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ETHNOGYNAECOLOGICAL DISORDERS OF MEDICINAL PLANTS USED BY TRIBAL PEOPLE IN GEDAMALAI, NAMAKKAL DISTRICT, SOUTHERN EASTERN GHATS, TAMILNADU

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ABSTRACT: The present exploration is an attempt to an ethnobotanical study was conducted in Eastern Ghats of Tamil Nadu, for the investigation of a medicinal plant used to treat several diseases by the local health healers by Gedamalai Tribes, Namakkal District. Data were collected during March 2015-January 2016. Quantitative analysis, including the informant consensus factor and use-value was performed to evaluate the medicinal plants. A total of 40% of women reported high affiliation with herbal remedies for gynecological problems, while others attribute was also positive for medicinal plants. A total of 27 species belonging to 23 genera and 19 families were recorded. This result also proved that the plant is used either the whole plant or various parts like leaves, stem, root, flower, seed, *etc.* The plant parts are used in the form of decoction, juice, paste, and powder. These plants were used to treat gynecological disorders. The botanical names, families, vernacular names were also given along with medicinal uses.

INTRODUCTION: Ethno-medicinal studies are significant for the discovery of new crude drugs from reporting indigenous medicinal plants. Right from the commencement of ethnobotany with special emphasis on the documentation of traditional medicinal, the population in such countries is dependent on traditional medicines^{1,2}. Since time immemorial, man has used various parts of plants in the treatment and prevention of many ailments³. According to estimations, more than 50,000 flowering plants have been used for medicinal purposes throughout the world⁴.

India is where Siddha and Ayurveda medicines are common, and the Traditional healers, spread all over the country have immense knowledge in curing many human diseases by using medicinal plants⁵. Indigenous Knowledge is a potential tool in searching for new economic plants for uses of medicinal plants for various purposes by tribal.

Ethno-gynecology is a traditional approach of indigenous tribes to deal with female health issues. Medicinal approaches or knowledge incorporating plants or any other natural / spiritual therapies used to treat gynecological problems such as abortion, menstrual pain, menopause, morning sickness, leucorrhoea, infertility, delivery problems, among others, are taken into consideration^{6,7}. Gynecology is the medical treatment of the female reproductive system (uterus, vagina, and ovaries) health. Ethnogyneacology is an emerging new branch that deals with the healing of ailments among tribal

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women, for example, abortion, menstrual trouble, leucorrhoea, anti-fertility, and delivery problems⁸. Menstrual disorders are generally not perceived as major health concerns by global health organizations. These ailments require effective, safe medications because they can disrupt women's daily activities. Due to limited access to analgesics and sanitary facilities, women in various localities across the globe (Latin, America, Africa, or Asia) prefer traditional medicines,⁹. Ethno-Medicinal research is important aspects of ethnobotanical research. Tribal people are very knowledgeable about the use of plants against various diseases. Ethnogynaecology is a new field of study that deals with various diseases among women in tribal societies related to sterility, conception, abortion, *etc...* very little work has been done on the ethno-gynaecological use of plants in the treatment and healthcare programmed of women. This study aims to record information on medicinal plants that are being used from traditional medicinal practitioners plant species used effectively to treat the

gynecological disorders have been discussed in detail Gedamalai used for gynecological disorders. In the present work, 27 plant species were used effectively to treat gynecological disorders.

MATERIALS AND METHODS: The ethnobotanical study was carried on a survey basis. The survey regarding the usage of medicinal plants available in the local area for treating various gynecological problems was collected by the prescribed procedure¹⁰. Extensive field trips were conducted between collected during March 2015-January 2016 in the Gedamalai, Namakkal district, Tamil Nadu. The information on gynecological uses of plants was collected by interviews with old age members of Gedamalai tribe, tribal healer and mid tribal wife. The plant species were identified with the help of floras¹¹ and documented. Information collected on ethno-gynecology was assessed in terms of Botanical name, Vernacular name, Habit, Family, Useful Parts, Ailments, and Therapeutic action.

