



Original Article

Survey of Ethno Medicinal Plants in Jambuthumalai, Eastern Ghats of Tamil Nadu, India

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An ethno medicinal survey was conducted to collect the information about medicinal plants used by tribal people located in the jambuthu malai, Salem District, Tamilnadu, India. About 32 medicinal plants were used in various health problems; Majority of the plant part were leaves. The most representative family was Euphorbiaceae with 10 species, Asclepiadaceae 5 species, Apocynaceae 7 species and Malvaceae 6 species each and Liliaceae 3 species, Asteraceae 3 species, Caesalpinaceae 2 species, Solanaceae 4 species. The other family had 1 species each associated with the treatment of the reports. The treatment mode were usually oral, but most of the plants used in paste. They use ethno medicinal plants to treatments like cold, cough, headache, stomachache, dysentery, skin disease, poison bites, cut and wounds, diabetes and sexual disorders.

Keywords: Medicinal plants, Jambuthumalai, Tribal people, Diseases,

1. INTRODUCTION

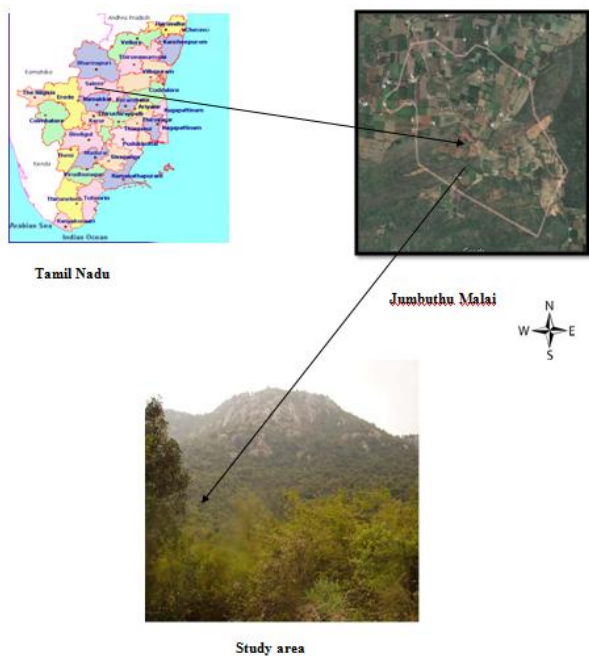
Ethno botany is the study of the relationship between plants and people: From "ethno" - study of people and "botany" - study of plants. Ethno botany is considered a branch of ethno biology. Ethno botany studies the complex relationships between (uses of) plants and cultures. The focus of ethno botany is on how plants have been or are used, managed and perceived in human societies and includes plants used for food, medicine, divination, cosmetics, dyeing, textiles, for building, tools, currency, clothing, rituals, social life and music (Choudhary *et al.*, 2008)⁶. The majority of these involve the isolation of the active ingredient (chemical

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compound) found in a particular medicinal plant and its subsequent modification. In the developed countries 25% of the medical drugs are based on plants and their derivatives (Principle, 2005)¹⁶.

World Health Organization estimates that more than 80% of health care needs in developing countries are met through traditional health care practices (WHO 2002)⁹. Ribbed mentions 67 plants having therapeutic effects, Ayurvedha lists 81 plants and Atharveda 290 plants (Nabachandra and Manjula, 1992)¹¹. The medicinal values of these plants lie in some chemical substances that produce a definite physiological action on the human body (Edeoga et al., 2005)¹². The tribals of Western Ghats have been using plant parts of various species as therapeutical agents (Veale et al., 1992)¹³. It is a necessity from the scientific point of view, to establish a rational relationship between chemical, biological and therapeutically activities of folklore medicine (Gentry 1993)⁷. Utilization of medicinal plants by individuals lies on the knowledge accumulated through the interaction of people with the environment and the diffusion of information, traditionally transmitted orally through subsequent generation (Singh et al., 2002).



The Eastern Cape is one of the poorest provinces in South Africa but is well known for its diversity in plant species (Afolayan et al., 2014)¹⁰. The Xhosa people are the major inhabitants of this province and they live primarily in the areas called Ciskei and Transkei. Plants used in traditional medicine by the Xhosas have been extensively documented (Bhat and Jacobs, 1995; Bhat, 2013; Afolayan et al., 2014). plants of ethnobotanical value indigenous to the Eastern Cape Province have also been reported (Hutchings, 1989; Dold and Cocks, 2000 and Bhat, 2013)¹⁷. This study revealed that self care using medicinal plants is a common practice by the tribes of SBR. About 64% of the used plants have

scientifically proved medicinal values with respect to the antibacterial properties.

