



INDIGENOUS KNOWLEDGE ON SOME MEDICINAL PLANTS AMONG THE MALAYALI TRIBALS IN YERCAUD HILLS, EASTERN GHATS, SALEM DISTRICT, TAMIL NADU, INDIA.

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ABSTRACT

The present work was to identify and enumerated some of the plant species used for medicinal purposes by the Malayali tribals of Yercaud Hills, Salem district, Tamil Nadu, India. The study was conducted among the Malayali tribals of Yercaud hills through survey, personal interviews and field visit along with the informants during November 2012 – March 2014. Informants were selected based on their knowledge of medicinal plants. A total of 51 plant species distributed in 50 genera belonging to 38 families used to cure various ailments by Malayali tribals. Traditional healers were using these plants to cure beetle bite, trismus, snake bite, chest pain, dental ache, flatulence, Normal delivers, Paralysis, Migraine, bone fracture, rheumatism, Oligospermia, eczema, cycosis, dysuria, wound healing, piles, Kidney stone, liver disorder and asthma. The present investigation revealed that medicinal plants still play a vital role in the primary health care of the people. The information gathered from tribals is useful for the further research in the field of ethnobotany, taxonomy. This study offers a model for studying the relationship between plants and people and traditional remedies of great therapeutic importance. The value of using ethnobotanical information is to initiate drug discovery efforts. This study also gathered a broad spectrum of information concerning medicinal plants used by tribals.

KEY WORDS: Malayali tribals, Yercaud hills, ethnomedicinal plants.



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INTRODUCTION

The ethnic people all over the world have emotional and symbiotic relationship with biodiversity which they have been protecting and conserving since ancient times. The knowledge of tribes on the value of plants has helped them to have a sense of responsibility injudicious use of the plant resources and also to conserve and pass on the people are very familiar with the knowledge of plant species in their ecosystems and also understand the ecological interactions of the components of their resources. The indigenous knowledge of plants among the local people is essential for the identification, cataloging and documentation of plants (Kadavul and Dixit, 2009). Therefore the present paper provides information on the plant based ethnomedicinal practices followed by tribal peoples of yercaud hills. Yercaud hills is a major point in the Eastern Ghats, located in the forest types ranges from evergreen to moist deciduous with the altitude of 1515 meters (4970 Ft) above sea level the highest point in Yercaud is the Servarayan temple, at 5,326 feet (1.623 m) lies between 11⁰45'56" N latitude and 78⁰17'55" E longitude. The temperature ranges from 13⁰ C to 29⁰ C on the peaks and 25⁰ C to 40⁰ C at the foot - hills. The average annual rainfall is around 1500 mm – 1750 mm. The soil is deep and non-calcareous. Malayali tribals are typically hill tribals present in the foot-hills of Yercaud hills. Malayali simply means a hill person an appellation distinguishing them from the people of the 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 Chennai, Tamil Nadu) between seventh and eleventh centuries. The tribals are mostly working as casual laborers in coffee estates. They are cultivating food grains, fruits and vegetable (Alagesaboopathi *et al.*, 1996). Most of the Malayali tribes have a great knowledge of medicinal plants that are used for first aid remedies to treat cough, cold, fever, headache, poisonous bite and some other ailments. A few reports on ethnomedicinal uses of plants in the forests of Yercaud hills

and its adjoining areas were available (Udayan *et al.*, 2006; Kadavul and Dixit, 2009; Parthipan *et al.*, 2011; Senthilkumar *et al.*, 2013). All these studies were conducted to document the information on traditional and cultural practices of the varied people residing in and around the study region, but there is no such comprehensive study on this region particularly Malayali tribes and also hills as whole. Therefore, the present study aims to identify and document, some of the plant species used for medicinal purposes by the Malayali tribals of Yercaud hills, Salem district, Tamil Nadu, India based on the field survey.

MATERIALS AND METHODS

During the course of the investigation, several periodical field trips were conducted from November 2012 – March 2014 among the Malayali tribals in Yercaud Hill. Ethnomedicinal data were collected from traditional healers (comprising of 26 males and 8 females were identified between the ages of 35 – 80) of the study area who have much knowledge of medicinal plants. The interviews were conducted in the local language (Tamil), ethnomedicinal information included with the local name of the particular plant, parts utilized, medicinal uses and methods of preparation (i.e., decoction, paste, powder and juice) and forms of usage either fresh or dried and mixtures of other plants used as ingredients. The collected ethnomedicinal information was recorded on field note books and plants were identified using the Flora of the Presidency of Madras (Gamble, 1935) and Flora of Tamil Nadu-Carnatic (Matthew, 1983). Plant species to be identified and further purpose to be kept in our Botany department, Vivekanandha College of Arts and Sciences for women (Autonomous), Elayampalayam, Tiruchengode, Namakkal(DT).

