



Survey of wild aromatic plants and utilize Paliyar tribes ethnomedicinal of Sadhuragiri hills, southern western Ghats, Tamil Nadu, India

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Abstract

The present study was conducted in Sadhuragiri hills to identify the major wild aromatic medicinal plant species, which has been used for various treatments by Paliyar tribes in the Southern Western Ghats of Virudhunagar District, Tamil Nadu. A total of 80 plant species belongs to 71 genera and 33 families were recorded. Among them thirteen plant (13) species were found to be used for stomach pain followed by Cough (12 species), Diarrhoea (11 species) and Fever (8 species). Various plant parts were used for treatment, among these plant species, leaves were mostly used. The inhabitants of the area used plant species for various purposes such as health care, food, fodder, fuel and shelter. The information on botanical identities, family, local name, plant parts used & uses of each plant were discussed in this article.

Keywords: ethnobotany, aromatical medicinal plants, Paliyar tribes, southern western Ghats, Tamil Nadu

1. Introduction

Ethnobotanical studies today are recognized as the most viable method of identifying new medicinal plants or refocusing on those earlier reported for bioactive constituents (Ogol *et al.*, 2002) [24]. In many countries, scientific investigations of medicinal plants have been initiated, because of their contribution to healthcare. The Ethnobotanical information in medicinal plant research has gained considerable attention in segments of the scientific community (Heinrich, 2000) [10].

Herbal medicines have good values in treating many disease including infections disease, hypertension, etc. That they can save lives of many, particularly in the developing countries, is undisputable (Ignacimuthu *et al.*, 2006; Muniappan and Ignacimuthu, 2011) [2, 13]. The primary benefits of using plant-derived medicines are that they are relatively safer than synthetic alternatives, offering profound therapeutic benefits and more affordable treatment (Iwu *et al.*, 1999) [14]. Traditional medicine based on herbal remedies has always played a key role in the health systems of many countries. The value and importance of traditional knowledge are now being increasingly acknowledge all over the world. The pharmaceutical industry continues to investigate and confirm the efficacy of many medicines and toxins used by traditional communities (Archana *et al.*, 2007) [1]. The forest have been the source of invaluable medicinal plants since the time man realized the preventive and curative properties of plants and started using them for human health care. The old traditional Indian System of Medicine (ISM), is one of the most ancient medicine practices known to the world, and derives maximum formulations from plants and plant extracts that exist in the forests. About 400 plants are used in regular production of *Ayurvedic*, *Unani*, *Siddha* and tribal medicine. About 75% are from tropical and 25% from temperate forests. 30% of preparation are derived from roots, 14% bark, 16% whole plants, 5% flowers, 10% fruits, 6% leaves, 7% seeds, 3%

wood, 4% rhizomes 6% stems and only less than 20% of the species used are cultivated.

Recently many local and indigenous communities in the Asian countries meet their basic needs from the products they manufacture and sell based on their traditional knowledge. Herbal drugs obtained from plants are believed to be much safer; this has been proved in the treatment of various ailments (Samydrurai *et al.*, 2012) [29]. Rural communities, in particular Paliyartribes, depend on plant resources mainly for herbal medicines, food, forage, construction of dwellings, making household implements, sleeping mats, and for fir and shade. Rural people not only depend on wild plants are sources of food, medicine, fodder, and fuel but have also developed methods of resource management, which may be fundamental to the conservation of some of the world's important habitats [8]. This information provides platform to several botanists and plant scientist who were directing vigorous researches towards the discovery or rediscovery of several medicinal plants along with their remedies for various diseases (Muthukumarasamy *et al.*, 2003; Rajendran *et al.*, 2002; Rajendran *et al.*, 2003a; Ganesan *et al.*, 2005; Ignacimuthu *et al.*, 2008) [22, 12, 27, 6]. The aim of the present study was to document the Wild aromatic Ethnomedicinal information of plants used by Paliyar tribes and indigenous people in village surrounding Sadhuragiri forest reserve. The generated information will be used in future to explore way of sensitizing the community on the sustainable utilization of the forest resources, so as to minimize their genetic loss.

