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Medicinal Plants wealth of local communities of Athoor Taluk, Dindigul District,South Tamilnadu, India

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Abstract

Ethnobotany is the direct interrelationship between human beings and plants. Ethnobotanists can play very useful roles in rescuing this disappearing knowledge and returning it to local communities. An ethnobotanical survey was carried out between January 2012 and January 2013 in Athoor Taluk of Dindigul District, Tamilnadu, India The main objective of the present study was to bring to light the species of wild plants that are used for the treatment of various ailments by the rural peoples. The present study revealed that 45 plant species are enumerated in the present account. In this way local ethno botanical knowledge can be conserved as part of living cultural – ecological systems, helping to maintain a sense of pride in local cultural knowledge and practice and reinforcing links between communities and the environment.

Key Words: Local communities, Ethnobotanical survey, Tamil Nadu

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1. Introduction

Plants are playing an important role in the health of millions of people's life in many villages of India in their day today life by its traditional usage. Herbal medicine is the foundation for about 75– 80% of the World population, mainly targeting primary health care for in the developing countries because of better cultural acceptability, compatibility with human body and lesser side effects. However, there is a drastic increase in the usage of herbal medicine was found in last few years from the developed countries (Kamboj, 2000). The World Health Organization (WHO) has compiled a list of 20,000 medicinal plants used in different part of the globe. A large number of these species have local uses within the country or spread over several countries in a region. Amongst these, over 100 botanicals are reported to have consistently large demand and are traded in major drug markets in the world. The medicinal virtues of these raw materials including chemical contents and composition of these species have been well worked out to have merited inclusion in National Pharmacopoeias and official formularies in different countries (Govil et al., 2002). The study highlights the importance of documenting, ethno botanical information and indigenous traditional knowledge about the medicinal plants used by the tribes in their day to day life to cure some common ailment (Thirupathy et al., 2013). Nearly 80% of the world populations rely on traditional medicines for primary health care, most of which involve the use of plant extracts (Sandhya et al., 2006). In developing countries and rural societies, the use of medicinal plants is both a valuable resource and a necessity, and furthermore it provides a real alternative for primary health care systems (Alexiades and Lacaze, 1996). Official medical attention is usually based on commercial drugs that have to be purchased with money, while a traditional medical consult in these countries has a much lower cost, including the consumption of the medicinal plants required (Naranjo, 1995). The main objective of this study was to assess the diversity of ethnomedicinal plants used by local peoples of Athoor taluk of Dindigul district and document the traditional medical practices followed in healing ailments. Therefore, it is the need of the hour to preserve the traditional knowledge the primary objective of this study is to present a database on indigenous among the local traditional healers.

2. Materials and Methods

2.1 Study area

The present studies were carried out in the Athoor taluk of Dindigul district in Tamilnadu. It has 10^0 17'14" N- 77^o 51'12" E / 10.2871^0N at the elevation. The taluk located at the foothills of Southern Palani Hills (Thandikudi hills), has rich biodiversity. These richness used to local peoples for their daily needs. The Athoor taluk located between East of Batlagundu, West of Sempatty and Dindigul. The famous Kamarajar Sagar dam is situated in the taluk, the reservoir provides major water resource for this taluk.

2.2 Survey and data collection

Frequent field trips were conducted for ethnobotanical studies from January 2012 to January 2013. Ethnobotanical data's were collected using questionnaires, interviews and discussion among the several villages. A total 75 members responded to the interviewed, randomly and selected between 40 - 75 age. Among them most of them were elderly people who had wide knowledge and hands on experience and practice on use of medicinal plants for treating various diseases. The collected plants were botanically identified using the Flora of Presidency of Madras (Gamble, 1935) and the Flora of Tamil Nadu Carnatic (Matthew, 1983) Some plants were identified in the field itself along with some of the members of the local community who already were using those plants for traditional medicine. During the survey, plants have been collected in their flowering and fruiting stages as far as possible from the natural habit and standard ethnobotanical methodology was followed to collect data on ethnomedicinal aspects.

3. Results and Discussion

The present study ethnobotanical survey was documented, 45 plant species are used for medicines representing 44 genera and 27 families (Table 1). The representing plants are most dominated used plants are observed in Euphorbiaceae (6), Lamiaceae (4), Solanaceae (3), Acanthaceae (2), Amaranthaceae (2), Asclepiadaceae (2), Caesalpiniaceae (2), Fabaceae (2), Liliaceae (2), Meliaceae (2), Verbenaceae (2), others each one families found in the study. Most of indegenious people interviewed were traditional healers who were

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familiar with the medicinal plants and they use these plants for treating common ailments like cold, cough, fever, digestive problems, headache, and skin infection, like other rural and tribal communities (Pattanaik et al., 2008). The tribal and rural population of India in general and TamilNadu in particular is highly independent on natural cure for meeting their healthcare needs.

