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Traditional Knowledge of Medicinal Plants- A Study in Thinnalore village, Kancheepuram District of Tamil Nadu, India

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ABSTRACT

This Ethnobotanical survey was carried out among the rural people Thinnalore Village Tamilnadu. The rural people nurture rich knowledge about medicinal plants and its uses. The herbal practitioners in the study area were interviewed, and information on medicinal plants regard to their botanical name, local name, parts used and utilization by the local people for different human ailments. The common diseases treated were collected from the rural people. This survey covers 38 medicinal plants belonging to 50 families that are used for the treatment of diseases in a traditional way. In this paper with by the herbal practitioner were asthma, digestive problems, paralyzes, skin diseases and diabetes.

KEYWORDS : Rural People, Medicinal plants, Traditional use

INTRODUCTION

We can use the case of traditional medicine to understand various aspects of Indian traditional knowledge systems. The most remarkable characteristic of the Indian medical tradition is that it prevails at two different levels: the classical and the folk system. By the classical system, we refer to the codified systems such as Ayurveda, Siddha and Unani. Ayurveda is also present outside India, especially in other parts of Asia, such as China, Thailand, Cambodia and Indonesia, and is increasing in the western world. The Unani system, which came up during the Arab period, also enjoys great popularity and over time has interacted successfully with the Ayurvedic system. Both systems of medical tradition are supported by a rich textual base. It is estimated that there are 10-30 million manuscripts in all diseases alone, many of them relating to medicine. The Tamil University at Thanjavur has made a catalogue of 24,000 Tamil manuscripts in libraries and public collections, including 8,000 related to science and technology, of which 4,000 pertain to medical sciences.

During the last few decades there has been an increasing interest in the study of medicinal plants and their traditional use in different parts of the world. Documenting the indigenous knowledge through ethno botanical studies is important for the conservation and utilization of biological resources. 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 healthcare and drug development in the present and future.

Today according to the World Health Organization (WHO), as many as 80% of the world's people depend on traditional medicine for their primary healthcare needs WHO (2003). There are considerable economic benefits in the development of indigenous medicines and in the use of medicinal plants for the treatment of various diseases. Due to less communication means, poverty, ignorance and unavailability of modern health facilities, most people especially rural people are still forced to practice traditional medicines for their common day ailments. Most of these people from the poorest link in the trade of medicinal plants. A vast knowledge of how to use the plants against different illnesses may be expected to have accumulated in areas where the use of plants is still of great importance.

Herbal remedies are considered the oldest forms of health care known to mankind on this earth. Prior to the development of modern medicine, the traditional systems of medicine that have evolved over the centuries within various communities, are still maintained as a great traditional knowledge base in herbal medicines (Mukherjee and Wahil, 2006). Traditionally, this treasure of knowledge has been passed on orally from generation to generation without any written document (Perumal samy and Ignacimuthu, 2000) and is still retained by various indigenous groups around the world. People use more than one plant either separately or mixed together. They mix several plants as ingredients to cure diseases immediately. Generally, fresh part of the plant is used for the preparation of medicine. When fresh plant parts are not used as simple drugs and some plants are used with some other plant parts. The information collected from this study is in agreement with the previous reports (Jain, 2001; Sandhya et al., 2006; Ganesan et al., 2004; Udayan et al., 2005; Mahapatra and Panda, 2002).

STUDY AREA

The Indian Village Thinnalore is located in the Taluk of Acharapakkam, Kanchipuram district in Tamil Nadu State, India. The latitude of the Thinnalore is 12.834; longitude is 79.7036 and the 50 meters above Sea level.

METHODOLOGY

The present study is an attempt to ascertain "Traditional Knowledge Medicinal Plants - A Study in Thinnalore Village, Kancheepuram District". This village is a predominantly agricultural village cultivating crops such as paddy, sugarcane, groundnuts, and watermelon etc. Total population of the village according to 2001 censes is1831 persons, consisting of 936 males and 933 females. The total households are 411 so the researcher has selected 50 respondents from the households, to collect information about nexus between "Traditional Knowledge Medicinal Plants".

All the relevant data were collected with the help of a well structured interview schedule and discussions among rural practitioners in their local language. Our schedule allowed descriptive response on the plant prescribed, such as part of the plant used, medicinal uses, and detailed information about mode of preparation (i.e., decoction, paste, powder and juice) form of usage either fresh or dried and mixtures of other plants used as ingredients.

A total of 50 informants, comprising 38 males and 12 females were identified between the ages of 40 and 80. They were selected based on their knowledge of medicinal plants either for self-medication or for treating others. Informants were asked to come to field and show the plants with local name; the species mentioned by the informants were taxonomically identified.