2. Materials and methods

2.1 Study area

Sadhuragiri hills are situated in Southern Western Ghats comes under Srivilliputhur Grizzled Squirrel Wildlife Sanctuary Srivilliputhurtaluk, Virudhunagar district of Tamil Nadu. Sadhuragiri is located at 1200 meters (3,937.0 ft)

mountain in the part of Southern Western Ghats of Southern India. It lies between $9^{\circ} 42' - 9^{\circ} 44'$ West latitude and between $77^{\circ} 37' - 77^{\circ} 41'$ East longitude and it has an elevation of 881 meters above sea level. Sadhuragiri is in an area with a Tropical evergreen forest, Semi evergreen forest and mixed deciduous forest climate. Only Hindu Paliyar tribes residing in this area (Figure: 1.a).



Fig 1a: View of the Study Region.

2.2 Methods

Several field trips were carried out in Sadhuragiri hills between Jan 2015 and March 2016, covering different seasons, in order to know the phenology of the plants and intensive and extensive field surveys were made in Sadhuragiri hills and villages in Virudhunagar district. The data were collected through repeated field visits and the careful interaction with the village people and Paliyar tribes. The collected specimens were identified taxonomically with the help of available Monographs, taxonomic revisions and floras and by using field keys (Jain, 1963; Gamble, 1935; Matthew, 1991; Nair, 1983; Henry, 1987) [15, 5, 17, 23, 11]. Ethnomedicine information was gathered from all categories of village people such as the local healers' village leaders, elderly persons and Paliyar tribes and the person having a through knowledge of Medical practices. Wild aromatical herbal medicines for the Treatment of healthcare were cross checked and confirmed with some Siddha Doctors. The information gathered from one place was also confirmed with different communities of village people, Paliyartribals in different places of investigation. The collected plant specimens were deposited in the Department of Botany, National College (Autonomous), Tiruchirappalli, Tamil Nadu for future reference.

2.3 Paliyar Tribals

The indigenous people of the study area are called Paliyar/Paliyan. They are found in the hilly regions of Madurai, Dindigul, Theni, Thirunelveli, and Viruthunagar districts. It is believed that paliyars are indigenous people of Palani hills (Situated near to Kodaikanal a famous tourist place). In the Palani hills they are found at an altitude of up to 2200m. Generally Paliyars are illiterate and they speak Tamil

(Mother tongue of Tamil Nadu). Paliyars when compared to various tribal communities in Tamil Nadu constitute native a small group.

Paliyars can be grouped into three categories based on their life styles, namely, Nomadic, Seminomadic and Settled Nomadic Paliyars don't built houses, they live temporarily in rock caves called "Pudai" semi nomadic Paliyar build temporary house and confine themselves to small territories most of their huts are dark with no window or any other opening to admit air. Settled Paliyar's are almost urbanized and live as agricultural laborers. Importance of traditional and folk medicine in the treatment of various human ailments is well recognized amongst these people (Sankarasivaraman, 2000) [30]. (Figure: 1.b).



Fig 1b: Interview with Paliyar's Tribes

3. Results

This study provides information on 80 plants species belonging to 33 families (Table-1). Off the plant species or Dicotyledons among them 39 species herbs, 19 species were trees, 14 species shrubs and 8 species climbers (Fig: 2). The maximum number of Lamiaceae (14 species) family highly contributed for medicinal uses followed by Rutaceae (8 species), Poaceae (5 species), Rosaceae (4 species), Asteraceae, Liliaceae, Lauraceae, Moraceae, Oleaceae, Piperaceae, Papilinnaceae, Solanaceae(3 species) in each (Table: 2).