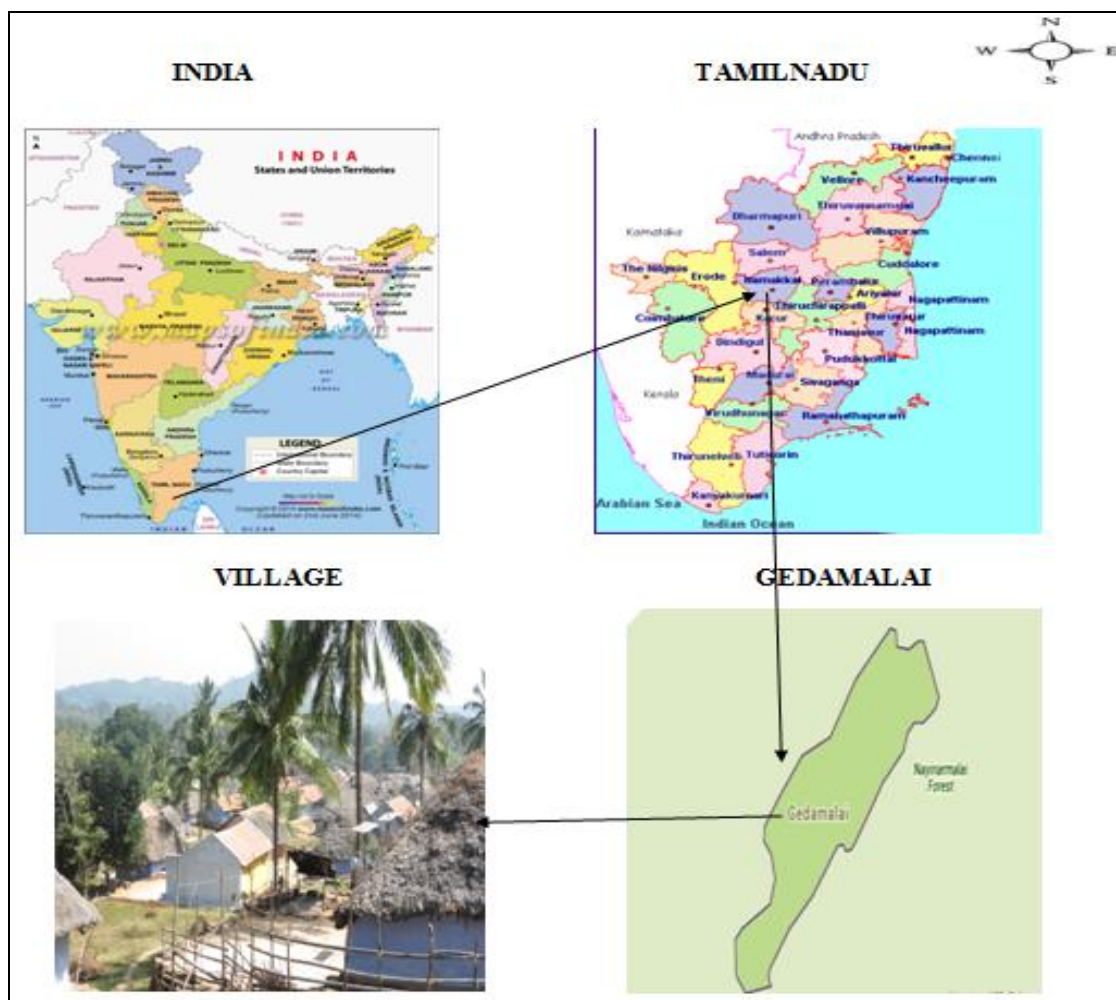


FIG. 1: STUDY AREA MAP



FIG. 2: INTERACTION WITH TRADITIONAL HEALERS DURING DATA COLLECTION

RESULTS AND DISCUSSION: Gedamalai region people were using 27 species of plants belonging to 19 families **Table 1** for medicinal use. Among them 10 were herbs, 6 were shrubs, 2 were small trees, 9 were big trees, and 2 were climbers. The most commonly represented families were Caricaceae (2), Caesalpiniaceae (2), Pedaliaceae (2), Moraceae (2), Meliaceae (2) Mimosiaceae (2) and Fabaceae (3) Asclepidaceae, Apocynaceae, Solanaceae, Sapindaceae, Gentiaceae, Acanthaceae, Apiaceae, Poaceae, Euphorbiaceae, Myrtaceae, Liliaceae (1) and Malvaceae (1 species each).