RESULT AND DISCUSSION

From this survey herbs (46%) were found to be most used plants followed by shrubs (26%), trees (14%) and climber (14%) in descending order. Many Species of the family Euphorbiaceae, Fabaceae, Solanceae and Asteraceae are frequently used in this study area. The first two families contribute to 10 remedies; the information is showed. The parts of the plant used for medicinal purposes are leaves, root, stem, fruits, the complete aerial parts, the whole plant, barks (root and stem) and flowers. However, leaves were found most frequently used part.

Traditional healers of Thinnalore Village used nine plant species to treat stomach problems among them 3 plants to treat stomachache and 6 plants to cure digestive problems. This study reported the use of 21 medicinal plants from 20 families to treat gastro-intestinal complaints by using paliyar community. The study area people used 13 plants for the treatment of Jaundice. In the present study on *Phyllanthus amarus* and *Eclipta prostrate* were used for the treatment of jaundice.

In this study ten remedies were used to alleviate problems of the respiratory system. Among the plants surveyed, *Ocimum basilicum*, *Adhatoda vasica* are used frequently for the preparation of medicines for the treatment of respiratory disorders. Whereas, 14 remedies were used to alleviate the respiratory problems, among the plants surveyed, *Adhatoda zeylanica* and *Vitex negundo* are used frequently. These plants used for wound healing and skin diseases, 16 plant species that were used for respiratory diseases and 48 plants for the treatment of gastrointestinal disorders in study area. Safety and efficacy of the treatment for respiratory tract infections were reviewed

From our survey of ethnomedicinal plants, the results obtained confirm the therapeutic potency of some plants used in traditional medicine. In addition, these results form a good basis for selection of potential plant species for further phytochemical and pharmacological investigation. The leaf paste of *Zizyphus mauritiana* along with the leaves of *Ailanthes excelsa* is taken internally as well as topically to treat paralyzes. *Andrographis paniculata* is used to treat poison bites; Leaf juice of *Mukia maderaspatana* with gingelly oil is applied topically on the head before taking bath to cure Asthma. Leaf and fruit powder of *Euphorbia hirta* is mixed with cow's milk and taken orally to treat Leucorrhoea, *Leucas aspera* (headache and snakebite) and *Cardiospermum helicacabum* (Arthiritis) also documented.

CONCLUSION

The data collected shows that majority of the remedies are taken orally. Herbal medicines prescribed by tribal people are either preparation based on single plant or a combination of several plant parts. Most of the reported preparations are drawn from a single plant; mixtures are used rarely. The fresh plant parts are used for the preparation of medicine. When fresh plant parts are unavailable, dried parts are also used. Generally, the people of the study area still have a strong belief in the efficacy and success of herbal medicine. The results of the present study provide evidence that medicinal plants continue to play an important role in the healthcare system of this tribal community.

This study provides an ethnobotanical data of the medicinal plants used by the tribal people of Irulas to cure different diseases. Moreover, this study will promote a practical use of botanicals and must be continued focusing on its pharmacological validation. Further detailed exploration and collection of ethnobotanical information, chemical studies and screening for medicinal properties will provide cost effective and reliable source of medicine for the welfare of humanity.

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Table; 1
Traditional Medicinal Plants used by Rural People from Thinnalore Village, Kancheepuram district of Tamil Nadu