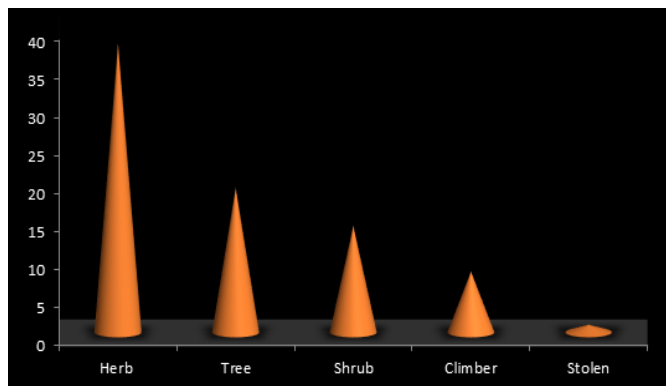


Fig 2: Life forms of reported medicinal plants.

Table 1: List of wild Aromatic Ethnomedicinal plants of Saduragiri hills.

Sl.No	Botanical Name	Vernacular/ English Name	Family	Habit	Part Used	Medicinal Uses
1	<i>Aeglemarmelos</i> (L.) Correa.	Vilvam	Rutaceae	Tree	Whole plant	Cancer, diabetes, bloodsugar, joint pains and swellings, cholesterol and blood urea.
2	<i>Ajugabracteosa</i> Wall. ex. Benth.	Rattibooti	Lamiaceae	Herb	Whole plant	Jaundice, hypertension and sore throat. Leaves used in stomachache and as blood purifier.
3	<i>Aloe vera</i> (L.) Burm.f.	Sothukathalai	Liliaceae	Herb	Whole plant	skin disorders, wound healing
4	<i>Amaranthusviridis</i> L.	Kuppakiri	Amaranthaceae	Herb	Leaves & Seeds	Alexiteric, Laxative, Stomachic Antipyretic, Hallucination, Leprosy, Bronchitis, Piles, Leucorrhoea and Constipation.
5	<i>Annonasquamosa</i> L.	Kattuseetha	Annonaceae	Tree	Leaves & park	Vermicide, tumors, insect bites. Scrapings of root-bark are used for toothache.
6	<i>Argyrolobiumroseum</i> (Cambess) Jaub. & Spach	MakhaniBooti	Papilionaceae	Herb	Leaves	Stomach and bladder inflammation and sexual debility.
7	<i>Arisaema utile</i> Hook.	Pamuthalseadi	Araceae	Herb	Tuber and Fruit	Fresh fruit grains are taken in the case of flatulence and stomach disorder.
8	<i>Arundodonax</i> L.	Nannal	Poaceae	Shrub	Whole plant	Diuretic, diaphoretic, insect bite.
9	<i>Bauhinia variegata</i> L.	Kalyar	Caesalpinaceae	Tree	Flowers buds & wood	They are used in the treatment of coughs, phthisis, asthma, dysentery.
10	<i>Broussonetiapapyrifera</i> Hert Ex Vent.	Jangli toot	Moraceae	Tree	Whole plant	Haemostatic; Laxative; Ophthalmic; Skin; Stimulant; Stomachic; Tonic; Vulnerary.
11	<i>Centaureaiberica</i> Trev. ex.	Kandaria	Astraceae	Herb	Whole plant	Wound healing and anti-inflammatory activities.
12	<i>Centratherum anthelminticum</i> (L.) Kuntze.	Kattuchiragam	Asteraceae	Herb	Seeds	It is used in asthma, kidney troubles and cough.
13	<i>Chenopodiumambrosioides</i> L.	waljuin	Chenopodiaceae	Herb	Leaves	Mostly the seeds that contain an essential dizziness, vomiting, convulsions.
