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Research Article

Traditional remedial plants utilized in the Paliyar's tribe handling of different skin diseases from Sadhuragiri hills, Tamil Nadu, india

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ABSTRACT

An ethnobotanical exploration, an attempt has been made to survey the indigenous knowledge on herbal medicines used as a therapy for skin disorders by the *Paliyar* tribes of Sadhuragiri hills. The purpose of this study is to assess traditional knowledge on medicinal plants which forms a baseline data for future pharmacological and phytochemical studies, to identify the vital species used for skin medicine, finding out methods for various preparations, and calculate the % informants in relation to medicinal plant use. In this study frequent field trips were made for the collection of plant specimens and information on medicinal aspects from traditional healers and women folk through questionnaire and interviews. The information of herbal preparation, parts used, mode of administration and local name was also taken during the study period. The present study has resulted in the documentation of 50 medicinal plant species belonging to 26 families and 41 genera used by the *Paliyar* for treatment of different skin ailments, viz. Scabies, Skin allergy, eczema, Wound swelling, Ring worm, itches, Heal crack, Burn wounds, Poison bite infection. The findings of present study shows documentation of 20 plant species which are found little known or less reported in available published literature. The *Paliyar* tribe lives interiorly in the forest localities and Government is making policies to rehabilitate them outside of forest areas, it is necessary to tap their rich heritable traditional knowledge on medicinal plants within time before it become vanished due to modernization. A inclusive detailed search and report on the pattern of utilization of medicinal plants by this tribe has not evidenced in the earlier publications. Therefore, present attempt has been made to document traditional knowledge of *Paliyar* tribe used to treat different skin disorders by production various herbal preparations.

Keywords: *Paliyar* tribe, Herbal medicines, Skin disorders, Indigenous knowledge, Sadhuragiri hills.

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1. INTRODUCTION

Skin diseases are significant high frequency problem of certain developing countries. In low and middle income countries, skin diseases are dominated by bacterial and fungal infections. Herbal medicines are assumed to be of great importance in the primary healthcare of individual and communities in developing countries. The Wealthiest skin is direct and indirectly related to our overall body health. It is largest organ of our body; include the terms of surface area and weight, such this skin act as a mirror to our body health and mental health¹.

Ethno-botany is the study of direct relationship between man and plants, plants are still an important sources of the world's pharmaceuticals folk-lore medicines which are frequently use in cure various skin disease diseases. Skin diseases are of common occurrence among the rural masses due to poor hygienic conditions, poor sanitation facility and

contaminated water. Traditional herbal medicines used by different communities play an important role in alleviating such skin diseases. They are safe, effective and inexpensive and in many cases, the only method of medication².

Traditional knowledge is deeply associated with biological resources, and an important aspect of primitive cultural groups, it grows close interdependence with the environment, which also covers vast and varied scopes of knowledge. From time immemorial, folk people live mainly in less accessible and isolated areas, and used to manage their livelihood directly from forests and land. The indigenous botanical knowledge of ethnic communities relating to the uses and management of wild plant resources is extensive ^{3,4}. The need for the integration of local indigenous knowledge for a phytotherapy ⁵⁻¹³.

Folk medication is used for thousands of years, made by practitioners for human health and strength, which becomes principal donors for health care of the native people ¹⁴.

Traditional folk medicine use the information, knowledge and observations made by the practitioners is totally based on hypothesis that plants contain natural substances that can promote health and alleviate illness¹⁵. Should have confidence of practice and also holds the legacy of community acceptance and skill gained by local herbalist over a period of time^{16,17}.

According to WHO more than one million people rely on herbal medicines to some extents¹⁸. There has been a great range of awareness and growing interest using medicinal plants for treating different diseases because of side effects due to chemicals and heavy cost of drugs¹⁹. Currently most of the drugs isolated from medicinal plants are used for treatment of various bacterial and other infections²⁰.