RESULTS AND DISCUSSIONS

The study revealed that the tribal people of study area use 51 plants species belonging to 38 families and 50 genera to treat various ailments such as beetle bite, trismus, snake

bite, chest pain, dental ache, flatulence, Normal deliver, Paralysis, Migraine, bone fracture, rheumatism, Oligospermia, eczema, cycolosis, dysuria, wound healing, piles, Kidney stone, liver disorder and asthma. Among 51 plant species herb (25 species) were found to be most used plants followed by shrub (9 species), tree and climber (7 species), undershrub (2 species) and parasite (1 species). The most dominant plant parts in the study were leaves (18 species), whole plant parts (8 species), bark (7 species), flower (5 species) other parts with low numbers are listed; rhizome (4 species), root (3 species),

pulp (2 species), stem, latex, fruit and seed (1 species) were documented. For each species botanical names, family, local name (Tamil), parts used, method of preparation, administration and ailments treated are provided. The medicinal uses of plants gathered in the study were compared with the previously published information from Yercaud hills (Udayan *et al.*, 2006; Kadavul and Dixit, 2009; Parthipan *et al.*, 2011; Senthilkumar *et al.*, 2013) and also from Eastern Ghats of Tamil Nadu (Dhatchanamorthy *et al.*, 2013; Vaidyanathan *et al.*, 2013; Salai Senthilkumar *et al.*, 2014; Vaidyanathan *et al.*, 2014).

Table 1
List of medicinal plants used by Malayali tribals in Yercaud Hills, Salem district, Tamil Nadu, India.

S. No	Ailments	Botanical name /Vernacular Name/Family	Parts Used	Methods of Preparation/Dosage
1	Antidote for poisonous bite a. Beetle bite	<i>Argemone mexicana</i> , L./Brahamadandu/Papaveraceae	Stem	Stem is made into paste and applied externally.
		<i>Cassia occidentalis</i> , L./Utharam/Caesalpiniaceae	Leaves	Leaves powder mixed with coconut oil and apply externally.
	b. Snake bite	<i>Thunbergia fragrans</i> , Roxb/Vellopoosedi/Acanthaceae	Leaves	Leaves paste mixed with hot water and given orally.
		<i>Toddalia asiatica</i> , Lamk/Mulaikaradannullu/Rutaceae	Root	Root powder is mixed with hot water is given orally. Dose: thrice a daily after meals for 7 days.
2	Asthma	<i>Tragia involucrate</i> , L./Ganjamkorai/Euphorbiaceae	Root	Root paste is given orally.
3	Bone fracture	<i>Buchanania axillaris</i> (Desr) Ramamoorthy/Sullukimaram/Anacardiaceae	Bark	The bark is made into paste and applied externally.
4	Chest pain	<i>Capparis divaricata</i> , Hk.f & T/Sellapattai/Capparidaceae, <i>Enicostemma littorale</i> , Blume/Vellaragu/Gentianaceae, <i>Hemidesmus indicus</i> , R.Br/Nannari/Asclepidaceae	Bark and whole plant parts	Different plants of mentioned parts are made into powder and mixed with hot water to give orally.
5	Dental ache	<i>Plumbago zeylanica</i> , L/Kuttanarainje/Plumbaginaceae	Root	Root is dipped in the castor oil and placed on the painful teeth.
6	Dysuria	<i>Phyllanthus virgatus</i> , G. Forst./Keelannelli/Euphorbiaceae	Whole plant parts	Whole plant parts are made into paste and mixed with the curd and given orally.
	Flatulence	<i>Caralluma edulis</i> /Kallaimalayan/Asclepid	Pulp	The fresh pulp is given as such

7		aceae <i>Cassythafiliformis</i> , Linn/ Kothan/ Hernandiaceae	Leaves	The fresh leaves along with the seeds of pepper and bulb of garlic is blowed into the ears.
8	General weakness	<i>Cocculus hirtus</i> , Diels/Kattukodi/Menispermaceae	Whole plant parts	Whole plant parts are made into powder and mixed with cow milk and given orally; it gives energy to the body.
9	Hungry	<i>Arachishypogaea</i> , Willd/Kadalli/ Fabaceae, <i>Datura discolor</i> , Bernh/ Karuumathai/ Solanaceae, <i>Hibiscus rosa-sinensis</i> , Linn/ Sembaruthi/ Malvaceae	Seeds, Leaves and Flowers	Different plants of mentioned parts are made into power to give orally; it stimulates the hungry.
10	Kidney stone	<i>Anisomeles malabarica</i> , R.Br/Peyameratti/Lamiaceae, <i>Coccinia indica</i> , W & A/Kovay/Cucurbitaceae, <i>Curculigo orchioides</i> , Gaertn/Nilapanaikilangu/Amaryllidaceae, <i>Desmodium gyrans</i> , DC//Fabaceae, <i>Drosera indica</i> , L/Panithangi/Droseraceae, <i>Hemidesmus indicus</i> , R.Br/Nannari/Asclepidaceae, <i>Hibiscus rosa-sinensis</i> , Linn/Sembaruthi/Malvaceae, <i>Moringa oleifera</i> , Lamk/Murugai/Moringaceae, <i>Musa paradisiaca</i> , Linn/Vazhai/Musaceae	Whole plant parts, Rhizome, Leaves and Flower	Different plants of mentioned parts are made into powder and mixed with hot water to give orally.
11	Liver disorder	<i>Anogeissus latifolia</i> , Wall/Namai/Combretaceae, <i>Embllica officinalis</i> , Gaerth/Nelli/Euphorbiaceae, <i>Hibiscus rosa-sinensis</i> , Linn/Sembaruthi/Malvaceae, <i>Nerium indicum</i> , Mill/Ratharali/Apocynaceae	Bark and Flowers	Different plants of mentioned parts are made into powder and mixed with hot water and given orally.
12	Migraine	<i>Asclepias curassarica</i> , L/ Mookkuthipoodu /Asclepiadaceae	Leaves	The fresh leaves are grinded with little water and made into juice; juice extracts is poured in the nose to relief the pain.
13	Normal delivery	<i>Ipomaea obscura</i> , Ker- Gawl/Sundan kodi/Convolvulaceae	Leaves	Leaves juices with a glass of hot water; give this preparation at bed time to release the fetus.
14	Oligospermia	<i>Asparagus racemosus</i> , Wild/Thanervittan kilangu/Liliaceae, <i>Curculigo orchioides</i> , Gaertn/Nilapanaikilangu/Amaryllidaceae	Rhizome	Different plants of mentioned parts are shade dried made into powder and mixed with cow milk to given orally it used to increase the sperms count.
15	Paralysis	<i>Urena lobata</i> , L/Kattupuluchai/Malvaceae,	Whole plant parts	Whole parts are made into powder to given orally.

