

# A STUDY ABOUT THE MEDICINAL PLANTS AND USES IN FOLK TREATMENT AROUND THE VILLAGE MANGAVILAI IN KANYAKUMARI DISTRICT, TAMIL NADU

**Dr. G. Kavitha**

Assistant Professor of Economics  
S.T. Hindu College, Nagercoil – 629 002.

*(Affiliated to ManonmaniamSundaranar University, Abishekapatti, Tirunelveli – 627 012, Tamil Nadu, India)*

## **Abstract**

According to World Health organization (WHO), around 21,000 plant species has been used as medicinal plants across the world. More than 8000 plants are used in our country for medicinal purpose. Western Ghats of India is one of the 34 global bio-diversity hotspots in the world. According to WHO, the global market of herbal product is poised to grow to 5 trillion dollars in the year 2050. Medicinal plants can provide a significant source of income for rural people. More than 671 lakhs registered traditional practitioners in the use of medicinal plants in India. 90% of the common ailments were cured with available medicinal plants. The clinical trails proved that a plant based diet can improve heart health. This study conducted to bring out the folk knowledge adopted by the village people curing various ailments traditionally. The study was conducted in the village Mangavilai in Kanyakumari district. This village is a repository of rare medicinal plants and famous herbalists. The medicinal informations were gathered from the local people and herbalists through group discussions and also structured questionnaires. In this study 104 plants from 63 families were identified and tabulated on alphabetical order with their folk name, botanical name, family, part used in folk treatment and disease cured were listed. The people in the study area fully depended on plant treatment to cure cough, cold, fever, jaundice, ulcer, rheumatic problem, urinary problems, kidney stone etc. The study reveals that the local people of the study area fully rely on medicinal plants for their health needs. Sustainable utilization is recommended to protect medical plants in the study area.

**Key Words:** *Medicinal plants, traditional knowledge, ailments, AYUSH, thrive, decoction, rare, curing*

## Introduction and Importance of Medicinal Plants

According to World Health Organization (WHO), around 21,000 plant species have been used as medicinal plants across the world. India has been known to be rich repository of medicinal plants.

The study was conducted in the village Mangavilai in Kanyakumari District. This village is accommodating rare medicinal plants and famous herbalists.

More than 8000 plants are used in our country especially for their medicinal values by the rural people.<sup>[1]</sup> Since prehistoric period, people has been fully rely on medicinal plants and natural resources for their primary health needs.<sup>[2]</sup> However, different medical system such as Ayurveda, Sidha, Unani and Homeopathy are being practiced, local folk medical tradition also exist. The Western Ghats of India is one of the 34 global bio-diversity hotspots in the world.<sup>[3]</sup> Kanyakumari district has a huge forest cover accommodating a wide variety of plants and also has an abundance of rare medicinal herbs. People have been using this medicinal plants to treat various ailments traditionally. Throughout the history, herbal treatment has been accepted by all culture and it is also an integral part of the development.

In India AYUSH have been recognized and certified about 8000 herbal remedies. According to WHO the global market of herbal product is 70 billion dollars, which is poised to grow to 5 trillion dollars in the year 2050.

In 2016-17, India's export value of medicinal plants was 358.6 million dollar and it was the share of 0.5% with the global market.<sup>[4]</sup>

The best way of prevention of disease is through Ayurvedha, because it is a comprehensive system based on natural medicines from medicinal plants and herbs, which is devoid of toxicity. Herbal treatment can enhance the immunity of the human body.<sup>[5]</sup>

The traditional knowledge accumulated over thousands of years in India, it is no surprise that the country among the top two exporters of medicinal plants. 85% of the global demand is fulfill by only twelve developed countries with more than 6.71 lakhs registered traditional practitioners, India occupies a unique position in the use of medicinal plants.<sup>[6]</sup>

An official of World Health Organization (WHO), who was a famous doctor of modern system of medicine had hailed the strength of India's traditional medicine with natural medicinal plants and their usefulness.<sup>[7]</sup>

Medicinal plants can provide a significant source of income for rural life in developing countries, especially through the wild harvested material. As per WHO, more

than 30% of the entire plants are using for medicinal purpose. More than 25% of the total drugs used on developed countries such as US are plant drugs and in developing countries such as India and China this contribution is more than 80%. Thus the economic importance of medicinal plants is much more in India than the other countries in the world.

In India 90% of the common ailments are reported to have local solutions based on local health traditions that use locally available medicinal plants.

Ayurveda, our indigenous system of health care, has now gained global recognition. Similarly there is great scope for the utilization of indigenous essential plant resources.

In the recent years the growth of our traditional medical system is very high. At the same time The World Conservation Union (WCU) presents a shocking report revealed nearly 34000 species or 12.5% of the world's vegetation is facing extinction. Based on these figures, it is reasonable to estimate that around 1000 of India's 8000 medicinal plant species are also threatened.

According to a report published in the journal 'Science', between 22.5 to 47 percent of the world plant species are endangered.