Skin diseases are one such common disorder, effecting people worldwide, particularly in rural areas of developing countries due to poor sanitation and inattentiveness to dietary food supplements²¹. It is found in all ages with an incidence of 34% of all occupational diseases²². Common skins ailments include eczema, leucoderma, ringworm, itching, wound, scabies, swelling and many others without distinct symptoms and are caused by a variety of microorganisms and uncomfortable environment²³. Microorganisms responsible for skin infections can be bacterial, fungal, parasitic or viral in nature. Many allopathic drugs prescribed for skin diseases have adverse effects. Consequently, there is an increased interest and confidence in alternative therapies, like phytomedicine, in the treatment of skin ailments²⁴. Currently, many natural products from plants have been used by various cultures all over the world to treat skin diseases or their symptoms caused by microorganisms²⁵.

Skin diseases are of common occurrence among the rural people due to poor hygienic conditions, poor sanitation facility and use of contaminated water. Traditional herbal medicines used by different communities play an important role in alleviating skin diseases such as wounds, cracks, ringworm, boils, scabies, allergy, eczema, skin burn, prickly heat and white patches of skin *etc.* Traditions of collecting, processing and applying plant based medicines are maintained by indigenous societies for long and carefully. They have been handed down by verbally from generation to generation. Human infections, particularly those involving the skin and mucosal surfaces, constitute a serious problem, especially in Tropical and sub tropical developing countries²⁶.

In India, there is significant incidence of skin diseases due to tropical climate and poor personal hygiene. Many

researchers across the country have documented the information on plants used for treating skin diseases by rural and tribal communities²⁷⁻³¹. India, with its glorious past of traditional systems of medicine and use of different plants, is one of the eight major centers of origin and diversification of domesticated taxa³². Even today large number of plants/plant extracts/decoctions or pastes are equally used by tribal's and folklore traditions and also people of rural areas of India enormously collect and preserve locally available wild and cultivated medicinal plant species and practice to treat skin infections and various ailments³³.

Medicinal Plants are used by tribes and folklore traditions in India in the treatment of skin diseases. The traditional healers are on the decline because the younger members of the tribe have started moving towards the towns and cities and are not willing to practice this form of medicine. There is danger that the knowledge of these medicinal plants will also die with them. Some of useful species are under serious threat due to unsustainable activities. Hence, a proper documentation of useful plants with their present status and local traditional knowledge as well as practices is urgently needed³⁴.

The present research article comprises the documentation of medicinal plants used as a remedy for different skin disorders by the *Paliyar* tribe. Various records on traditional knowledge of the plant species used for treatment of skin diseases by different tribal communities or local people are reported in different parts of India³⁵⁻⁴¹. But no previous records are available on the folk knowledge of plants used for treating various skin ailments by the *Paliyar* tribe of Sadhuragiri hills Tamil Nadu. Therefore, an attempt has been made for the collection of ethnomedicinal information from this tribe of the study area.

2. MATERIALS AND METHODS

2.1. Study area

Sadhuragiri hills are situated in Southern Western Ghats comes under The Srivilliputhur Grizzled Squirrel Wildlife Sanctuary Srivilliputhur Taluk, Virudhunagar and Theni district. The elevation of Sadhuragiri is 1900 meters (3,937.0 ft.) msl in Western Ghats of South India. It lies between 9° 42' - 9° 44" West latitude and between 77° 37' - 77° 41" East longitude. Sadhuragiri is in an area with a Tropical Evergreen Forest, Semi Evergreen Forest and Mixed Deciduous Forest climate. The only tribal community residing in this region is Hindu Paliyar Tribes (**Fig: 1**).

Figure 1: The over View of study region

2.2. Methods

Several field trips were carried out in Sadhuragiri hills between July 2016 and March – 2018, Covering different seasons. In order to know the phenology of the plants an Intensive and extensive field surveys were made in Sadhuragiri hills and villages in Virudhunagar and Theni district. The data were collected through repeated field visits and the careful interaction with the village people and Paliyar tribes. The collected specimens were identified taxonomically with the help of available Monographs, taxonomic revisions and floras and by using field keys⁴²⁻⁴⁵.