TABLE 1: MEDICINAL PLANTS USED FOR THE TREATMENT OF ABORTION

S. no.	Scientific Name	Vernacular Name	Habit	Family	Part Used	Therapeutic Action
1	<i>Carica papaya</i> , Linn.	Ppali	Small Tree	Caricaceae	Fruit	Tender fruit paste latex is administered daily for five days; it causes abortion up to 5 months of pregnancy.
2	<i>Sesamum indicum</i> Linn.	Ellu	Herb	Pedaliaceae	Seed	Seeds Soak overnight and filter the sesame water drinking daily for 3 days it causes abortion up to 3 months pregnancy
3	<i>Calotropis gigantea</i> (L.) Ait.f.	Erukkan	Shurb	Asclepiadaceae	Leaves	Fresh leaves are inserted are vagina to cause abortion up to 3 months

TABLE 2: MEDICINAL PLANTS USED FOR THE TREATMENT OF AMENORRHOEA

S. no.	Scientific Name	Vernacular Name	Habit	Family	Part Used	Therapeutic Action
1	<i>Carica papaya</i> , Linn,	Papali	Small Tree	Caricaceae	Fruit	Unripe fruits are sliced after peeling and cooked along with ground coconut carnell, green chilly, onion and sufficient quantity of salt. Taken along with rice
2	<i>Tamarindus indica</i> L.	Pulliyamaram	Tree	Caesalpiniaceae	Root, Bark	The root bark is rubbed in cow's milk and taken
3	<i>Vitexne gundo</i> L.	Nochi	Shurb	Verbenaceae	Root	Fresh roots are crushed and cooked along with rice in the form of porridge and taken daily to the menstrual cycle
4	<i>Aloe barbadensis</i> , Mill.	Katralai	Herb	Liliaceae	Whole plant	The smooth gel is taken as such
5	<i>Indigofera tinctoria</i> L.	Avuri	Shurb	Fabaceae	Whole plant	Powder of plant parts are mixed with buttermilk to drink orally
6	<i>Pedaliium murex</i> Linn.	Perunerinjii	Herb	Pedaliaceae	Whole plant	Powder of plant parts are mixed with buttermilk to drink orally

TABLE 3: MEDICINAL PLANTS USED FOR THE TREATMENT OF CONTRACEPTION

S. no.	Scientific Name	Vernacular Name	Habit	Family	Part Used	Therapeutic Action
1	<i>Dodonea angusitifolia</i> L.	Virali	Shurb	Sapindaceae	Seed	Paste of seed is given orally it prevention the pregnancy

TABLE 4: MEDICINAL PLANTS USED FOR THE TREATMENT OF DYMENORROHEA

S. no.	Scientific Name	Vernacular Name	Habit	Family	Part Used	Therapeutic Action
1	<i>Enicostemma littorata</i> Blume.	Vellaragu	Herb	Gentianaceae	Whole plant	Powder along with the seeds of proper and nigella is given orally for 2-3 months
2	<i>Sesbania grandiflora</i> Pers.	Agathi	Tree	Fabaceae	Flowers	The juice of the flowers (two teaspoonfuls) is taken twice daily

TABLE 5: MEDICINAL PLANTS USED FOR THE TREATMENT OF EXCESSIVE BLEEDING AFTER DELIVERY

S. no.	Scientific Name	Vernacular Name	Habit	Family	Part Used	Therapeutic Action
1	<i>Albizia julibrission</i> Durazz	Silavanji	Tree	Mimosaceae	Whole plant	Different plant part powder is mixed with honey to taken orally for one week
2	<i>Ficus racemosa</i> L.	Attimaram	Tree	Moraceae	Fresh fruit	Fresh fruits are taken as such
3	<i>Ficus auriculata</i> Lour.	Semmiatti	Tree	Moraceae	Fresh fruit	Fresh fruits are taken as such