The domestic demand of medicinal plants has been estimated 1,95,000 MT for the year of 2014-2015 and export demand has been estimated 1,34,500 MT during 2014-2015. Total consumption of herbal raw drug in the country for the year 2014-2015 has been estimated at 5,12,000 MT with a trade value of Rs.5,500 crore. The major increase has been recorded on export value which has increased from Rs.345.80 crore in 2005-06 to Rs.3211 crore in 2014-15, registering a nine fold increase during last decade.<sup>[8]</sup>

India's domestic herbal industry is represented by 8610 licensed herbal units, thousands of cottage level unregulated herbal units and millions of folk healers (*NaattuVaithyars*) and household level users are channels the herbal raw drugs from various supply sources to the end users.<sup>[9]</sup>

In developing countries most of the primary health care needs are fulfilled through herbal or folk medicines due to its safety profile, efficacy and cost-efficiency.<sup>[10]</sup>

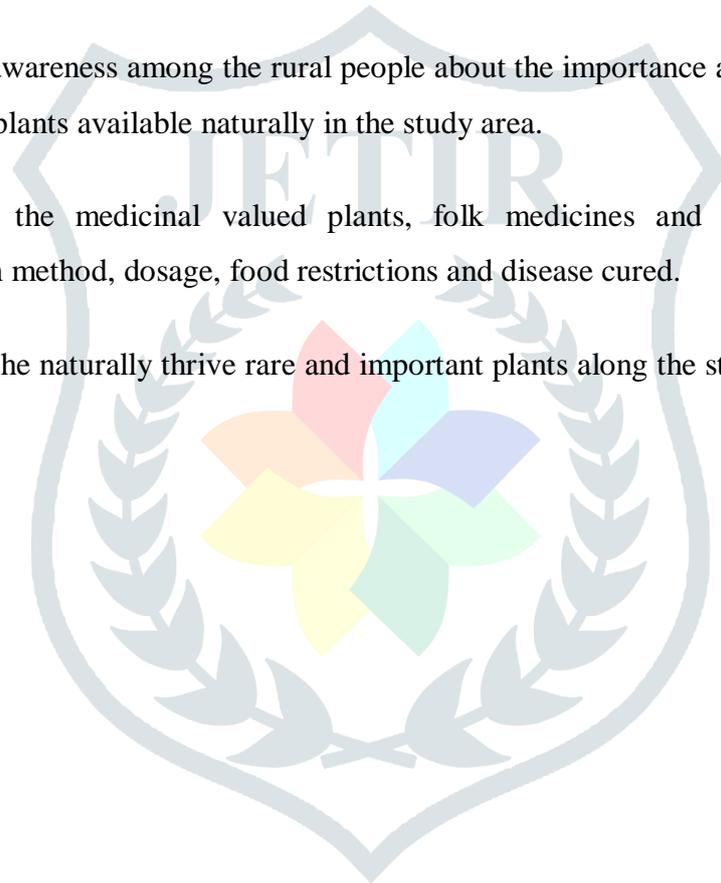
By using folk medicines and treatments, several metabolic and chronic diseases can be treated without any side effects.

Previous clinical trails and observational studies have found strong evidence that a plant based diet can improve heart health. The plant feeds are especially effective for lowering cholesterol and boosting our overall cardiovascular health.<sup>[11]</sup>

Today herbal medicines have become a symbol of safety when compared with synthetic drugs. In this view an attempt was taken to collect information about the medicinal plants being used by the villagers around Mangavilai village for the folk treatment to cure various ailments.

### Scope of the Study

- To bring out and share the different folk knowledge adopted by the village people curing various ailments traditionally.
- To familiarize the people in the study area with the valuable, rare and important medicinal plants which thrive naturally in their surroundings.
- To create awareness among the rural people about the importance and conservation of the herbal plants available naturally in the study area.
- To record the medicinal valued plants, folk medicines and treatment such as preparation method, dosage, food restrictions and disease cured.
- To record the naturally thrive rare and important plants along the study area which are medicinal.



## The Study Area

❖ Period of Study – One year from 01.12.2017 to 30.11.2018.

❖ Geographical Location:

- Longitude – 77° 23' 22" East to  
77° 25' 44" East
- Latitude – 8° 6' 01" North to  
8° 7' 52" North



Study Area Map

❖ Average Rainfall – 1456 mm per year

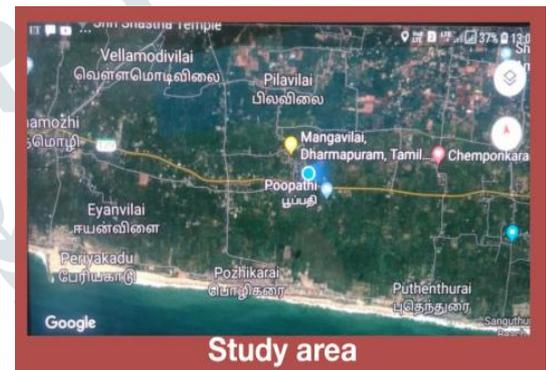
❖ Land Forms – Coastal land, Wet land, Plain land with loose soil and dry land with red soil

❖ Population – 11893

❖ Surface Area – 12 square km

❖ Constituency – Kanyakumari

❖ Coastal Length – 4 km along Arabian Sea.