Ethenomedicine information was gathered from all categories of village people such as the local healers, village leaders, elderly persons and Paliyar tribes and the person having through knowledge of Medical practices. Traditional Medicines for the Treatment of different skin diseases were cross checked and confirmed with some Siddha Doctors. The information gathered from one place was also confirmed with different communities of village people, Paliyar tribes in different places of investigation. The collected plant specimens were deposited in the Department of Botany, National College (Autonomous), Tiruchirappalli, Tamil Nadu for future reference.

2.3. Paliyar Tribals

The indigenous people of the study area are called Paliyar/Paliyan. They are found in the hilly regions of Madurai, Dindigul, Theni, Thirunelveli, and Virudhunagar districts. It is believed that paliyars are indigenous people of Palani hills (Situating near Kodaikanal a famous tourist place). In the Palani hills they are found at an altitude of up to 2200m. Generally Paliyars are illiterate and they speak Tamil (Mother tongue of Tamil Nadu). Paliyars when compared to various tribal communities in Tamil Nadu constitute relatively a small group.

Paliyars can be grouped into three categories based on their life styles, namely, Nomadic, Seminomadic and Settled Nomadic, Nomadic Paliyars don't built houses, they live temporarily in rock caves called "Pudai" Semi nomadic Paliyar build temporary house and confine themselves to small territories most of their huts are dark with no window or any other opening to admit air. Settled Nomadic Paliyars are almost urbanized and live as agricultural laborers. Importance of traditional and folk medicine in the treatment of various human ailments is well recognized amongst this people⁴⁶. (**Fig: 2**).

Figure 2: Author Interaction with Paliyar's Tribes

3. RESULT AND DISCUSSION

The Paliyar tribal's knowledge of the indigenous uses of native medicinal plants needs to be studied and knowledge about the utilization of medicinal plants was documented. The present study reveals that the inhabitants of the study area are rich in indigenous knowledge of plants and their uses to treat various skin diseases. For the duration of the field survey, Ethenomedicinal information of 50 species of medicinal plants belonging to 41 genera and 26 families was composed and documented from different habitats of the study regions (**Table 1&2**).

The study shows that among the skin diseases, scabies, wounds, and boils are the most important diseases in the village. During the treatment of the diseases, various forms of preparation are used. In the subsequent enumeration, the species are arranged alphabetically. The plant species are

enumerated alphabetically by botanical name, family followed by local name, plant part used and mode of administration and duration of treatment. Medicinal plants are a rich source of organic compounds. Recent medicinal system use medicinal plants as drug agents against numerous infectious and non-infectious diseases^{47,48}.

In our study region the tribes used Herbs (20 species) as their major source of medicine followed by Trees (14 Species), (10 Species) and Climbers (6 Species) (**Fig 3**). The study provides information on 50 plant species belonging to 26 families. Euphorbiaceae and Malvaceae contributed maximum of 6 species (12%) each and 3 species (6%) in each family of Amaranthaceae, Fabaceae, Lamiaceae, Mimosaceae and 2 species (4%) from Asclepiadaceae, Asteraceae, Caesalpinaceae, Combretaceae, Liliaceae, Solanaceae, Acanthaceae and others each one family (**Fig 4**).

Figure 3: Distribution of Life forms of reported skin diseases medicinal plants.

Figure 4: Family wise distribution chart of ethnomedicinal plant species used by Paliyar skin diseases

Frequently roots, leaves, stems, barks, seeds to flowers, fruits and in some cases of entire plant parts were used for treatment based on the requirement. As far as plant parts are concerned, the Paliyar employed almost all parts of the plant in ethnomedicine. In terms of percentage of plant parts used,

leaves were observed to be top priority as used in 12 medicinal preparations (50%) followed by Bark (10%), Flower, Latex and Root (8%) Seed (6%) Whole Plant (4%) Bulbs, Fruit and Tuber (2%) (Fig 5).