TABLE 6: MEDICINAL PLANTS USED FOR THE TREATMENT OF FEMALE STERILITY

S. no.	Scientific Name	Vernacular Name	Habit	Family	Part Used	Therapeutic Action
1.	<i>Azadirachta indica</i> A. Juss	Vembu	Tree	Meliaceae	Bark, Leaf, seed, fruit, flower	Different plant parts are powder along with the jiggery is taken orally
2.	<i>Melia azedarach</i> L.	Malai vembu	Tree	Meliaceae	Bark, Leaf, seed, fruit	Different plant parts are powder along with the jiggery is taken orally
3.	<i>Sida acuta</i> Burm. f.	Ariva-mooku keerai	Herb	Malvaceae	Leaf, root	10 ml leaf juice with 10 ml root decoction is given to cure impotency

TABLE 7: MEDICINAL PLANTS USED FOR THE TREATMENT OF HAEMORRHAGE

S. no.	Scientific Name	Vernacular Name	Habit	Family	Part Used	Therapeutic Action
1	<i>Solanum indicum</i> L.	Kandakathaeri	Shurb	Solanaceae	Fruit	Fruit paste is taken orally.
2	<i>Mimosa pudica</i> L.	Thottaccurungi	Herb	Mimosaceae	Leaves	Leaves are collected and made into a paste is given orally.

TABLE 8: MEDICINAL PLANTS USED FOR THE TREATMENT OF LABOUR PAIN

S. no.	Scientific Name	Vernacular Name	Habit	Family	Part Used	Therapeutic Action
1	<i>Acacia pennata</i> Wild.	Kattuchikai	Shurb	Mimosaceae	Leaves	Leaves decoction is drink orally

TABLE 9: MEDICINAL PLANTS USED FOR THE TREATMENT OF MENORRHAGIA

S. no.	Scientific Name	Vernacular Name	Habit	Family	Part Used	Therapeutic Action
1	<i>Ficus racemosa</i> L.	Attimaram	Tree	Moraceae	Fruit, leaf, seed	Different plant parts are made into powder and mixed with milk to drink orally
2	<i>Senna occidentalis</i> L.	Nattam Takarai	Shrub	Caesalpinaceae	Fruit, leaf, seed	Different plant parts are made into powder and mixed with milk to drink orally
3	<i>Asparagus racemosus</i> Wild	Tannir-vittan Kilzangu	Herb	Asparagaceae	Tuberous root	Fresh tubers roots are crushed, and 4 teaspoons full of expressed juice is mixed with sugar and taken 30 min before food for 7 days

They were using these plants to cure diseases like abortion, amenorrhoea, contraception, dysmenorrhoea, excessive bleeding after delivery, female sterility, hemorrhage, labor pain, menorrhagia, menstrual disorder, normal delivery. Medicines were prepared in the form of powder, decoction, paste, and juice. It was also observed that some plants were used in

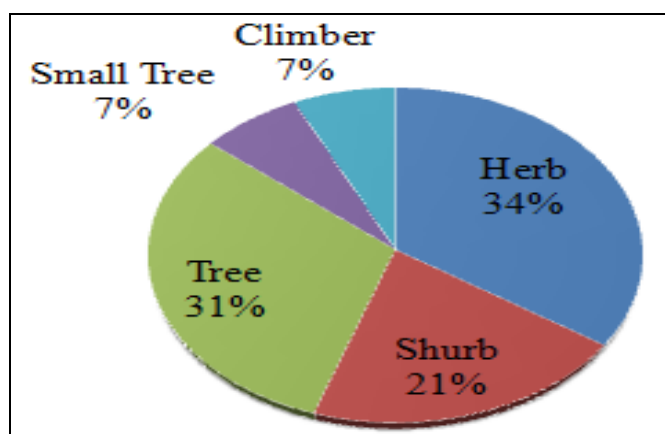
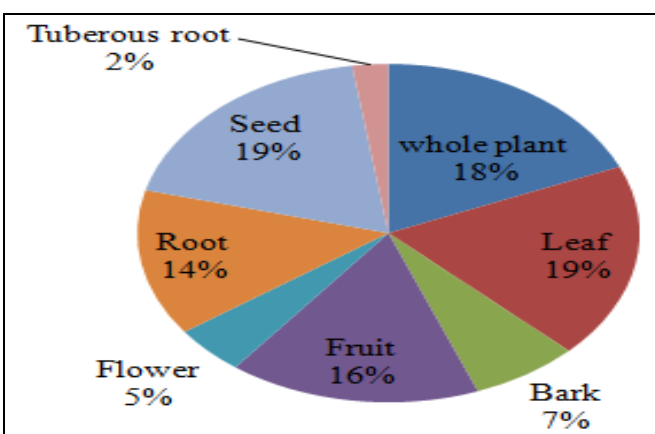
more than one form of preparation. The bark is found as the most widely used plant parts (3 species) followed by leaves (8 species), root (6 species), seeds 8 and fruits (5 species), whole plant (8 species) flower (2 species) tuberous root (1 species) were documented.