14	<i>Chlorophytumtuberosum</i> (Roxb.) Baker.	Musli	Liliaceae	Herb	Rhizome	Digestion and rheumatism
15	<i>Cinnamomzeylanicum</i> Blume.	Karuvlavangam	Lauraceae	Tree	Bark	Bronchitis, asthma and cardiac diseases.
16	<i>Cinnamommaacrocarpum</i> Hook.	Periyalavangam	Lauraceae	Tree	Leaf, bark & root bark	Liver protection and digestion cough, diarrhea and dysentery.
17	<i>Cinnamomtamala</i> Nees. & Eberm	Kattulavangam	Lauraceae	Tree	Leaves & bark	As stimulant, carminative and rheumatism
18	<i>Clauseenadentata</i> Burm.	Kattukarvapilli	Rutaceae	Shrub	Leaves	Gastro-intestinal disorders, fever, pneumonia, headache, hypotension, sore throat and sinusitis, venereal diseases.
19	<i>Coleus aromatics</i> Benth.	Karpuravalli	Lamiaceae	Herb	Whole plant	cough, fever and liver tonic
20	<i>Cotinuscogguria</i> Scop.	Smokemaram	Anacardiaceae	Tree	Whole plant	It is used in sitz, compresses, baths and washes. It works against hemorrhoids, oral cavity inflammatory processes vaginal inflammations.
21	<i>Cotus speciosus</i> (Koen.) Smith.	Kottam	Zingiberaceae	Herb	Leaves & rhizomes	Bronchitis, diabetics and asthma.
22	<i>Curcuma aromatica</i> Sal.	Kasturimanjal	Zingiberaceae	Herb	Rhizomes	Hepatitis, anti-arthritis, antiseptic and menstrual disorders.
23	<i>Cymbopogan citrates</i> Stapf.	Karpurapul	Poaceae	Herb	Whole plant	Cold fever, head ache and cough, To prepare for tea, "lemon oil".
24	<i>Cynodondactylon</i> L.	Aruku	Poaceae	Stolon	Whole plant	Stone, piles and sexual debility.
25	<i>Cyperus rotundus</i> L.	Pearukorai	Cyperaceae	Stolon	Underground stolons	Piles and sexual debility.
26	<i>Dodonaea viscosa</i> L.	Santha	Sapindaceae	Shrub	Whole plant	Swelling, interstitial worms
27	<i>Duchesnea indica</i> (Ander.) Focke.	Budimiva	Rosaceae	Herb	Whole plant	Swellings. Blood circulation skin diseases. boils, burns
28	<i>Emblicaofficinalis</i> G.	KattuNelli	Euphorbiaceae	Tree	Leaves & fruits	As antioxidant, tonic and cosmetics
29	<i>Euphorbia prostrata</i> L.	Tharai pasalai	Euphorbiaceae	Herb	Leaves	Diarrhea and dysentery.
30	<i>Ficus variegata</i> Wall. ex Roxb.	Phagwara	Moraceae	Tree	Whole plant	Cardiovascular diseases, Neurodegenerative diseases and cancer.