Figure 5 Percentage of plant parts Paliyar used by practitioners in skin diseases

The skin diseases consequences exposed that 14 plant species (28%) are used to treat Scabies; Skin allergy was treated with 7 species (14%), Eczema, Wounds Healing and Ringworm by 6 species (12%). Itching was treated by 4 species (8%), Heal cracks by 3 species (6%), Leucorrhoea, Burns Wounds, Poison bite Infection treated using 2 species (4%) and rests of the diseases are represented by single species (Fig 6). Results revealed that the common mode of

administration is Tropical (90%) and Oral (10%) respectively according to the disease condition. As the diseases to be cured are skin disorder which consistently requires the external course of treatment. Dosage pattern have been mention anywhere available with the particular species including quantity of medicine, its regularity and duration depends mainly on the harshness of disease as well as on age of the patient.

Figure 6: Skin Disease curing percentage of Paliyar utilized plants

The study regions are rich in medicinal plants, many are still not known to us. Present investigation indicates that wildlife sanctuary area of Sadhuragiri hills is blessed with magnificent diversity of ethno-medicinal plants used to cure many diseases. The present study will give new motivation to the traditional system of healthcare. Most of the remedies are reported for first time. The population use herbal remedies for the treatment of dermatological infections and diseases. The people have a long history of traditional uses of plants. Traditional medicine is still widely practiced throughout the region; it is now fast becoming extinct due to upgrading.

A large amount of time drug is utilized in the fresh or dried state. It is found that the leafy crude drug preparation are frequently recommended as ethno medicine and followed by entire plant, stem or bark, seeds and fruits, flower, root, stem, rhizome and tuber. The most frequently used preparations being paste, powder, raw plant, juice, and decoction. The methods and period of administration may be usually different. Some remedies consist of particular herbs but supplementary than two herbs are reported in several preparations ⁴⁹.

The common 35 species used for betterment of more than one ailments are *Abutilon indicum*, *Ampelocissus latifolia*, *Argemone mexicana*, *Barleria prionitis*, *Basella alba*, *Bryophyllum pinnatum*, *Callicarpa macrophylla*, *Calotropis gigantea*, *Casearia elliptica*, *Eranthemum pulchellum*, *Ficus*

racemosa, *Holoptelea integrifolia*, *Indigofera hirsuta*, *Ipomoea carnea*, *Lepidagathis cuspidata*, *Litsea glutinosa*, *Cayratia trifolia*, *Commelina benghalensis*, *Cordia dichotoma*, *Crinum viviparum*, *Cucumis sativus*, *Curcuma longa*, *Cynodon dactylon*, *Dendrophthoe falcata*, *Phlogacanthus thyrsoformis*, *Plumbago zeylanica*, *Pogostemon benghalense*, *Solanum erianthum*, *Ruellia tuberosa*, *Solanum americanum*, *Tridax procumbens*, *Vallaris solanacea*, *Urena lobata*, *Wrightia arborea* and *Vanda tessellata*. In several cases two different parts of equal species are used together for preparation of herbal drug e.g. in treatment of boils leaf and seed paste of *Senna tora* mixed together and used externally, like as leaf and root paste of *Vitex negundo* and leaf and stem paste of *Withania somnifera* for the same disease; the leaf and bark paste of *Dalbergia sissoo* together used externally as a remedy for eczema, while in some other cases parts of two different species are used together as a remedy, e.g. leaf juice of *Abrus precatorius* and *Plumbago zeylanica* for the treatment of leucoderma. The information also was checked with available prose ⁵⁰⁻⁵².

The most cited plant species to cure skin disorders in the recent investigation are, *Azadirachta indica* A. Juss., followed by *Cassia tora* L., *Annona squamosa* L., *Pongamia pinnata* L.) Pierre, *Lantana camara* L., *Tridax procumbens* L., *Argemone mexicana* L., *Calophyllum inophyllum* L., *Andrographis paniculata* Nees., *Amaranthus spinosus* L., *Bauhinia variegata* L., *Butea monosperma* (Lam.) Taub. Similar plant use is recorded earlier in different parts of India ⁵³⁻⁵⁸.

