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Original Research Article

Ethnomedicinal Plants Used by Rural People in Salem District, South India with Reference to Important Ailments

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Abstract

The observations of present investigation showed that traditional medicine plays a vital role among the rural people of Salem district, Tamil Nadu, India. In Salem district, the traditional medicinal method is very effective, supportive and successful in curing snake bite, jaundice, diabetes, fever, urinary troubles and skin diseases. Tribals and villagers mainly depend on the plants for all ailments. They are perceptive of the plant remedies for common diseases such as jaundice, diabetes, dysentery asthma, rheumatism, skin diseases, cough, urinary troubles, fever, dyspepsia and constipation. Analysis of the present study revealed that different parts of the plants such as bark, flower, fruit, latex, leaves, roots, seeds, stems, tubers and whole plants are being used as medicines. Among these parts 61% of medicines were from leaves. This was followed by flowers (10%), seeds (9%), root-tubers (8%), latex (6%), bark (3%), whole plant (2%) and stem (1%). They are also very popular with the antidotes for scorpion bite and snake bites.

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Introduction

People who live in rural areas of the Asia-Pacific are familiar with the medicinal properties of plants, growing close to their homes, in the open fields, water margins, waste lands, both inside and outside the nearby forest areas and under different growth conditions. Most of the plant materials collected is used fresh either to obtain the extract from the whole plant or parts thereof, whether they be leaves, roots, flowers or fruits. In case of woody forms, mostly the bark, roots and other parts are used. Carminatives like ginger, cloves and coriander are also usually added as fresh or dried materials. Though dried plant parts are frequently used, often the easy availability of fresh material is a critical point and the herbal doctor in the village is well familiar with various plants he/she needs, their growth patterns, seasonality, habitat and other details. Such details were usually passed on in the past from parent to offspring in the family and uses of plants and the various combinations or mixes made were kept as a family secret. Along with the development of knowledge at family level, tremendous progress has been made at using the plant products at professional level in different societies, which have grown into branches of science in their own right. Most of the methods and uses were taught orally

and through demonstration, and very few records or writings were maintained. Such professional practices are continuing even today. As villagers migrated to city, losing touch with past practices or when there was no heir apparent to the village doctor, the precious knowledge was usually lost, although there are a number of treatises that exist in different countries (Rao and Ramanatha Rao, 1998).

Refinement of such practices lead to the well established Asian systems of medicines including Ayurveda and Siddha of India, Unani system of middle and Far East Asia, Ying and Yan principles of Chinese herbal medicines, Jamu of Indonesia and others (Natesh, 2000). About 400 plant species are used in regular production of Ayurvedic, Unani, Sidhha and tribal medicine (Rajasekharan and Ganeshan, 2002). Recently, a regional inventory of medicinal and aromatic plants and polyherbal formulations dealing with 65 Indian medicinal plants; 10 important Indonesian and 25 medicinal plants of Malaysia, along with important traditional and polyherbal formulations used in these countries has been brought out by CIMAP and supported by the Department of Biotechnology, Government of India (Anonymous, 1998). It is only in the last 40 to 50 years that many of the medicines were produced industrially and sold in shops and markets with trade names. The practice of various indigenous medicinal systems is flourishing in different countries even today, with nearly 80% of the rural population still dependent on plant-based medicines for primary health care (Sasson, 1996; Natesh, 2000).

In India, about 2500 species are used for medicinal purposes, and about 90% of the medicinal plants provide raw materials for the herbal pharmaceuticals, which are collected from the wild habitats (Rajasekharan and Ganeshan, 2002). About 2000 medicinal plants species are reported from Malaysia (Latif, 1997), while in another account 1200 species have been reported to have potential pharmaceutical value, some of which are being used as herbal medicines.

The investment so far on traditional medicine and on the conservation and research activities of medicinal plants of India has been rather skewed. No has shown much interest except some of the ethnobotanists and research organizations. Ironically enough, whereas all other systems of traditional medicine flourished well in India and received encouragement from both the people and the Government, their very originator the 'folklore medicine' who gave birth to traditional medicine remained largely neglected and left to die its natural death. Salem district of Tamil Nadu has more diversified people and indigenous medicinal plants because this district covers about 70% of villages and hilly areas. Also the knowledge on the medicinal uses of plants are still much surviving in these areas. The present study is aimed to trace out the common ethnomedicinal plants used by rural people with reference to important ailments, in selected villages of Salem district (plains and hills), Tamil Nadu.