31	<i>Garciniaindica</i> Chojj.	Marukalam	Rubiaceae	Tree	Fruit and bark	Hair tonic and soap.
32	<i>Gloriasuperba</i> L.	Kalappakilangu	Colchicaceae	Climber	Rhizome & seed	Intestinal worms, digestive, liver tonic and cardio tonic.
33	<i>Hedora helix</i> Alinauct	Harbumbal	Araliaceae	Shrub	Leaves	Fresh leaves are cheeked to control diabetes.
34	<i>Hugoniastax</i> L.	Motirakanni	Lamiaceae	Herb	Leaves & roots	Wound hilling, cough and chest pains ringworm and cosmetics.
35	<i>Hyptissuaveolens</i> (L.)Poit.	Mint weed	Lamiaceae	Shrub	Whole plant	Dysentery, swellings, tumorus and rheumatism, antirheumatic, excitant, fever-reducing, laxative, stimulant.
36	<i>Indigoferaheterantha</i> Wall	Kainthi	Papilionaceae	Shrub	Whole plant	Hepatitis, whooping cough and in blackening of hair.
37	<i>Jasminumangustifolium</i> Vahl	Kattumalli	Oleaceae	Climber	Flowers & leaves	anti-Depressant, antiseptic, cicatrisant, aphrodisiac, expectorant, anti-spasmodic, galactogogue, sedative, parturient, uterine etc.
38	<i>Jasminummalabaricum</i> W	Wild Jasmine	Oleaceae	Climber	Leaves & flower	Dysentery, swelling, tumors' and Rhematism.
39	<i>Lamimumamplexicaule</i> L.	Sagg	Lamiaceae	Herb	Leaves	antirheumatic, excitant, fever-reducing, laxative, stimulant, and has agents that induce sweating.
40	<i>Lathyrusaphaca</i> L.	Pratha	Fabaceae	Herb	Whole plant	Coughing, cold, headache and fever
41	<i>Leucasaspera</i> Spreng	Thumbai	Lamiaceae	Herb	Leaves and flowers	Chronic skin eruption, psoriasis and cough
42	<i>Leucasbiflora</i> (Vahal)R.Br.	Naithumbai	Lamiaceae	Herb	Leaves	Headache, Cough, asthma, and ronchitis, dyspepsia,jaundice, scabies, psoriasis, and snake bite.
43	<i>Medicagopolymorpha</i> L.	Injai	Papilionaceae	Herb	Whole plant	Used as a green manure, it fixes atmospheric nitrogen
44	<i>Menthalongifolia</i> (L.). Huds	Chittaponda	Lamiaceae	Herb	Leaves	Stomach disorders, vomiting, cholera, enteric fever and cough.
45	<i>Morusnigra</i> L.	Kala toot	Moraceae	Tree	Whole plant	Hemorrhoids, diarrhea, burns, gingivitis, kidney stones, impotency, dysentery, wounds,
46	<i>Murrayapaniculata</i> L.	Vengari	Rutaceae	Tree	Leaves	Cosmetics, Perfumes,
47	<i>Myrsticadactyloides</i> Gaert.	Kattujathiki	Myristicaceae	Tree	Leaves & fruits	Cough and fever.
48	<i>Naringicrenulata</i> (Roxb.) Nicols.	Magavilvam	Rutaceae	Tree	Whole plant	Increase the fertility in women.
49	<i>Nerium oleander</i> L.	Aralli	Apocynaceae	Shrub	Whole plants	skin related problems, snake bites joint pains, leprosy, cancer, ulcers etc.
50	<i>Ocimumcanum</i> Sims	Naithulasi	Lamiaceae	Herb	Leaves	Malaria fever, digestive and cardio tonic stomach ache, leucoderma, asthma, bronchitis and skin disease.
51	<i>Ocimum sanctum</i> L.	Thulasi	Lamiaceae	Herb	Leaves	Stomach ache, head ache, leucoderma, asthma, bronchitis and skin disease.
52	<i>Oleaferuginea</i> Royle	Kahu	Oleaceae	Climber	Whole plant	Toothache, throat pain and hoarsences.
53	<i>Orthosiphonthymiflorus</i> Roth	CilantiPatam	Lamiaceae	Herb	Whole plant	Scabies, diarrhea and ulcers.
54	<i>Passflorafoetida</i> L.	Kurangupalam	Passiflorace	Climber	Whole Plant	Hypertension
55	<i>Peperomiawightiana</i> Miq.	valthiplli	Piperaceae	Climber	Fruit	Carminative, analgesic in vomiting.
56	<i>Pimpinelladiversifolia</i> L.	Tarpakhi	Apiaceae	Herb	Whole plant	Leucorrhoea, abdominal swelling and stomach disorder.
57	<i>Piper longum</i> L.	Thippli	Piperaceae	Climber	Fruit	Diarrhea, migraine.
58	<i>Piper nigrum</i> L.	Kurumillaku	Piperaceae	Climber	Fruit	Jaundice, piles, malarial fever. cold fever, head ache and cough.
59	<i>Pistaciachinensis</i> Bunge	Kangar	Anacardiaceae	Tree	Whole plant	Cough asthma, diarrhea and phlegmatic affections.
60	<i>Plectranthusurticifolius</i> Hk.F	Sirukilanku	Lamiaceae	Herb	Whole plant	Fever, cold and cough.
61	<i>Pogoestemon specious</i> Benth	Paucholi	Lamiaceae	Herb	Whole plant	Fever, cold and cough
62	<i>Pogostemonbenghalensis</i> (Burm.f.) Kuntze	Katirpaccai	Lamiaceae	Shrub	Whole plant	Diarrhoea and antipyretic.
63	<i>Pyruspashia</i> Buch-Ham.Ex.Don	Batangi	Rosaceae	Tree	Whole plant	Diarrhoea.
64	<i>Rauwolfiaserpantina</i> Benth	Sarpaganthi	Apocynaceae	Herb	Roots	In hypertension and blood purified.