Study area

This is the first study in this area to record the valuable medicinal plants thrive naturally and their uses in folk treatment which has been followed by the habitants for their primary healthcare needs. Till two decades back, 50% of the study area covered with paddy fields called 'Semponkarai Patru'. Because of some reason such as water scarcity due to poor rainfall at times, the paddy fields were converted into coconut and plantain groves [*said Mr. M. Duraisamy, aged 68 years, Mangavilai*]. This part of the study area has a wide variety of medicinal plants and herbs.

## Method of Study

- During this study many field visits were conducted to various villages in the study area.
- Face to face interviews and detailed personal discussions were made with the well experienced traditional herbalists (*NaattuVaithyar*) of the study area and the local people in the age group of 55 to 85 years, who have maximum dependence with the herbal plants around the villages for their healthcare.
- The ethnomedical informations such as the plant parts used, method of preparation, dosage and curable disease were gathered from the well knowledged healers of the area in folk treatment and also from local men and women.
- Most of the plants were identified with local name by the famous traditional herbalist M.S. Pal Nadar, aged 85 plus, who belongs to the native of Mangavilai village.
- The medicinal value of each plant was accepted as valid if at least three informants had a similar opinion.
- The medicinal important plants were botanically identified accurately through standard websites.
- The combination of two or more medicinal plants in the preparation of medicine, usage of curing a particular disease and food control at the time of treatment have been collected and recorded in this study.
- The medicinal informations were gathered from the habitants and herbalists through group discussions and also structured questionnaires.

## Findings and Discussions

In this study, 116 important medicinal plants from 65 families were identified in the study area and tabulated in alphabetical order with their folk name, botanical name, family, parts used in folk treatment and disease cured were listed in the [Table-1](#).

In the table noticed that the maximum number of plants belongs to the family Fabaceae (10 plants), followed by Lamaceae (8 plants), Acanthaceae, Amaranthaceae, Solanaceae (7 plants), Malvaceae (6 plants), Euphorbiaceae(5 plants), Asteraceae(4 plants), Cucurbitaceae, Cleomaceae, Menispermaceae, Lythraceae, Convolvaceae (2 plants) and 52 plants belongs to 52 different families [[Table – 2 & Figure – 1](#)].

Table - 1

Sl. No.	Folk Name	Botanical Name	Family	Parts used as Medicine	Curable Disease in Folk Treatment
1.	Aadathodai	<i>Justica adathoda</i>	Accanthaceae	Leaf	Rheumatism, respiratory and wheezing problem
2.	Aadutheendapalai	<i>Aristolochia bracteata</i>	Aristolochiaceae	Roots and leaves	Snake bite, fever, intestinal worms and post labor infections
3.	Aakasha garudan	<i>Corallocarpus epigaeus</i>	Cucurbitaceae	Root (Beet)	Rheumatism and poisonous bite
4.	Aamanakku	<i>Ricinus communis</i>	Euphorbiaceae	Seeds	Seed oil used to treat arthritic disease .Used as a laxative and purgative. Orally given to children for de-worming
5.	Aarai keerai	<i>Marsilea minuta</i>	Marsileaceae	Leaf	Cure inflammation, urinary problems, cough, head ache and snake bite
6.	Aavaram poo	<i>Cassia auriculata</i>	Fabaceae	Leaf and flower	Skin and diabetic problem and to regulate menstrual cycle for women
7.	Ammaan pacharisi	<i>Euphorbia hirta</i>	Euphobiaceae	Leaf and flower	Milk secretion for lactating mother, ulcer and to increase masculinity
8.	Arivalmanai pachilai	<i>Sida acuta</i>	Malvaceae	Root, leaf and seeds	Cure cut wounds and to clean urinary tracts
9.	Arukampul	<i>Cynodon dactylon</i>	Poaceae	Leaf	Cure ulcer, anemia, constipation and menstrual pain and irregularity
10.	Brammanthandu	<i>Argemone Mexicana</i>	Papaveraceae	Leaf and flower	Latex to cure skin disease and heal wounds
11.	Chakkarai kolli	<i>Chamaecostus cuspidatus</i>	Costaceae	Leaf	Best cure for diabetic
12.	ChappathiKalli	<i>Opuntia stricta</i>	Cactaceae	Whole plant	Cure constipation and ulcer
13.	Chembaruthi	<i>Hybiscus rosa sinensis</i>	Malvaceae	Leaf and flower	Used internally to treat painful menstruation, venereal disease, cough and promote hair growth
14.	Cheppu Nerunjil	<i>Indigofera enneaphylla</i>	Fabaceae	Whole plant	To treat kidney stone, cough ,gall bladder stone, and all urinary problem
15.	Chodakkupachilai	<i>Commelina benghalensis</i>	Commelinaceae	Leaf	Eye disease, sore throat and pain and urinary problems