Materials and methods

Salem is one of the most significant districts of Tamil Nadu. It lies between 11°14′46″ and 12°53′30″ North latitude and between 77°32′52″ - 78°53′05″ East longitude. The district is mountainous in nature. The utilization of plants for treating many ailments is known to various households. The elderly people have wide knowledge of the ethnomedicinal plants found in the nearby forest. They are excellent identification, use, extraction, preparation and applications of plants and herbs in several kinds of disorders locally occur in the area. The use traditional information in health care method where herbs, plants and roots of some wild trees and plants locally available are used for treating the diseases. They have indigenous mode of treatment for various kinds of ailments with the help of local herbal medicines. To study ethnobotany, the plant human interaction has to be observed carefully within the dynamic ecosystem in which they exist.

A proforma was designed for recording information on usage of plants from various sources. It provides data on botanical name, local name, concerned tribe, plant part used, the usage and location of sources. For comparison of Ethnobotanic uses, Dictionary of Indian Folk Medicine and Ethnobotany (Jain, 1991), A manual of Ethnobotany (Jain and Goel, 1995), the nature and status of Ethnobotany (Ford, 1978), have been used.

Information was noted in the field on plant species, data were collected about the informants, the local name(s) of plants, for food, medicines and other materials relationships as also culture of the folk. The information collected was considered notable when the researcher himself observed its actual application or three informants in the same or different villages reported a similar use. Each of the plant material was assigned field book number and reported as to family, scientific name

of species, vernacular name (Tamil), parts used, method of drug preparation, mode of applications, dosage and duration were documented (Parinitha et al., 2005) and medicinal uses, plant parts that were identified as having use in ethnobotany were collected and compressed plant species collected were identified with the help of relevant published floras (Gamble, 1936; Henry et al., 1987; Henry et al., 1989; Matthew, 1983).

Results and discussion

While analyzing the practice of home-made remedies it could be inferred that there is difference in the herbal practice among these two different sections of people, *viz.*, plain and hilly areas. For curing a particular type of ailments, different plants are administered. For example, to cure disease like asthma besides *Justicia*, *Solanum* spp., *Datura* spp., *Nelumbo* sp. and *Mentha* sp. are administered (Table 1). Analysis of the present study revealed that different parts of the plants such as bark, flower, fruit, latex, leaves, roots, seeds, stems, tubers and whole plants are being used as medicines. Among these parts 61% of medicines were from leaves. This was followed by flowers (10%), seeds (9%), root-tubers (8%), latex (6%), bark (3%), whole plant (2%) and stem (1%) (Fig. 1).

Table 1. Medicinal herbals used by rural people in plain and hilly areas.

S. No.	Ailments cured	Plants used in plains (Family)	Plants used in hills (Family)
1.	Asthma	*Mentha arvensis* L. (Lamiaceae) *Justicia adhatoda* Nees. (Acanthaceae) *Nelumbo nucifera* Gaertn. (Nymphaeaceae)	*Solanum trilobatum* L. (Solanaceae) *Justicia adhatoda* Nees. (Acanthaceae) *Datura metal* L. (Solanaceae)
2.	Cough	*Enicostemma axillare* Ray. (*Acalypha indica* L. (Euphorbiaceae) *Justicia adhatoda* Nees. (Acanthaceae)	*Lawsonia inermis* L. (
3.	Cut wounds	*Tridax procumbens* L. (Asteraceae) *Phyla nodiflora* L. (Verbenaceae)	*Garuga pinnata* Roxb. (*Ipomoea reniformis* Jacq. (Convolvulaceae)
4.	Diabetes	*Gymnema sylvestre* R. Br. (Asclepiadaceae) *Syzigium cuminii* Skeel. (Myrtaceae)	*Gymnema sylvestre* R. Br. (Asclepiadaceae) *Cassia javanica* L. (Caesalpiniaceae)
5.	Dysentery	*Punica granatum* L. (Punicaceae) *Leucas aspera* L. (Lamiaceae) *Moringa oleifera* L. (Moringaceae) *Carum copticum* Benth. (Apicaeae) *Musa paradisiacal* L. (Musaceae) *Azima tetracantha* L. (Salvadoraceae) *Solanum trilobatum* L. (Solanaceae) *Phyla nodiflora* L. (Verbenaceae) *Mimosa pudica* L. (Mimosaceae) *Ocimim sanctum* L. (Lamiaceae) *Cardiospermum halicacabum* L. (Sapindaceae) *Hibiscus cannabinus* L. (Malvaceae)	*Cocculus hirsutus* Diels. (Menispermaceae)
6.	Fever	*Vitex negundo* L. (Verbenaceae) *Azadirachta indica* A. Juss. (Meliaceae) *Leucas aspera* L. (Lamiaceae) *Andrographis paniculata* Nees. (Acanthaceae)	*Anisomelos malabarica* R.Br. (Lamiaceae) *Pavonia zeylanica* L. (Malvaceae)
7.	Head ache	*Citrus limon* Burm f. (Rutaceae) *Achyranthes aspera* L. (Amaranthaceae)	*Coriandrum sativum* L. (Apiaceae) *Allium sativum* L. (Liliaceae) *Vitex negundo* L. (Verbenaceae)
8.	Jaundice	*Phyllanthus amarus* Sch. & Thon. (Euphorbiaceae) *Leucas aspera* L. (Lamiaceae)	*Phyllanthus amarus* Sch.&Thon. (Euphorbiaceae) *Leucas aspera* L. (Lamiaceae)
9.	Mouth ulcer	*Centalla asiatica* Urban. (Apicaceae) *Solanum nigrum* L. (Solanaceae)	*Jatropha glandulifera* Rox. (Euphorbiaceae)
10.	Pimples	*Ocimum basilicum* L. (Lamiaceae) *Citrus limon* Burm. f. (Rutaceae) *Santalum album* L. (Santalaceae) *Aloe vera* Burm. (Liliaceae) *Mentha arvensis* L. (Lamiaceae)	*Commelina benghalensis* L.(Commelinaceae)