						Snakebites, hypertension, high blood pressure and mental illness.
65	<i>Rosa brunonii</i> Herrm.	Tarni	Rosaceae	Shrub	Whole plant	Constipation.
66	<i>Rubiocardifolia</i> L.	Manjitti	Rutaceae	Shrub	Leaves & root	Blood purifying agent and haemostic uses
67	<i>Rubus ellipticus</i> Smith	Raspberry	Roaceae	Herb	Whole plant	Fevers, gastric troubles, diarrhoea and dysentery, wounds.
68	<i>Ruta graveolens</i> L.	Kattukasthuri	Rutaceae	Shrub	Leaves	Antiseptic and antipyretic.
69	<i>Solanumchrysotrichum</i> L.	Perusundai	Solannaceae	Shrub	Fruit	Skin diseases and Tinaepedis.
70	<i>Solanumnigrum</i> L.	Manathakkali	Solanaceae	Herb	Whole plant	skin diseases, rheumatism,ear, and eye diseases
71	<i>Solanumsurratense</i> Burm.F	Kandamkathari	Solanaceae	Herb	Whole plant	Cough, cold, asthma
72	<i>Sorghum halepense</i> L.	Kattusolam	Poaceae	Shrub	Seed	Diarrhea and weakness.
73	<i>Syzgiumcumini</i> Walp	Novel	Myrtaceae	Tree	Fruit, bark & seeds	Urinary problem.
74	<i>Tagetesminuta</i> L.	Sadbarga	Astraceae	Herb	Leaves	Fresh leaves are crushed and the paste is applied on wounds phlegmatic affections.
75	<i>Toddaliaasiatica</i> L.	Kattumilaku	Rutaceae	Shrub	Whole plant	Fever, cold and cough
76	<i>Tulipa stellate</i> Hook	Kakaemoona	Liliaceae	Herb	Bulb and leaves	Boiled Flowers: anti cough.
77	<i>Uvarianarum</i> L.	Puliccan	Annonaceae	Tree	Leaf, bark & fruit	Health tonic and medicines
78	<i>Veteriaindica</i> L.	Vella kunguliam	Ancistrocladace	Tree	Resin	Purgative and insect repellent
79	<i>Vetiveriazizanoides</i> (L.) Roberty	Vetiver	Poaceae	Herb	Whole plant	As febrifuge, diaphoretic and stomach ache
80	<i>Woodfordiafruticosa</i> Wall.Ex. Roxb	Alipli	Lythraceae	Shrub	Whole plant	Piles, diarrhea, and dysentery and for wound healing.