16.	Erukku	<i>Calotropis gigantea</i>	Apocynaceae	Root and leaf latex	Skin, respiratory and snake bite
17.	Ezhuthanipachilai	<i>Prenanthes sarmentosus</i>	Compositae	Leaf and root	Chronic internal sores, constipation and skin disease
18.	Gopuramthangi pachilai	<i>Andrograpis echioides</i>	Acanthaceae	Whole plant	Snake bite, fever, jaundice and intestinal worms
19.	Kattu Sundai	<i>Solanum pubescens</i>	Solanaceae	Fruits	It helps to heal bowel complaints and joint pains
20.	Kadalamanakku	<i>Jatropha Curcas</i>	Euphorbiaceae	Leaves and seeds	Skin disease, tumor and ulcer
21.	Kandan Kathari	<i>Solanum xanthocarpum</i>	Solanaceae	Whole plant	Asthma, cold and chronic cough
22.	Kallurukki pachilai	<i>Scoparia dulcis</i>	Plantaginaceae	Whole plant	Dissolve kidney stone
23.	Kalluruvi pachilai	<i>Ammannia baccifera</i>	Lythraceae	Leaf	To treat snake and poisonous bite, skin disease and rheumatic problem
24.	Karisalonkanni	<i>Eclipta alba</i>	Asteraceae	Leaf	Jaundice, urinary blocks and menstrual problem (over bleeding)
25.	Kariveppilai	<i>Murraya koenigii</i>	Rutaceae	Leaf	Good for eyes, hair growth and diabetes
26.	Kavil Thumbai	<i>Tricodesma indicum</i>	Porogenaceae	Whole plant	Very good medicine for bone joint pain
27.	Keezhan Nelli	<i>Phyllanthus niruri</i>	Phyllontheaceae	Whole plant	Cure jaundice and urinary problems
28.	Kilukiluppai	<i>Crotalaria verrucosa</i>	Fabaceae	Leaf	Cure scabies and impetigo skin allergies
29.	Kiranthi nayakam	<i>Ruellia patula(jacq)</i>	Acanthaceae	Leaf	Leaves used to treat insect bites, itches and skin problem
30.	Kodakasalai	<i>Justica procumbens</i>	Acanthaceae	Whole plant	To treat asthma, cough with blood, rheumatism and back pain
31.	Kodikalli	<i>Sarcostem maacidum</i>	Apocynaceae	Leaf and stem	To treat respiratory ailments
32.	Koduppai	<i>Alternanthera sessilis</i>	Amaranthaceae	Leaf	Cure anemia and eye disease
33.	Koduveli	<i>Plumbago zeylancia</i>	Plumbaginaceae	Root	Fever, piles, diarrhea and some skin diseases
34.	Kolinichi	<i>Tephrosia purpurea</i>	Fabaceae	Root and leaf	Bleeding piles and rheumatism
35.	Komuttikeerai	<i>Allmania nodiflora</i>	Amaranthaceae	Leaves	Very good diet for pregnant women
36.	KooduThakkali	<i>Physalis minima</i>	Solanaceae	Whole plant	Cure ulcer and root decoction is used to cure cough and fever
37.	Koraipul	<i>Cyperus rotundus</i>	Cyperaceae	Root beet	Fever and

					digestive system disorder and uterus problems
38.	Kozhi pasalai	<i>Talinum fruticosum</i>	Talinaceae	Leaf	Consume as recipe to treat diabetes
39.	Komuttikaai	<i>Citrullus colocynthis</i>	Cucurbitaceae	Leaf and Fruit	Cure asthma, urinary discharge, constipation and joint pain
40.	Kuppai keerai	<i>Amaranthus viridis</i>	Amaranthaceae	Leaf	Snake bites and scorpion stings. Cure constipation and anemia
41.	Kuppaimeni	<i>Acalypha indica</i>	Euphorbiaceae	Leaf	Cure asthma, pneumonia, cough, cold, scabies and impetigo and joint pain
42.	Kurunthotti	<i>Sida cordifolia</i>	Malvaceae	Root	Rheumatic and urinary problem
43.	Mana thakkali	<i>Solanum nigrum</i>	Solanaceae	Whole plant	Cure ulcer, oral sore, all the stomach problems
44.	Manjal karisalan kanni	<i>Sphagneticola colendulaceae</i>	Asteraceae	Leaf	Jaundice and all liver problems
45.	Maruthani	<i>Lawsonia inermis</i>	Lythraceae	Leaf	Cure premature white hair and body coolness
46.	Mookkirattai	<i>Boerhavia diffusa</i>	Nyctaginaceae	Leaf and root	Cure kidney disease, inflammation and joint pain, skin disease like scabies and anemia
47.	Moovilai pachilai	<i>Pseudarthria viscida</i>	Fabaceae	Whole plant	Cure asthma and nervous disease
48.	Mudakkatran	<i>Cardiospermum halicacabum</i>	Spaindaceae	Whole plant	To treat joint pain, ear pain, cold, cough and menstrual problem
49.	Mulli keerai	<i>Amaranthus spinosus</i>	Amaranthaceae	Leaf	Urinary and menstrual problems
50.	Murinchan kulai	<i>Tridax procumbens</i>	Asteraceae	Leaf	Infectious skin disease, cure cut wounds and diarrhea
51.	Musu musukkai	<i>Mukia maderaspatana</i>	Cucurbitaceae	Leaf	Asthma and respiration problems. Make herbal oil to prevent premature white hair
52.	Musuttai kodi	<i>Rivea ornate</i>	Convolvulaceae	Leaf	Rheumatism, ulcer, stomach pain and constipation
53.	Muyal cheviyan	<i>Emilia sonchifolia</i>	Asteraceae	Leaf	Cure eye disease, cough, sore throat, oral ulcer and