Table 1: Medicinal Plants used by local peoples of Athoor taluk in Dindigul district, Tamilnadu. India.

S.No	Plants names	Family	Local name	Mode of use
1.	*Abrus precatorius* L.	Fabaceae	Kundumani	The whole plant is tied around the neck of cattle of repel insect and flies.
2.	*Acalypha indica* L.	Euphorbiaceae	Kuppaimeni	Decoction of root is administered early morning to the person suffering from dysentery and to kill intestinal worms in Children.
3.	*Achyranthes aspera* L.	Amaranthaceae	Naiyuruvi	Leaves *Achyranthes*, betel and *Pipper longum* are chewed together in case of scorpion bite.
4.	*Adhatoda zeylanica* Medik.	Acanthaceae	Adhatoda	The decoction of the leaves is given orally twice a day to get relief from cold and cough.
5.	*Aerva lanata* (L.) Juss.	Amaranthaceae	Poolai poo	The decoction of the leaves is given on empty stomach to cure fever. Leaf paste is also applied on the chest for the same purpose.
6.	*Aloe vera* L.	Liliaceae	Sothukathalai	Leaves are ground in coconut oil and applied on the joints thrice a day for about a month to relieve joint pains.
7.	*Andrographis paniculata* (Burm.f.) Wall. Ex Ness.	Acanthaceae	Siriyanangai	5-6 fresh leaves are eaten as soon as a snake bites or scorpion stings. In case of children, juice of the leaves with honey could be used for the same purpose.
8.	*Anisomeles malabarica* (L.) R. Br.	Lamiaceae	Peimeratti	Paste of the leaves is applied on wounds, cuts and burns twice a day.
9.	*Aristolochia bracteolata* Lamk.	Aristolochiaceae	Aduthinnapalai	Paste of the leaves is applied on the head at night to kill lice.
10.	*Azadirachta indica* A. Juss.	Meliaceae	Vembu	Tender leaves are slightly fried in the oven and the paste is prepared with salt and orally given along with rice to dispel worms in the stomach. Juice of the leaves is applied on the wounds and cuts twice a day until cure.
11.	*Azima tetracantha* Lam.	Salvadoraceae	Mullusangu	Leaves of *Andrographis paniculata* and *Azima* are dried and powdered and administered orally with the fodder for a

				week.
12.	*Bambusa arundinacea* (Retz) Willed.	Poaceae	Moongil	Paste of the leaves alone or with the seed paste of *Dolichos biflorus* is administered orally to pregnant women to induce abortion.
13.	*Borassus flabellifer* L.	Arecaceae	Panai	Leaves are made into paste and applied on sores twice a day.
14.	*Calotropis gigantea* (L.) R.Br.	Asclepiadaceae	Erukku	2-3 drops of leaf juice would help to get rid of irrigation of eyes.
15.	*Cardiospermum helicacabum* L.	Sapindaceae	Mudakathan	Decoction of the leaves of *Cardiospermum, Achyranthus aspera* is administered on empty stomach in the morning for a week to cure joint pains. Leaves of *Cardiospermum* and *Mukia maderaspatana* are made in to paste and given orally to cattle in the morning to cure dysentery.
16.	*Cassia tora* L.	Caesalpiniaceae	Oosithagarai	Leaves are made in to paste and given orally with cow's milk, twice a day to cure dysentery.
17.	*Cissus quadrangularis* L.	Vitaceae	Pirantai	A paste *Cissus* leaves and ground nut oil is prepared and consumed with food to promote digestion. Tender leaves of *Cissus* and *Mentha* are ground well along with ginger and orally administered to the cattle to remove giddiness.
18.	*Coleus amboinicus* Lour.	Lamiaceae	Karpooravalli	Leaf juice with honey is given to cure asthma and cough.
19.	*Croton bonplandianus* Baillon.	Euphorbiaceae	Pavalamanikam	Fresh leaves are made into paste and applied on the wound and sores twice a day until the cure.
20.	*Datura metel* L.	Solanaceae	Oomathai	Dried leaves are burnt and the smoke is inhaled twice a day for a week to get relief from respiratory disorders.
21.	*Enicostema axillare* (Lam.) Rayal.	Gentianaceae	Vellarugu	Leaves are ground with a pinch of salt and garlic and made in to paste. The paste is placed under the aching tooth for about half an hour.
22.	*Euphorbia hirta* L.	Euphorbiaceae	Amman pacharisi	Leaves are chewed as soon as scorpion bites. For children, leaves are made into paste and given orally along with honey.
23.	*Evolvulus alsinoides* (L.) L.	Convolvulaceae	VisnuKiranthi	Plant decoction is administered two or three times a day to get relief from cough and cold.
24.	*Ficus benghalensis* L.	Moraceae	Alamaram	The aerial roots are used to brush the tooth.

