plant	Lowers serum uric acid level
42	<i>Piper betle</i> L.	Piperaceae	Vettilai	Leaves	Bronchitis, Cough and Alcoholism
43	<i>Piper longum</i> L.	Piperaceae	Thippili	Fruit	Diarrhoea, Indigestion, Jaundice
44	<i>Piper nigrum</i> L.	Piperaceae	Milagu	Fruit	Stomach ache, Vomitting
45	<i>Pithecellobium dulce</i> (Roxb.) Benth.	Mimosaceae	Kodakkapuli	Leaves	Astringent and Anti inflammatory
46	<i>Plectranthus amboinicus</i> (Lour)	lamiaceae	omavalli	Leaves	Malarial fever, Cough and Asthma
47	<i>Plumbago zeylanica</i> L.	Plumbaginaceae	Chittira moolam	Root	Diarrhoea, Skin Diseases
48	<i>Pogostemon benghalensis</i> Desf.	lamiaceae	Minnakeerai	Leaves	Cardio tonic, Fever and Tumours
49	<i>Psidium guajava</i> L.	myrtaceae	Koyya	Leaves, Pulp and Seed	Respiratory and Gastrointestinal disorder
50	<i>Punica granatum</i> L.	Punicaceae	Madhulai	Juice of fruit	Reduces the risk of stroke, Heart disease and Heart attack
51	<i>Pterocarpus santalinus</i> L.	caesalpinaceae	Santhana Vengai	Wood Decoction	Eye disease, Mental aberration and ulcer
52	<i>Rauwolfia serpentina</i> Benth	Apocyanaceae	Sarpaganthi	Root	Hyper tension and blood purifier
53	<i>Rubia cordifolia</i> L	Rubiaceae	Manjanathi	Leaves and root	Blood Purifying and Haemostatic
54	<i>Ricinus communis</i> L	Euphorbiaceae	Amanakku	castor oil	Purgative, hair growth
55	<i>Santalum album</i> L	Santalaceae	Santhanam	Sandal wood oil, Wood and Bark	Abdominal Pain and other gastric problem

56	<i>Sapindus emarginatus vahl W&A</i>	Sapindaceae	<i>Punnangkottai</i>	Powdered Seeds	Dental caries, Hair tonic
57	<i>Smilax zeylanica L</i>	Smilacaceae	<i>Kaattu kodi</i>	Leaves and Root	Fever, Abscesses and Swelling
58	<i>Syzygium cumini</i> (L) Skeels	Myrtaceae	<i>Noval</i>	Leaves, Fruit	Diabetes, Diuretic and Controlling blood pressure
59	<i>Tinospora cordifolia</i> (Willd) Miers. ex Hook & Thomson	Menispermaceae	<i>Seenthil Kodi</i>	Leaves	Cold, Cough, Fever
60	<i>Withania somnifera</i> (L) Dunal	Solanaceae	<i>Amukkara</i>	Root, Seeds and Leaves	Diuretic, Sedative, and Pain reliever

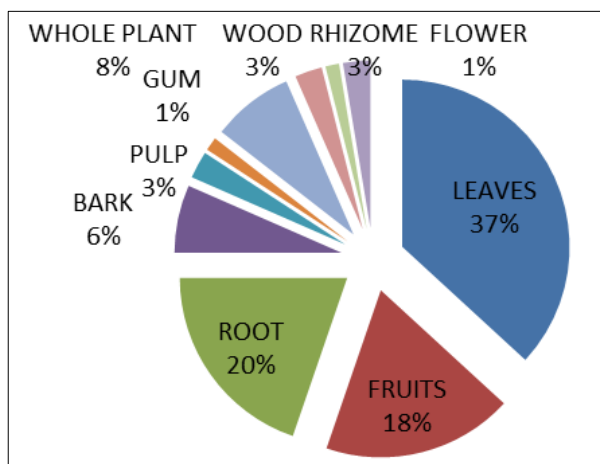


Fig 1: The percentage of plant parts used.

A total of 60 plant species belonging to 36 families were identified for curing human ailments in Natham. Dominant families are Rutaceae, Asclepiadaceae, Piperaceae, Euphorbiaceae, Caesalpinaceae and Lamiaceae are more frequently used for human diseases. Different plant parts such as Roots, Leaves, Seeds, Fruit, wood bark and Flowers. The herbal preparation 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 the role of potential plants which are closely associated with Rural, Tribal community, and also Traditional healers. It can be concluded that local people of Natham taluk 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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