					poisonous bite
54.	Naagamalli	<i>Rhinacanthus nasutus</i>	Acanthaceae	Root and leaves	Treat diabetes, urinary infection, ring worms and snake bite
55.	Naai thulasi	<i>Ocimum americanum</i>	Lamiaceae	Whole plant	Decoction used to cure cough and respiratory problem. Used in bath to treat rheumatism.
56.	Naaivaalai	<i>Cleome viscosa</i>	Clemaceae	Leaf and seed	Cure cut wounds, gastric sores and intestinal pain
57.	Naalumani poo	<i>Mirabilis jalepa</i>	Nyctaginaceae	Whole	Cure inflammation, white discharge for women
58.	Naayuruvi	<i>Achyranthus aspera</i>	Amaranthaceae	Leaf and seed	Cure urine retention and kidney problems. Used to cure cough, cold, piles, tooth ache, snake bite
59.	Nancharuthan kodi	<i>Gymnema sylvestre</i>	Apocynaceae	Leaf	Eye disease, constipation, cough and stomach disease
60.	Nathaichoori	<i>Spermaco hispida</i>	Rubiaceae	Whole plant	The seed to cure all male sexual disorder and reduce cholesterol
61.	Navara pachilai	<i>Pletranthus amboimicus</i>	Lamiaceae	Leaf	Cure cough for child and used as a mosquito repellent
62.	Neer mulli	<i>Hygrophila auriculata</i>	Acanthaceae	Beet and flower	Cure male infertility, erectile dysfunction and increase sperm counts
63.	Nethra mooli	<i>Belpharis madaraspatensis</i>	Acanthaceae	Leaf	Cure all type of eye disease and bone joint pain
64.	Nilathuthi	<i>Sida cordifolia</i>	Malvaceae	Leaf	Dry cough, asthma and wheezing problem
65.	Nilavaakai	<i>Senna alexandrina</i>	Fabaceae	Leaf	Remove ring worm, constipation and stomach pain
66.	Nila vembu	<i>Andrographis paniculata</i>	Acanthaceae	Leaf and root	Reduce blood sugar and snake bite. Good cure for dengue fever
67.	Nilamparanda	<i>Desmodium triflorum</i>	Fabaceae	Whole plant	Increase milk secretion for lactating mother. Used to cure

					cough, wounds and dysentery
68.	Nithya kalyani	<i>Catharanthus roseus</i>	Apocynaceae	Leaf and flower	Cure diabetes and urinary tract problem, memory loss, throat infection
69.	Nochi	<i>Vitex negundo</i>	Lamiaceae	Leaf	Cure menstrual problem and used as a mosquito repellent
70.	Oomathai	<i>Datura stramonium</i>	Solanaceae	Leaf	It is poisonous. Juice applied over the skull to reduce hair fall and dandruff
71.	Orithazh Thamarai	<i>Hybanthus erneaspermus</i>	Violaceae	Whole	Improve masculinity and all male sexual problems
72.	Ottumul pachilai	<i>Alternanthera pungens</i>	Amaranthaceae	Whole	Take internally and decoction to cure painful urination
73.	Paal perukki	<i>Euphorbia heterophylla</i>	Euphorbiaceae	leaf	Leaf decoction is taken to cure stomach pain and constipation. Leaf extract is taken to treat body pain and mild dose taken to increase milk production for breast feeding woman.
74.	Pasalai keerai	<i>Spinacia oleraceae</i>	Amaranthaceae	Leaf	Cure anemia, cold, cough, urinary problems and helpful to nursing mother
75.	Perani	<i>Bacopa monnieri</i>	Plantaginaceae	Whole plant	Increase memory, power, promote mental health
76.	Perum Nerunjil	<i>Pedaliium murex</i>	Pedaliaceae	Whole plant	Used to cure kidney stone and urinary tract disease, cure heat related ailments and painful urination with blood
77.	Perum thumbai	<i>Anisomeles malabarica</i>	Lamiaceae	Leaf	Cure fever and rheumatic fevers
78.	Perumkan peelai	<i>Aerva javanica</i>	Amaranthaceae	Leaf , flower and seed	The seeds used to cure headache. Make gargle to cure thooth ache.