Table 2: Family wise distribution of Ethno medicinal plants used by Paliyar's in Sadhuragiri hills.

S. No	Family	Number of species
1	Amaranthaceae	1
	Araceae	
	Anacardiaceae	
	Araliaceae	
	Anacardiaceae	
	Ancistrocladace	
	Caesalpinaceae	
	Chenopodiaceae	
	Cyperaceae	
	Colchicaceae	
	Lythraceae	
	Myristicaceae	
	Myrtaceae	
	Passifloraceae	
	Fabaceae	
Sapindaceae		
Umbeliferae		
2	Apocynaceae	2
	Annonaceae	
	Euphorbiaceae	
	Zingiberacea	
3	Asteraceae	3
	Liliaceae	
	Lauraceae	
	Moraceae	
	Oleaceae	
	Piperaceae	
	Papilionaceae	
Solanaceae		
4	Rosaceae	4
5	Poaceae	5
6	Rutaceae	8
7	Lamiaceae	14

The plant part used for medicinal purpose is present leaves, seeds, tuber, fruits, root, rhizomes, flower, bark, whole plant, root bark, resin, underground stolons and bulb in some cause whole plant including roots was utilized. The most frequently utilized plants parts were whole plants (32), leaves (27), fruits (12), bark (8), seeds (5), root (4), rhizomes (4), flower (3), tuber (2), root bark (1), resin (1), underground stolons (1) and bulb(1). (Fig: 3).

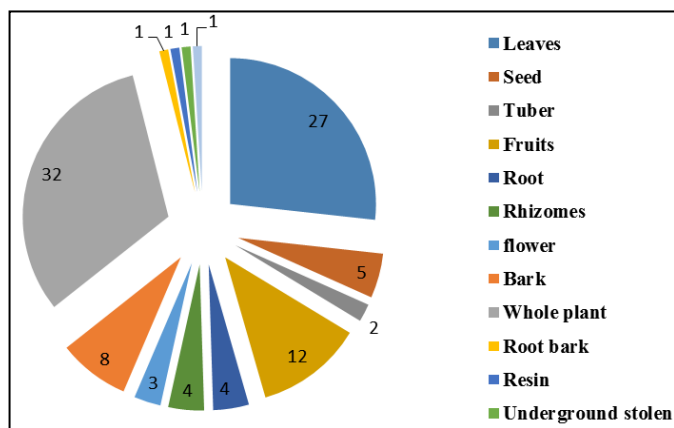


Fig 3: Percentage distribution analysis of remedies obtained from different plant parts

The present paper a brief account of the uses of various Ethnomedicinal plants against the disease like cough, diarrhea, fever, gonorrhoea, head ache, leucoderma, malaria, stomach ache, skin disease, wound, asthma, kidney problem, diabetes, snake bites, piles and jaundice among them most of the plant species used for major disease. Such as stomach ache (13 species), cough (12 species), diarrhea (11 species), fever (8 species) then head ache, skin disease (6 species) in each asthma (5 species), wound, piles (4 species) in need. (Fig: 4).

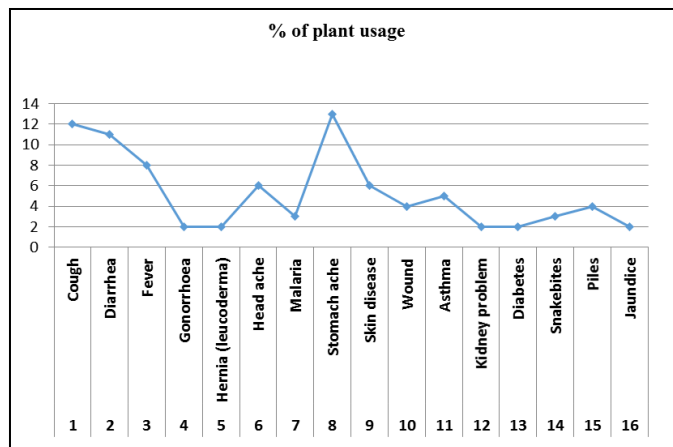


Fig 4: Frequency of medicinal plants used to cure diseases.