16	Piles (Hemorrhoids)	<i>Centella asiatica</i> , Urb/Vallarai/Apiaceae, <i>Euphorbia hirta</i> , Linn/Amampatchaiarisi/Euphorbiaceae, <i>Terminalia chebula</i> , Retz/Kadukkai/Combretaceae	Whole plant parts, Leaves and Fruit	Different plants of mentioned parts are made into powder along with the seeds of cumin and the powder is given orally.
		<i>Holarrhena pubescens</i> (Buch.Ham) Wall.ex.G.Don/Kudasapalli/Apocynaceae	Bark	Bark is made into powder along with the Seeds of cumin and bulb of garlic to mix with hot water to give orally.
17	Rheumatism	<i>Shorea roxburghii</i> , Roxb/Kunkilium/Dipterocarpaceae	Bark	Bark is made in to powder to give orally.
18	Skin diseasea a. Cycosis	<i>Asclepias curassarica</i> , L/ Mookkuthipoodu /Asclepiadaceae	Leaves	Fresh Leaves are added to the boiling water while taking bath.
	b. Eczema	<i>Erythroxylum monogynum</i> , Roxb/Sembulichaana/Erthroxyaceae	Bark	Bark is made into a chrim to apply on the affected part externally.
		<i>Biophytum sensitivum</i> , DC/Melsurungi/Geraniaceae	Whole plant parts	Whole plant parts are made into powder and mixed with salt to apply externally.
	c. Pimples	<i>Biophytum sensitivum</i> , DC/Melsurungai/Geraniaceae, <i>Nymphaea nucifera</i> /Thamarai/Nelumbonaceae, <i>Ottelia alismoides</i> , Pers/Neerithamarai/Hydrocharitaceae	Whole plant parts and flowers	Different plants of mentioned parts are made into paste and applied externally.
d. Rashes	<i>Mimosa pudica</i> , Linn/Thottal surungi/Mimosaceae	Leaves	Leaves paste mixed with turmeric and applied externally.	
19	Sprain	<i>Sida cordifolia</i> , I/Nilapadre/Malvaceae	Leaves	Leaves are made into paste to apply the painful part externally.
20	Swelling	<i>Aloe barbadensis</i> , Mill/Katralai/Liliaceae	Fleshy leaf	Fleshy leaves are treated with fire and tied over the swelled area.
		<i>Catharanthus roseus</i> , Don/Katcharali/Apocynaceae	Leaves	Leaves paste applied externally.
21	Trismus	<i>Thunbergia alata</i> , Bojer.ex.sims/Manthasedi/Acanthaceae	Leaves	The fresh leaves are made into paste along with the seeds of pepper and bulb of garlic and the paste is mixed with hot water to give orally.
22	Wound healing	<i>Anisochilus carnosus</i> , Wall/Sethupunchedi/Lamiaceae	Leaves	Leaves paste applied on the wound affected part externally.
		<i>Cryptolepis buchmanii</i> , R. & S/Palkodi/Asclepidaceae	Latex	Latex is applied on the wound affected part externally.
		<i>Oxalis corniculata</i> , Linn/Puliyarai/Gerniaceae	Leaves	Leaves paste apply on wounds.

CONCLUSION

The present investigation revealed that medicinal plants still play a vital role in the primary health care of the people. The information gathered from tribals is useful for the further research in the field of ethnobotany, taxonomy. This study offers a model for studying the relationship between plants and people and traditional remedies of great therapeutic importance. The value of using ethnobotanical information is to initiate drug discovery efforts. This study also gathered a broad spectrum of information concerning medicinal plants used by tribals.

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