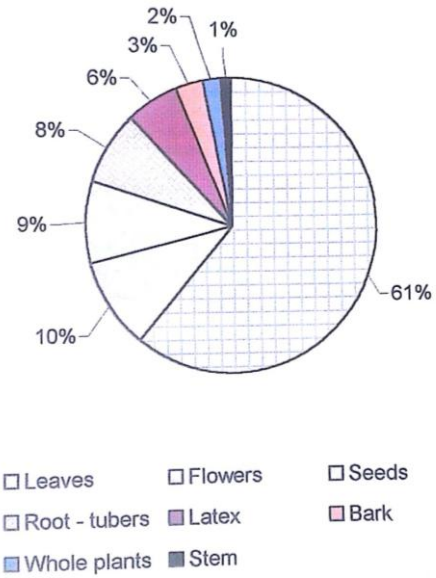

Fig. 1: Parts of the medicinal plants used by the respondents.

In this study about 85.25% of medicinal plants used by the beneficiaries, were reported to be easily available at their homested medicinal gardens and 14.72% were not easily available and hence the respondents had to buy the medicinal plants from local market. The analysis of the study revealed that around 70% of respondents adopt home remedies for its effective remedy, 12% of respondents adopt homemade remedies for its easy availability, 10% of respondents adopt homemade remedies for its low cost and 8% of the respondents adopt homemade remedies for their no side effect.

The present research is notable that people of rural and tribal community used highest remedies from plants for treating the ailments in the studied area were: jaundice, snake bite, malarial fever, asthma, diabetes, skin diseases, cough, dysentery, urinary troubles, these medicinal species are used as entire or their parts in the form decoction, extract, powder, latex, juice and paste. The medicinal uses are qualities with details such as the part(s) used singly, combination with other ingredients or mixed with other plants, method of preparation and mode of administration were noted in the field. The tribal and rural people needs essentially on plants for medicine, food, fodder, nuts, craft, agricultural tools, house construction and for other necessities. Plant utilized to snake and scorpion bites, fever, diabetes, jaundice, cough, skin diseases urinary troubles, dysentery, headache and toothache (Rajan et al., 2002; Ayyanar and Ignacimuthu, 2005; Udayan et al., 2006; Venkataswamy et al., 2010; Umapriya et al., 2012; Ramana Naidu et al., 2012).

Medicinal plants performance an important role in providing information to the researchers in the field of ethnopharmacology and ethnobotany. Clinical and pharmacological studies will support in the confirmation of the efficiency of the report plants. The utilization of the reported plant species were collected from the regional people, who utilize them as tradition. Therefore, it is not proper to use them without consulting an experienced Siddha, Ayurveda, Naturopathy and Homeopathy medicine practitioners. For the profit of the community the documented plant species should be protected and also steps be taken for propagation as well as conservation.

Conflict of interest statement

Authors declare that they have no conflict of interest.

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