25.	*Gloriosa superba* L.	Liliaceae	Kanvalipoondu	The leaves are crushed and the juice is applied on the insect bitten parts of the body.
26.	*Hemidesmus indicus* (L.) R. Br.	Asclepiadaceae	Nannari	Leaves decoction is administered orally to the Children along with milk twice a day for cold and cough.
27.	*Jatropha gossipyfolia* L.	Euphorbiaceae	Katamanakku	Goggle with leaf decoction to cure dental problems.
28.	*Leucas aspera* (Willd.) Link.	Lamiaceae	Thumbai	2-3 drops of leaf juice is dropped into the eyes to get relief from eye irritation.
29.	Melia azadirachta L.	Meliaceae	Malaivembu	The roots are made into paste and added with rice and kept in the corner of the house for the rat to eat. The rats would die immediately.
30.	*Mukia maderaspatana* L.	Cucurbitaceae	Musumusukkai	Decoction of leaves with *Piper longum* and *Allium sativum*, administered along with cooked rice for 3-4 days to cure cold and sneezing.
31.	*Occimum basilicum* L.	Lamiaceae	Nallathulasi	Paste made from the leaves is applied on the throat. Decoction of leaves orally given on empty stomach to cure throat pain.
32.	*Passiflora foetida* L.	Passifloraceae	Sirupunaikali	Decoction of the leaves is given to cure asthma. Leaf paste is applied on the forehead to get relief from head ache.
33.	*Phyla nodiflora* (L.) Greene.	Verbenaceae	Poduthalai	A paste of the leaves is taken orally twice a day (cattle) to control dysentery.
34.	*Phyllanthus amarus* Schum &Thonn.	Euphorbiaceae	Keelanelli	Juice of the leaves is administered orally on empty stomach in the morning to cure jaundice.
35.	*Pongamia pinnata* L.	Fabaceae	Pungam	Root powder is mixed with coconut oil and externally applied on sores twice a day.
36.	*Sansevieria roxburghiana* Schult. &Schult.f.	Agavaceae	Marul	Slightly warm a leaf in flame and obtain the juice and instill it in the aching ear.
37.	*Sesamum orientale* L.	Pedaliaceae	Ellu	Leaves juice is applied on the head so as to cool it.
38.	*Solanum nigrum* L.	Solanaceae	Manathakkali	Fresh fruits and leaves consumed or decoction of leaves of *Solanum nigrum*, garlic and salt is administered orally with rice to cure ulcer.
39.	*Solanum trilobatum* L.	Solanaceae	Thuthuvalai	Leaves, flowers and fruits are half boiled and the extract is administered orally twice a day to cure asthma
40.	*Tamarindus indica* L.	Caesalpiniaceae	Puliamaram	The raw fruits are consumed to stop dysentery.

41.	*Thespesia populnea* (L.) Sol. ex Corr.	Malvaceae	Poovarasu	Powdered bark is used to brush the teeth to prevent tooth diseases.
42.	*Tragia involucrata* L.	Euphorbiaceae	Senthatti	Leaf paste of this plant and Castor leaf is taken along with rice from the third day of delivery to six day to promote sterilization.
43.	*Tribulus terrestris* L.	Zygophyllaceae	Nerungi	Paste of leaves are administered orally twice a day to cure urinary troubles.
44.	*Tridax procumbens* L.	Asteraceae	Thatha poo	Juice of the leaves is applied on the wounds, cuts and bruises.
45.	*Vitex negundo* L.	Verbenaceae	Notchi	The dry leaves are burned and the smoke is inhale twice a day. The juice of the leaves is instilled in the nostril to treat cold and cough.

Traditional healers, use their eyes, ear, nose and hands to diagnose the diseases, this way of diagnose is interesting because they live in interior areas and lake the use of modern scientific equipment for treatment, they however treat diseases using medicinal plants (Santhya et al., 2006). Over use of plants affect the flora it will leads to harmful for future ancestors. The ancestors of tribes and rural peoples had acquired some knowledge about medicinal plants by their experiences. Otherwise technically advanced people need to understand the problems of destruction before conserving the plants.

3.1 Conclusion

This study shows that knowledge and usage of herbal medicine for the treatment of various ailments among rural people is still a major part of their life and culture. They use forest plants, weeds, fruit plants, vegetables, spices, ornamental plants, ferns and many others as traditional medicine. Although many of these species are known as medicinal plants, others are mainly used for non-medicinal purposes. The data collected show that majority of the remedies are taken orally. Most of the reported preparations are drawn from a single plant; mixtures are used rarely. In other parts of the country, the use of mixtures of plant species in treating a particular ailment is fairly common. 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 health care system of this rural community in Athoor taluk of Tami Nadu.

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