Ethno botanical knowledge has been documented from various parts of the Indian sub-continent .India has one of the richest plant medical cultures in the world. It is a culture that is of tremendous contemporary relevance because it can on one hand ensure health security to millions of people and on the other hand it can provide new arid safe herbal drugs to the entire world (Das A and Tag H.2006)⁸. According to WHO report, globally, approximately 347 million people or 5-8% of the global population is estimated to be affected by this disease. Thus concerned ethno botanical research plays an important role for conservation and Sustainable utilization of these medicinal plants.

Ethno botanical studies assume great importance in enhancing our knowledge about the plants grow and used by tribal communities, the rich diversity assembled by them for their sustenance and the different means adopted by them for its preservation and conservation (Xavier et al, 2014)⁵. Ethno-medicinal documentation of tribal health system will be of great advantage to our pharmacologists and biotechnologists to develop potential medicine for treatment of several diseases and disorders. The medicinal plant sector has traditionally occupied a pivotal position in the socio cultural, spiritual and medicinal areas of rural and tribal families.

India has one of the richest plant medical cultures in the world. India is well known for significant geographical diversity which has favoured the formation of different habitats and vegetation types, India is enriched with 15% (3000-3500) out of 20,000 medicinal plants all over the world, About 90% of these are found growing wild in different climate regions of the country (Chopra & Nayar, 1965)². The knowledge of medicinal plants has been accumulated in the course of many centuries based on different medicinal system such as Ayurvedha, Unani and Siddha (Fabricant and Farnsworth, 2001)¹. These medicinal plants have a longstanding history in many indigenous communities and continue to provide useful tools for treating various diseases (Farombi, 2003)³. Documenting the indigenous knowledge through ethnobotanical studies is important for the conservation and utilization of biological resources. Several active compounds have been discovered from plants on the basis of ethnobotanical information and are used directly as patented drugs (Carney et al, 1999)⁴.

Plant derivatives with hypoglycaemic properties have been used in folk medicine and traditional healing systems around the world from very ancient time. Despite the introduction of hypoglycaemic agents from natural and synthetic sources, diabetes and its secondary complications continue to be a major medical problem to people. The World Health Organization recommended the search for beneficial use of medicinal plants for the treatment of diabetes mellitus. Several investigations have been conducted and many plants have shown positive activities. The Eastern Cape is one of

the poorest provinces in South Africa but is well known for its diversity in plant species (Afolayan et al., 2014). Factors like history, culture, attitudes of community and philosophy are involved in this variation (Savikin et al., 2013)¹⁸.

The traditional knowledge of people on medicinal property of plants is still being used by the tribes and urban people. This traditional knowledge reveals how the economically backward local and tribal people were getting treatment for various diseases. They have enormous knowledge about medicinal uses of plants and this knowledge is mostly undocumented and transmitted orally from generation to generation. Therefore, it is urgent to explore and document this unique and indigenous, traditional knowledge of the tribal community, before it diminishes with the knowledgeable persons. Limitations to the interview approach might be the reluctance of some herbal practitioners to disclose plants names and combinations. Moreover, portions of patients was of good quality as it provided direct evidence of efficacy with a complete pattern of the disease (Trebiessou et al., 2014)¹⁹. Consequently, the need to perform ethno-botanical researches and to document the medicinal plants and the associated indigenous knowledge must be an urgent task. Like other communities in Jambuthu hills, traditional medication is believed to be important health care systems in Valapadi, eastern Salem which mainly involve the use of nearly available medicinal plants

OBJECTIVES OF THE STUDY

- To conduct an ethnomedicinal plants used in Malayali tribals in jambuthu malai, southern eastern ghats, Salem district, Tamil nadu.
- To document the indigenous knowledge through ethno botanical studies in jambuthu malai.
- To study of tribal people using ethno medicinal plants.

2. METHODOLOGY

STUDY AREA

The ethno medicinal plants study was conducted in Jambuthumalai, eastern Ghats, Salem district during the period August 2014 to July 2015. The area sea level height in 1,182m elevation above located in the Eastern Ghats. The surrounding area is Aathukadu, surepulikadu, modukadu. This is one of the places with a rich biodiversity in India. Traditional healers, called “Vaidyars, Malayali tribal” from indigenous groups were targeted for documentation of the uses of medicinal plants.

The Eastern plateau also contains two villages kedamalai (2,963) and jambuthu (2,139). At its western extremity is the highest point on the range, Jandakatti-medu (4,015). The precipice to the north of this one of the finest in the District. On the south-east the ridge resolves itself into an irregular group of hills, the highest of which (Periya-malai, 3,124') overhangs the Ayil-patti ghats leading from Rasipuram to Attur. The range terminates on the north-east in a fine spur, the highest point of which is Ten-kal (2,661).