TABLE 10: MEDICINAL PLANTS USED FOR THE TREATMENT OF MENSTRUAL DISORDER

S. no.	Scientific Name	Vernacular Name	Habit	Family	Part Used	Therapeutic Action
1	<i>Andrographis paniculata</i> Wall. Ex. Nees	Siriyanangai	Herb	Acanthaceae	Whole plant	Powder of different parts are mixed with hot water to drink orally
2	<i>Centella asiatica</i> Urb	Vallarai	Climber	Apiaceae	Whole plant	Powder of different parts are mixed with hot water to drink orally
3	<i>Phyllanthus amarus</i> Schum & Thonn	Keelannelli	Herb	Euphorbiaceae	Whole plant	Powder of different parts are mixed with hot water to drink orally
4	<i>Syzygium cumini</i> L.	Naaval	Tree	Myrtaceae	Fruit, seed	Powder of different parts are mixed with hot water to drink orally

TABLE 11: MEDICINAL PLANTS USED FOR THE TREATMENT OF NORMAL DELIVERY

S. no.	Scientific Name	Vernacular Name	Habit	Family	Part Used	Therapeutic Action
1.	<i>Aburus purchellus</i> Wall	Vellaikundumani	Climber	Fabaceae	Seed	Seed paste with a glass of milk given this preparation at bedtime to release to the fetus

**FIG. 3: HABIT OF PLANTS USED IN GYNAECOLOGICAL TREATMENTS****FIG. 4: PARTS OF PLANTS USED FOR GYNAECOLOGICAL NEEDS****TABLE 12: HABIT OF PLANTS USED IN GYNAECOLOGICAL TREATMENTS**

S. no.	Habit	No. of plants
1	Herb	10
2	Shrub	6
3	Tree	9
4	Small Tree	2
5	Climber	2

TABLE 13: PARTS OF PLANTS USED FOR GYNAECOLOGICAL NEEDS

S. no.	The useful part of plants	No of species
1	Leaves	8
2	Whole plants	8
3	Flower	2
4	Fruit	7
5	Root	6
6	Tuberous root	1
7	Seeds	8
10	Bark	3

Majority of the preparation is used internally in the form of powder. The plants are used either singly or in combination with other plants also noted. The mode of preparation and administration is very easy and suitable. The treatments are not caused by any side effects. Use of 20 plants species used by Gond and Baiga women in Achanakmar wild life sanctuary for curing the gynaecological disorders¹². 30 plants species used by the tribal communities and medicinal healers of *Paschim Medinipur* district, West Bengal in gynaecological problems of Lodha women¹³. 32 plant species used by paniya tribes for gynaecological ailments¹⁴. 27 plants species used by Malayali Tribes in Ethnogynaecological disorders in Yercaud hills¹⁵. The result of the present study provides evidence that medicinal plants continue to play an important role in the healthcare system of this tribal community.

CONCLUSION: The present study was focused on rural women's health and treatment. Herbal medicines are like a blessing in rural areas, where modern medical facilities are not available or insufficient. Diversity and efficacy of medicinal plants, along with the positive attitude of local people towards herbal medicines for the treatment of gynecological problems in the study area favored the aims of this study to document this treasure. Old women had a greater relation to indigenous plants, and they have potential information on the medicinal values of the indigenous plants. Younger generations have more relation with allopathic medicines that lead to the decrease of indigenous medicinal knowledge. Furthermore, this study will also be useful for the conservation of medicinal flora in the future.

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