79.	Pinnakku keerai	<i>Corchorus aestuans</i>	Malvaceae	Leaf	Used to cure urinary block, rheumatic problem, piles and skin disease
80.	Pirandai	<i>Cissus quadrangularis</i>	Vitaceae	Whole	Bone growth, gas problem, neuro problem, indigestion, ulcer and constipation
81.	Poduthalai	<i>Phyla nodiflora</i>	Verbenaceae	Leaf	Good remedy for dandruff and constipation
82.	Ponnankanni keerai	<i>Alternanthera sessilis</i>	Amaranthaceae	Leaf	Cure eye disease, prevent mouth odors and skin disease
83.	Rana kalli	<i>Kalanchoe pinnata</i>	Crassulaceae	Leaf	Cure kidney stone and gall bladder problems
84.	Sahadevi mooli	<i>Cyanthillium cinereum</i>	Asteraceae	Whole plant	Cure piles, cut wounds, skin disease, lower abdominal pain and better treatment for menstrual pains
85.	Sangu pushpam	<i>Clitoria ternatea</i>	Fabaceae	Leaf, root and seed	Chronic cough, white discharge for women, fever and head ache
86.	Seenthilkodi	<i>Tinospora cordifolia</i>	Menispermaceae	Leaf	Cure digestion problem, piles, constipation and increase masculinity for men
87.	Siru Nerunjil	<i>Tribulus terrestris</i>	Zygophyllaceae	Whole plant	Cure kidney stone, all urinary problems and cure the sexual weakness of men
88.	Siru pasalai	<i>Portulack oleracea</i>	Portulactaoleraceae	Leaf	Constipation, urinary problem and very good for eye disease
89.	Siru puliyaarai keerai	<i>Oxalis stricta</i>	Oxalidaceae	Leaf	Cure digestion and liver problem
90.	Sirukan peelai	<i>Aerva lanata</i>	Amaranthaceae	Whole plant	Cure kidney stone, piles and snake bite
91.	Siruthaali keerai	<i>Ipomoea obscura</i>	Convolvulaceae	Leaf	To treat cut wounds and decoction used to cure stomach pain
92.	Sivanear vembu	<i>Indigo fera</i>	Fabaceae	Whole plant	Cure disease such as scabies and impetigo and leprosy
93.	Sottru katalalai	<i>Aloe vera</i>	Asphodelaceae	Leaf and root	Reduce body heat and keep the body

					young. Increase masculinity for males, cure white discharge for women
94.	Sundaikkai	<i>Solanum torrum</i>	Solanaceae	Dry, fresh fruit and leaves	To treat infections, rheumatism, snake bite, diabetic, ulcer and stomach pain
95.	Thaivaalai	<i>Cleome gynandra</i>	Cleomaceae	Leaf	Rheumatism, eliminating intestinal worms and anemia and sinus
96.	Thalavettu kodi	<i>Aristolochia indica</i>	Aristolochiaceae	Leaf and root	Snake bite, cold, cough, asthma and menstrual problem
97.	Thaneervittan kizhangu	<i>Asparagus racemosus</i>	Asparagaceae	Beet	Increase masculinity, white discharge and increase milk secretion for lactating mother
98.	Tharai pasalai	<i>Portulaca quadrifida</i>	Portulacaceae	Whole plant	Cure urinary tract disorder, worm disease, dysentery and ulcers
99.	Thel kodukku pachilai	<i>Heliotropium indicum</i>	Boraginaceae	Leaf and root	Scorpion sting, ear pain and scabies and impetigo
100.	Thirugu kalli	<i>Euphorbia tirucalli</i>	Amaranthaceae	Whole	Boiled with water and applied for rheumatic pain
101.	Thiruneettru pachilai	<i>Ocimum basilicum</i>	Lamiaceae	Leaf and seed	Cure virus fever and used as mosquito repellent
102.	Thooduvalai	<i>Solanum tricobatum</i>	Solanaceae	Whole plant	Chronic cough and asthma
103.	Thottalvaadi	<i>Mimosa pudica</i>	Fabaceae	Leaf	Reduce swelling and pain in joints, cure asthma, piles, menstrual problems and ulcers
104.	Thulasi	<i>Ocimum tenuiflorum</i>	Lamiaceae	Leaf	To treat fever, respiratory problem and diabetes
105.	Thumbai	<i>Leucas aspera</i>	Lamiaceae	Whole plant	Cure fever, intestinal worms for children, cough and cold
106.	Thuthi	<i>Abutilon indicum</i>	Malvaceae	Leaf	Cure piles, cough, ulcer and skin diseases
107.	Unnichedi	<i>Lantana camara</i>	Verbenaceae	Leaf	Cure cuts, ulcers, swellings and rheumatic problems
108.	Vadhamudakki	<i>Clerodendrum phlomidis</i>	Lamiaceae	Leaf	Cure rheumatic pain and bone joint