Malayali tribals

Malayali simply means a hill person an appellation distinguishing them from the people of plains. In physical appearance they scarcely differ from the people of plains. They speak Tamil dialect of their own. They are supposed to be descendants of Kanchipuram vellalar. They appear to have migrated from Kanchipuram (a town near Bangalore, Karnataka.) between seventh and eleventh centuries. The tribals are mostly working as casual labours in coffee estates. They are cultivating food grains, fruits and vegetable.

DATA COLLECTION

The field survey, the information collected on plant species was mainly gathered through interviews that were held with selective indigenous knowledgeable person. Information regarding, local name, plant part used, mode of preparation and administration were recorded through informal interviews, open and group discussions with selected informants.

3. RESULTS AND DISCUSSION

In the study ethno botanical survey was carried out Jambuthumalai in Salem district, Tamilnadu, India. This study results showed that 41 plant species under 9 families (Table.1). The plants used to treatments like cold, cough, headache, stomach ache, dysentery, skin disease, poison bites, cut and wounds, diabetes and sexual disorders.

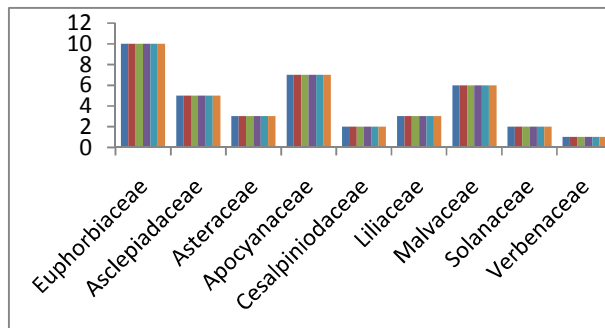


Fig 1: Various families of preparations of medicaments used for the Malayali tribes jambuthu malai Salem

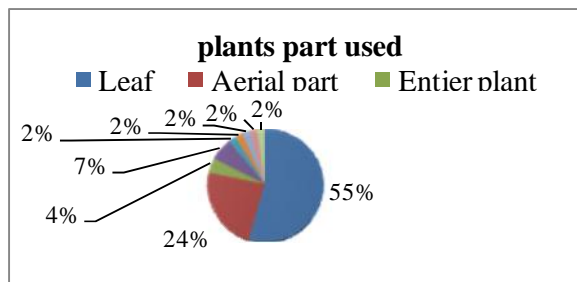


Fig 2: Various part of preparations of medicaments used for the Malayali tribes jambuthu malai Salem.

Table 1: Ethno Medicinal Plants Used By Jambuthumalai People, Eastern Ghats, Salem District

S. No.	BOTANICAL NAME	FAMILY	VERNACULAR NAME	PART USED	MODE OF PREPARATION
1.	<i>Acalyphain dica L</i>	Euphorbiaceae	Kuppaimeni	Leaf	Leaf juice is applied externally for curing body itching.