S No	Botanical Name	Local Name (Tamil)	Method of preparation and Medicinal uses
1	**Acanthaceae** *(i) Adhatoda vasica* Nees	Adathodai	Leaves are ground with the flowers of *Hibiscus rosa-sinensis* and taken orally to treat asthma.
	(ii) Andrographis paniculata	Nilavembu	Leaf paste is applied topically at the bitten site of snake, beetle and scorpion.
	(iii)Asystasia gangetica	Valukkai keerai	Powdered leaf is mixed with cow or goat's milk and taken orally to treat diabetes. Leaf powder is mixed with coconut oil and applied topically to heal wounds (burns).
2	**Aizoaceae** *(i)Trianthema portulacastrum*	Saaranai	Decoction of roots is taken internally to treat Constipation and asthma.
3	**Amaranthaceae** *(i)*Achyranthes aspera	Naayuruvi	Leaf paste is applied topically to treat cuts and Wounds.
	(ii)Aerva lanata	Siru peelai	Juice of whole plant is taken orally to treat cough, sore throat and wounds.
4	**Anacardiaceae** *(i)Mangifera indica*	Maamaram	The latex from leaf and stem bark is used to treat heel cracks. Juice of leaves is taken orally to prevent white discharge in women.
	(i)Odina wodier Roxb	Uthiyam,Odimaram	
5	**Apocynaceae** *(i) Catharanthus roseus*	Nithyakalyani	Whole plant is powdered and mixed with cow's milk and taken orally to treat diabetes. Juice of seeds taken orally to treat indigestion Juice prepared from the stem bark is boiled with gingelly oil and two drops are poured into ear to treat ear pain.
	(ii) Wrightia tinctoria	Veppalai	
	(iii) Nerium oleander	Arali	
6	**Araceae** *Acorus calamus*	Vasambu	Dried rhizome is ground in water and the paste is given orally to children for clarity of speech.
7	**Asclepiadaceae** *(i)Gymnema sylvestre*	Sirukurinchan	Leaf powder is mixed with cow's milk and taken orally to treat diabetes. The root powder is taken orally and also applied on the bitten spot to treat snake bite.
	(ii)Hemidesmus indicus Linn	Nannari	Juice extracted from the whole plant is taken Internally to keep the body cool.
8	**Asteraceae** *(i)Eclipta prostrata*	Karisalanganni	Leaf powder is mixed with coconut oil & applied on the hair regularly for healthy and black hair.
	(ii)Tridax procumbens	Vettukayapundu	Leaf paste is applied topically on cuts and wounds
9	**Boraginaceae** *(i)Heliotropium indicum*	Thelkodukku	Paste of whole plant is applied topically to treat wounds and skin affections.
10	**Caesalpiniaceae** *(i)Cassia auriculata*	Aavarai	Flowers are crushed and mixed with goat's milk and taken orally to prevent white discharge in women.
	(ii)Tamarindus indica	Puliya maram	Dried fruits are taken orally to treat eye infections.
11	**Capparaceae** *(i)Cleome viscose*	Naikadugu,	Leaf paste is applied topically to heal wounds.

12	**Combretaceae** *(i)Terminalia arjuna* Roxb	Marutha maram,	Fruit paste is applied topically on wounds. Bark powder is boiled with water and inhaled to cure headache to kill worms in teeth.
13	**Convolvulaceae** *(i)Merremia emarginata*	Elikkadilai	Decoction of the whole plant is taken internally to treat stomach problems.
14	**Cucurbitaceae** *(i)Coccinia grandis* *(ii)Mukia maderaspatana*	Kovai Musumusukai	Leaf Juice is mixed with butter and applied topically to treat skin diseases. Leaf powder is mixed with boiled rice and taken orally to treat cold and cough.
15	**Cyperaceae** *(i)Cyperus rotundus*	Korai, Muthakkasu	Paste of dried tuber is applied on breast of women to secrete more milk and applied topically on bitten site of scorpion.
16	**Euphorbiaceae** *(i)Acalypha indica* *(ii) Euphorbia antiquorum* Linn *(iii) Euphorbia tirucalli* *(iv) Phyllanthus amarus* Schum *(v)Phyllanthus emblica* *(vi)Ricinus communis*	Kuppaimeni Sathurakkalli Kodikalli Keezhanelli Nelli Amanakku	Leaf paste is applied topically to treat skin diseases. Dried latex is taken internally in low dose to help free motion. The stem is boiled with water and given to children to treat skin diseases. Fresh leaves are ground and mixed with a cup of cow or goat's milk and taken internally to cure jaundice. Fruit powder is mixed with cow's or goat's milk and taken orally to treat cold and cough. The leaf juice is taken orally or washed leaves are tied on the breast to increase secretion of milk in women. The oil prepared from the seeds is applied on lower stomach to get relief from stomachache.
17	**Fabaceae** *(i)Abrus precatorius* Linn *(ii)Clitoria ternatea* *(iii)Pongamia pinnata*	Kundumani Sangu Pushpam Punga maram	Root powder is taken orally along with cow's milk to treat scorpion sting and snakebite. Root powder is mixed with water and taken orally to treat indigestion, eye diseases and headache. Juice of root is mixed with equal amount of coconut milk, boiled and applied topically to cure wound and gastric trouble.
18	**Lamiaceae** *(i)Coleus aromaticus* Benth *(ii)Leucas aspera* *(iii)Ocimum sanctum*	Karpuravalli Thumbai Thulasi, Tulsi	Leaf juice is taken orally by children to treat Indigestion and cough. A bunch of leaves is boiled and the vapour is inhaled to cure head ache and fever. Leaves are crushed with onion bulbs and the juice is taken orally to treat cough, cold and headache.
19	**Lauraceae** *(i)Cinnamomum verum* Presl	Lavangappattai, Karuvappatttai	Decoction of stem bark is taken internally to treat cough, dysentery and to keep the body cool.
20	**Liliaceae** *(i)Aloe vera*	Sothukathalai	Sap mixed with oil is heated and the mixture is applied on hair for hair growth and good sleep.
21	**Lythraceae** *(i)Lawsonia inermis*	Maruthani	Leaf powder is mixed with coconut oil and applied topically to treat cuts and wounds.
22	**Malvaceae** *(i)Hibiscus rosa-sinensis* *(ii)Sida acuta* Burn.	Semparuthi Arival manai poondu	Paste of fresh leaves is applied on the hair for healthy and black hair. Leaf paste is applied topically to heal cuts, wounds and to get relief from headache.
23	**Meliaceae** *(i)Azadirachta indica* A. Juss	Vembu	Leaf paste is applied topically on the body to treat small pox, rheumatism and skin diseases. The young twigs are used as toothbrush to develop strong teeth.
24	**Mimosaceae** *(i)Acacia leucophloea* *(ii)Mimosa pudica*	Velvelamaram Thottasurungi	Paste of fresh stem bark is applied topically to treat cuts and wounds. Pinch of leaf paste is applied topically to treat cuts and wounds.
25	**Moraceae** *(i)Ficus benghalensis* *(i)Ficus racemosa* *(iii)Ficus religiosa*	Alamaram Athi maram Arasu	Stem latex is applied topically on heel cracks. Young stem is used as tooth brush. Stem latex is applied topically to treat heel cracks. Dried leaf powder is mixed with water and taken orally to get relief from body pain.
26	**Moringaceae** *(i)Moringa oleifera* Lam	Murangai	The leaf is taken as food and it reduces body heat and to treat indigestion and eye diseases. Flower is taken as food and it gives chillness to Eyes and increases sperm production in men.
27	**Myrtaceae** *(i)Syzygium cumini*	Naval maram	Paste of stem bark is applied topically to treat swellings. The ripe fresh fruits are taken orally to reduce body heat.
28	**Poaceae** *(i)Cynodon dactylon*	Arugampullu	Decoction of whole plant is taken orally to keep the body cool.
29	**Rhamnaceae** *(i) Zizyphus mauritiana* Lam.	Ilandai	Leaf and bark decoction is boiled and it is used to take bath to treat severe body pain. Dried bark powder is applied topically to treat wounds.