					pains
109	Vallarai	<i>Centella asiatica</i>	Mackinlayaceae	Leaf	Cure open sores, ulcers, skin injuries, revitalize the brain and nervous system and improve memory
110	Veliparuthi	<i>Pergularia daemia</i>	Asclepiadaceae	Leaf	Cure asthma, menstrual problem, insects bites, piles and rheumatic problems
111	Vellaruku	<i>Enicostama axillare</i>	Gentianaceae	Whole plant	Cure urinary problem, diabetes, rheumatism and insect poisoning
112	Ven sarannai	<i>Trianthema portulacastrum</i>	Aizoaceae	Leaf	Urinary problem, liver disorder and rheumatic problem
113	Venkattukodi	<i>Coculus hirsutus</i>	Menispermaceae	Leaf	Cure rheumatic problem and increase semen viscosity
114	Vettilai	<i>Piper betle</i>	Piperaceae	Leaf	Cure cough, constipation, indigestion and respiratory problems
115	Virali	<i>Dadonaea viscosa</i>	Sapindaceae	Leaf	To cure skin problems and rheumatic problems
116	Vishnukranthi	<i>Evolvus alcinoides</i>	Convolvulaceae	Whole plant	Cure fever and improve memory power

[Original Photographs of all said Medicinal Plants captured in the study area has been attached]

By using these medicinal plants, the local people treat and cure various disease such as rheumatic problem, diabetics, snake bite, cut wounds, intestinal ulcers, menstrual problem, urinary disorder, constipation, kidney stone, gall bladder stone, jaundice, skin disease, inflammations, cough, cold, respiratory problem, asthma, eye disease, male sexual disorder etc.

Decoction, juice, paste, powder, cooked recipe etc. are the various form of preparation of medicine from the medicinal plants.

However, many form of preparation available to attain a positive response, decoction method was widely used by the people in the study area. Decoction is an effective traditional method in which the plant material is boiled in water to extract all essential compounds and other medicinal substances to get quick relief.

Food restriction is an important thing while using as infusion. It should be prescribed and supervised by experienced persons or traditional vaithyars for a particular disease, otherwise it may cause adverse effects.

Depends upon the ability to cure disease, the villagers used various parts of the medicinal plants such as roots, leaves, fruits, seeds, whole plant etc. Leaves are the mostly used plant part to prepare folk medicine for different ailments in the study area.

Among the plant parts used, leaves accounts 51.9%, followed by whole plants 34.4%, roots 8.2%, seeds 3.2% and flowers 2.3% [Table – 3 & Figure – 2]. However, dried and fresh parts are used to prepare medicines, fresh parts are more effective than dried parts.

90% of the reported medicinal plants were thrive naturally and spread over the study area densely during the post monsoon season and the remaining are growing interestingly by the local people as ornamental plant in their home garden and backyards. Most of the habitants growing some important medicinal plants such as Chembaruthi (*Hybiscusrosasinensis*), NavaraPachilai (*Plectranthusamboimicus*), Sakkara kolli (*Chamacostuscuspidatus*), Maruthani (*Lawsoniainermis*), Ranakalli (*Kalanchoeroseus*), Kariveppilai (*Murrayakoenigi*) etc.

This study reveals that the people in the study area fully depended on the medicinal plants to remediate some common ailments such as cough, cold, fever, jaundice, ulcer, intestinal worms, stomach pain, rheumatic problem, urinary problem, kidney stone etc.

The traditional herbalists here having many folk medicines made from available natural plant source in the form of 'lehiyam' (Processed plant paste) and herbal oil for various disease. The local people are well aware about the important medicinal plants in the study area to treat various ailments based on the symptoms and the following effects.

Many plants are identified as medicinal and used to treat a single disease. (Example: Neermulli, Orithazh thamarai, Amman pacharisi, Nathaichoori, Seenthil, Thaneervittan Kizhangu etc. are used to cure male sexual disorders in traditional folk treatment in the study area.

Similarly many diseases were treated and cured with a single plant. (Example: The plant 'Vellaruku' is used to treat fever, diabetes, urinary defects, snake and poisonous bites, jaundice, menstrual problems for women, rheumatism etc. [*Souce: M.S. Pal Nadar, a famous traditional herbalist, Mangavilai Village*]

About 22% of the tabulated medicinal plants are edible and hence most of the people in the study area are taking them as their regular diet alternatively.

Besides the reported plants many trees are also thrive naturally as medicinal in the study area such as Vembu (*Melia azedarach*), Pungai (*Milletiapinnata*), Naval (*Syzygiumcumini*), Punnai (*Calophylluminophyllum*), Aal (Banyan), Arasu (*Ficusreligiose*), Athi (*FiscusRacemosa*), Manjanathi (*Morindacitrifolia*) etc.