2.	<i>Croton Bonplandianus L</i>	Euphorbiaceae	Attupuntu	Aerial part	Plant latex is used to cure wounds.
3.	<i>Euphorbia Heterophylla L</i>	Euphorbiaceae	Cututuratticeti	Aerial part	Remove Intestinal worms.
4.	<i>Euphorbia hirta L</i>	Euphorbiaceae	Amman Paccarici	Entire plant	Entire plant paste mixed with goat milk and taken internally for stomach Upset.
5.	<i>Jatropha Gossypifolia L</i>	Euphorbiaceae	Kaduaman akku	Entire Plant	Toothachean dangular stomatit is, plant latex is used to cure Headache.
6.	<i>Phyllanthus Amarus L</i>	Euphorbiaceae	Kilanelli	Whole plant	Plantextractisusedtocurejaundice.
7.	<i>Phyllanthus Emblica L</i>	Euphorbiaceae	Nelli	Fruits	Decoctionoffruitsusing fever.
8.	<i>Gymnema Sylvestre L</i>	Asclepiadaceae	kurintai	Leaf	Diabetes
9.	<i>Hemidesmus Indicus L</i>	Asclepiadaceae	Nannari	Aerialpart	Feverandskindiseases.
10.	<i>Pentatropis Capensis L</i>	Asclepiadaceae	Upilankodi	Leaf	Constipation,colicanddiarrhea
11.	<i>Pergularia Daemia L</i>	Asclepiadaceae	Uttamani	Leaf	Bath withleafdecoctionistakentocure bodypain.
12.	<i>Tylophora indica L</i>	Asclepiadaceae	Kaakittam	Leaf	Asthma,bronchitis,whoopingcough.
13.	<i>Eclipta procera L</i>	Asteraceae	Mangel karisalankanni	Leaf	Jaundice
14.	<i>Biden spilosa L</i>	Asteraceae	Mukkutthi	Leaf	Antiseptic and Cough relief
15.	<i>Catharanthus Roseus L</i>	Apocynaceae	Nithyakalyani	Aerialpart	Dry park powde risedused for cancer therapy.
16.	<i>Carissa Spinaram L</i>	Apocynaceae	Sirukila,Kalla	fruits	Snakebites,rheumatismand worms.
17.	<i>Ervatamia Divaricata (Burn)</i>	Apocynaceae	Nantiyavarttam	Leaf	Antibacterial and antifungal properties.
18.	<i>Holorrhena Antidysenterica L</i>	Apocynaceae	Kutasappalai	Aerialpart	Hypoglycemic and anti-protozoal activities.
19.	<i>Plumeria rubra</i>	Apocynaceae	Segappuurali	Leaf	Ulcers,pruritus,leprosy,and vitiated conditions of Vataand Kapha.
20.	<i>Cassia Auriculata L</i>	Cesalpinoideae	Avarai	Stem	Stem decoction mixed with garlic and powdered pepperis given for purgative.
21.	<i>Cassia tora L</i>	Cesalpinoideae	Tagarai	Aerialpart	Malaria,ring worm,chronic inflammation of The skin and other skin diseases.
22.	<i>Aloe vera (L.) Burm.f.</i>	Liliaceae	sottru katalai	Aerial Part	Promotesmenstrualflow,heals woundsand freshcuts,eyediseases,asthma,leprosyandjaundice.
23.	<i>Asparagus Recemosus L</i>	Liliaceae	Catavari	Aerial Part	Nervous disorders,diarrhoea,dysentery,vata,pitta,tumours,controlcough throat infections and scaldingofurine.
24.	<i>Allium ceba L</i>	Liliaceae	venkayam	Pulb	Snake Bite
25.	<i>Abutilon indicum L</i>	Malvaceae	Thuththi	Leaf	Fever
26.	<i>Hibiscus Cannabinus L</i>	Malvaceae	Kaccakkirai	Leaf	Antihypertensive
27.	<i>Hibiscus Rosasinensis L</i>	Malvaceae	Semparuthi	Leaf, Flower	HairgrowthandCoolingeffect.
28.	<i>Euphorbia heterophylla L</i>	Euphorbiaceae	Paal Perukki	Leaf	Leaf paste is applied externally
29.	<i>Decalepis hamiltonii Wight & Arn</i>	Apocynaceae	Mavilangam	Root	Root powder is applied externally to cure cut wounds

30.	<i>Tridax procumbens L</i>	Asteraceae	Vettu Kaya Pooundu	Leaf	Leaf juice will control the bleeding immediately and paste is applied externally on wounds to heal
31.	<i>Sida rhombifolia L</i>	Malvaceae	kuruthankanni	Leaf	It is applied externally on wounds and this paste is persistent on wounds up to cure.
32.	<i>Wattakaka volubilis Stapf</i>	Apocynaceae	Peria Kuringan	Leaf	Leaf paste is applied externally on the surfaces.
33.	<i>Withania somnifera (L.) Dunal</i>	Solanaceae	Amukara Kizhangu	Tuber, seed	Paste is applied on the surfaces will control the Kattihal (tumors), Amukara means amukuthal meaning suppress the tumors.
34.	<i>Lycopersicon esculentum Mill.</i>	Solanaceae	Thakkali	Fruit	Fruit is made in to small pieces and tied with white cloth on the surface of the Silanthi Katti for 3 to 4 days
35.	<i>Jatropha curcas L.</i>	Euphorbiaceae	Katta Kottai	Leaf	Leaves are soaked in rice water overnight, heated and tied around painful area to reduce pain
36.	<i>Ricinus communis L.</i>	Euphorbiaceae	Kottai Maram	oil	body cooling
37.	<i>Thespesia Populnea</i>	Malvaceae	Puvaracu	Leaf	Skindisease
38.	<i>Malvaparviflora</i>	Malvaceae	--	Leaf	Anti-inflammatory activity, skin disease.
39.	<i>Solanum Trilobatum</i>	Solanaceae	Thuthuvalai	Leaf	Leaf extract is taken orally to cure cough.
40.	<i>Solanumnigrum</i>	Solanaceae	Manathakkali	Aerialpart	Inhibits growth of cervical carcinoma.
41.	<i>Vitexnegundo</i>	Verbenaceae	Nochi	Leaf	Headache,sinusproblem.

The present investigation revealed that medicinal plants still play a vital role in primary health care of the people. We suggest that these plants can be used as drugs by pharmacologically unexplored areas of India ,which may be utilized for the better human health. In such cases laboratory investigations and clinical trials are suggested to validate the therapeutic properties of these herbal preparations for effective and safe use. The value of using ethno medical information is to initiate drug discovery efforts. In future, photochemical, pharmacognostical and pharmacoecological investigation of these medicinal plants will be very helpful for developing the new drugs.

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