4. Discussion

The present study revealed the uses of 80 species of plants used as medicines for the various treatments. Similarly (Ezhilvalavan *et al.*, 2015) [4] reported 30 plant species used as medicine for people in Palani hills Western Ghats Tamil Nadu most of the reported showed about plant species used by various diseases (Girach *et al.*, 1998; Reddy *et al.*, 2006; Mini and Sivadasan, 2007; Harsha *et al.*, 2005; Satya and Solanki, 2009; Yadav, 2009; Rahman *et al.*, 2009; Geetha *et al.*, 2006; Ayyanar and Ignacimuthu, 2011) [8, 2, 28, 18, 9, 31, 32, 25, 7]. In our study Herbs (48.75%) were there major source of medicine followed by (23.75%) and Climbers (10.0%) similarly herbs (41%) found to be predominate source of medicine in Thirunelveli hills Western Ghats (Ayyanar and Ignacimuthu 2011) [2].

Among the different plants parts used the whole plant (31.68%) were mostly used by tribes for various diseases as medicine. It was followed by leaves (26.73%), fruits (11.88%), bark (7.92%), seeds (1.98%), Root (3.96), rhizomes (3.96%), underground stolen (0.99%) and bulb (0.99%) reported leaves (50%), fruits (17%), whole plant (6%) were frequently used for the preparation of medicine by Kanitribs in Thirunelveli hills of Western Ghats in Tamil Nadu.

The family Lamiaceae had the highest proportion of medicinal plants used (14.38%), followed by Rutaceae (8.22%), Poaceae (5.13%), Rosaceae (4.11%) and Asteraceae, Liliaceae, Lauraceae, Moraceae, Oleaceae, Piperaceae, Fabaceae, Solanaceae (3.8% each). According to (Ezekiel and Daniel, 2012) the family Fabaceae had the highest proportion of medicinal plants used (29%), followed by Euphorbiaceae (20%), Asteraceae and Moraceae (17% each), and Rubiaceae (15%) in Komboza forest reserve in Morogoro, Tanzania. Fabaceae found to be the major medicinal plants family followed by in Caesalpiniaceae 9 species, in Euphorbiaceae 8 species, Apocynaceae and Rutaceae (each 5 species), in Rubiaceae 5 species and Combretaceae, Solanaceae (each 4 species), Asteraceae and Malvaceae (each 4 Species) and in Amaranthaceae 3 species Chamarajanagar wild life division, Karnataka (Murugesan *et al.*, 2015) [21].

Some of the important medicinal plants species has played a major role in ethnobotany such as *Ocimum canum*, *leucas biflora*, *Ocimum sanctum*, *Hyptis suaveolens*, *Piper longam*, *Aegle marmelos*, *Morus indica*, *Rubus ellipticus* (Kiruba and

Geetha, 2006) [7]. Reported that *Abrus precatorius*, *Abutilon indicum*, *Acalypha indica*, *Acaranthus aspera*, *Aloe vera*, *Andrographis paniculata*, *Aristolochia bracteata*, *Azadirachta indica*, *Calotropis gigantean*, *Cassia tora*, *Cissus quadrangularis*, *Dendrocalamus strictus*, *Euphorbia hirta*, *Gymnema sylvestre*, *Pergularia daemia*, and *Vitex negundo* are highly contributed in medicinal properties of tribal people in Kaniyakumaridistrict Western Ghats. According to (Geetha *et al.*, 2016) [7] that, the plants such as *Aloe vera*, *Azadirachta indica*, *Cardiospermum halicacabum*, *Cissus quadrangularis*, *Citrullus colocynthis*, and *Pedaliium murex* are mostly used by the Malayalitribals in Kollihills of Namakal District.

5. Conclusion

The result of the study revealed that there is rich diversity of wild aromatical medicinal plants used to treat various diseases in the Sadhuragiri hills. Herbal practitioners and the local community in the study area people prepare folk medicine due to their socioeconomic status. The wealth of this tribal knowledge of aromatic medicinal plants points to great potential for research and the discovery of new drugs to be the diseases. The documentation of this knowledge is valuable for communities and future generations.

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