### Suggestions and Conclusions

- Gardening is a big passion among the people of this area and some of the rare and medicinally important plants were seen on outside houses as ornamental.
- Since some of the important medicinal plants such as Aadutheenda paalai, Vellaruku, Kallurukki, Kandan kathari etc. are getting endangered in this area, conservation effort to be taken with high priority.
- The study area is a repository of so many medicinal plants and herbs. However, cultivation and preservation efforts will protect biological diversity of this area.
- More than 50% of the plant collection through destructive harvesting because of the use of parts like roots and whole plants for medicinal use.
- Even though an extraordinary increase in the consumption of medicinal plants over the last twenty years, still there is a deficit of research output in this field.
- The present study reveals that the people of the study area are fully rely on medicinal plants for their health needs and this widely used folk remedies needs further clinical evaluation to prove their medicinal effects.
- Due to over exploitation and non-cultivation of medicinal plants leads to distinctions of some important plants in this area. Sustainable utilization is recommended to protect such plants in the study area.
- In case of rare and endangered or over exploited plants, cultivation is the only way for the survival of such plants without further endangering.
- The rare medicinal plants which are on the verge of decay, awareness to be created among the younger generation from the school itself through social service such as NCC, NSS etc. to preserve and protect the medicinal plants in their area thrive naturally.
- Systematic documentation of traditional knowledge helped scientists for the later research work.

- The granny's folk remedy for various ailments is a traditional knowledge gathered from our ancestors is to be protected from being commercially exploited by pharmaceutical companies.
- Thirty ' **Medicinal Plant Conservation Area** ' (MPCA) have been established across the southern states by the department of the state for the conservation of forest medicinal plants. To conserve the rare and important medicinal plants in the study area, government to take initiation to establish such MPCA with a site area of 200 hectares.
- Not claim, is a fact, folk treatment with easily available plants is a rich medicinal source and has a lot of potential as a primary health care option for the whole world.
- The representatives of AYUSH could guide farmers to cultivate medicinal plants in their fields. This would help farmers boost their income in line with the government's plan to double their income by 2022, when India attains 75 years of independence.

**Table – 2**  
**The family of the reported plants**

Sl.No.	Family	Number of plants Identified	Percentage (%)
1.	Fabaccae	10	8.62
2.	Lamaccae	08	6.89
3.	Acanthaccae	07	6.03
4.	Amaranthaccae	07	6.03
5.	Solanaccae	07	6.03
6.	Malvaceae	06	5.17
7.	Euphorbiaccae	05	4.33
8.	Asteraccae	04	3.45
9.	Cueurbitaccae	02	1.73
10.	Cleomaccae	02	1.73
11.	Menispermnaccae	02	1.73
12.	Lythraccae	02	1.73
13.	Convolaccae	02	1.73
14.	Others	52	44.80

Figure 1

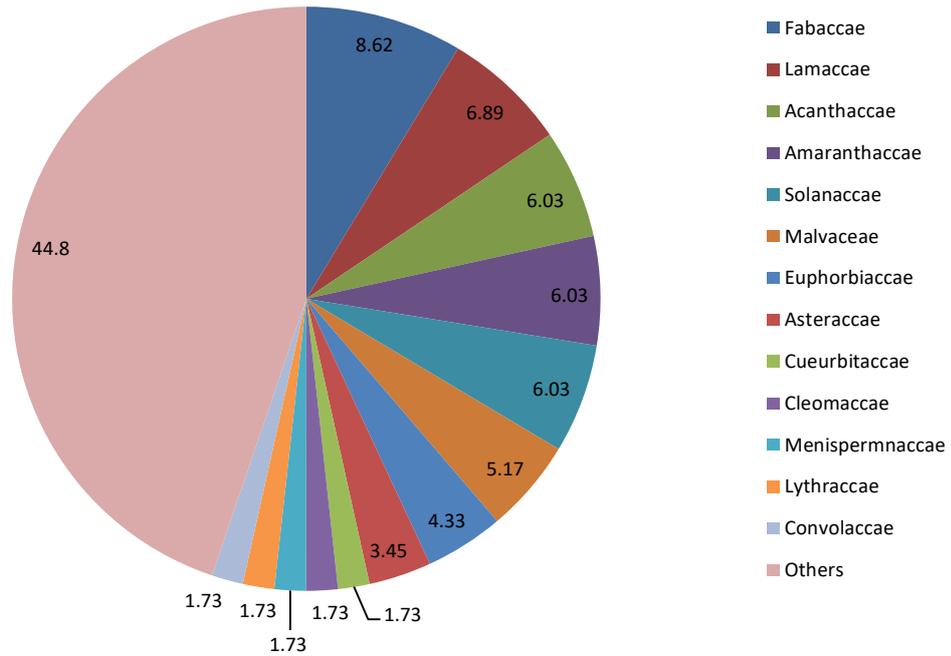


Table – 3  
Parts used as medicine among the reported plants

Sl. No.	Parts used	Percentage
1.	Leaves	51.90
2.	Whole plants	34.40
3.	Roots	08.20
4.	Fruits and seeds	03.20
5.	Flowers	02.30

Figure - 2