30	**Rubiaceae** *(i)Oldenlandia umbellate*	Siruver, Sayaver	The root paste is applied topically to arrest bleeding.
31	**Rutaceae** *(i)Aegle marmelos* Corr.ex.Roxb *(ii)Citrus aurantifolia*	Vilvam Elumitchai	Leaf paste is applied topically to heal wounds. Decoction of leaves is inhaled to get relief from fever, headache and cold.
32	**Sapindaceae** *(i)Cardiospermum halicacabum*	Mudakkathan	Root is boiled with oil and applied on head before bath to treat throat infection and headache.
33	**Solanaceae** *(i)Solanum nigrum* *(ii)Solanum torvum* *(iii)Solanum trilobatum*	Manathakkali Sundaikkai Thuthuvalai	Whole plant parts are taken as food to treat cough. Leaf juice is taken orally to reduce body heat. Unripe fruits are prepared as curry or roasted in gingerly oil and taken orally along with food to strengthen the body. The leaf juice is taken orally to treat cough and itching.
34	**Sterculiaceae** *(i)Melochia corchorifolia*	Punnakku chedi	Boiled leaf is taken as food to help in free motion.
35	**Verbenaceae** *(i)Lantana camara* *(ii)Lippia nodiflora* Mich *(iii) Stachytarpheta jamaicensis* Vahl *(v)Vitex negundo*	Unni chedi Poduthalai Seemainayuruvi Notchi	A handful of flower is ground with coconut oil and applied topically on the head to get relief from headache. Paste of leaves is applied topically to treat swellings and wounds. Paste of stem and root bark is applied topically to treat dysentery. Leaves are boiled in water and the vapour is inhaled twice a day to get relief from headache, fever, cold, and cough.
36	**Violaceae** *(i)Hybanthus enneaspermus*	Orithal thamarai	Paste of whole plant is applied topically to treat cough.
37	**Vitaceae** *(i)Cissus quadrangularis*	Pirandai	Paste of stem is taken orally for easy digestion.
38	**Zygophyllaceae** *(i)Tribulus terrestris*	Nerunchimul	The fruit and root are mixed with boiled raw rice, taken orally to prevent white discharge in women and to treat urinary troubles.

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