CONCLUSION

The study depicts that the *Paliyar* folk possess very good knowledge about the herbal medicines along with their age old traditional knowledge. The *Paliyar* tribes have good knowledge of herbal plants used for treating various ailments including skin problems which they face during the routine schedule of their working in forest. The studies of different uses of plant species by the tribe provide documentation of information which is new for scientific societies. The valuable traditional knowledge of herbal medicines requires more scientific researches to check the properties of plant and phytochemical analysis for the discovery of new drugs and compounds. The vigorous constituents of conventional herbal remedies should be discovered and synthesized into new medicines of wider scopes. A huge amount of medicinal plants are used in domestic markets, due to excessive extraction of value medicinal plant species in high, there has been a serious depletion of biological resources, therefore, to introduce policies to encourage the protection of these species and support farmers and tribal people to cultivate them provide enhancement to their incomes. Due to a lack of well organized distribution of knowledge concerning these herbal remedies, it is believed that little of this knowledge will stay alive when the older generation has passed away. Several of the remedial measures are little known to the scientific field to substantiate future bioprospectives, particularly in phytotherapeutic concerns. Such study reveals overall consideration of resource utilization, which is much helpful to sustainable natural management and conservation. Therefore, through the ethnobotanical studies attention should be paid for the documentation of traditional knowledge system for the advancement of healthcare system.

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Table 1: list out the medicinal plants in Skin diseases

Botanical Name	Family	Local Name	Life form	Part (s) used	Preparation	Application	Skin Disorders	Methods of preparation and medicinal used by traditional healers.
<i>Abelmoschus esculentus</i> (L.) Moench	Malvaceae	<i>Kattu Veandai</i>	Shrub	Leaf	Paste	Topical	Scabies	50gm fresh leaves crushed made into a paste with water and the paste is externally applied twice a day to treat scabies infection.
<i>Abrus precatorius</i> L.	Fabaceae	<i>Gundumani</i>	Climber	Seed	Paste	Topical	White patches	5-10 numbers of mature seed grain mixed with root paste of <i>Plumbago zeylanica</i> is applied locally 3times a day in white patches skin diseases until cure.
<i>Abutilon hirtum</i> (LAM.) SWEET Var. <i>Hirtum</i>	Malvaceae	<i>Peruthuthi</i>	Shrub	Leaf	Paste	Topical	Scabies Skin allergy	50gm fresh leaves crushed made into a paste with water and the paste is applied externally on the skin thrice a day to treat the scabies and skin allergy.
<i>Abutilon indicum</i> (L.) Sweet	Malvaceae	<i>Thuthi</i>	Shrub	Leaf	Paste	Topical	Scabies Skin allergy	50gm fresh leaves crushed made into a paste with water and the paste is applied externally on the skin thrice a day to treat the scabies and skin allergy.
<i>Acacia nilotica</i> (L.) Willd. ex Del. subsp. <i>indica</i> (Benth) Brenan	Mimosaceae	<i>Karuvelam</i>	Tree	Bark	Paste	Topical	Eczema	50gm bark are ground to paste is applied externally to treat 3 days eczema.
<i>Acacia planifrons</i> WIGHT & ARN.	Mimosaceae	<i>Sallimaram</i>	Tree	Bark	Paste	Topical	Skin allergy	10gm of bark grain made extract is gently fried in coconut oil and the extract is applied externally to 3 days treat skin allergy.
<i>Acalypha indica</i> L.	Euphorbiaceae	<i>Kuppaimeni</i>	Herb	Leaf	Paste	Topical/ Orally	Scabies Skin allergy	50gm the extract of the fresh leaves crushed is applied externally for cure scabies and skin allergy.
<i>Acalypha paniculata</i> MIQ.	Euphorbiaceae	<i>Kattu Kuppaimeni</i>	Herb	Leaf	Paste	Topical/ Orally	Scabies Skin allergy	50gm the extract of the fresh leaves crushed is applied externally for cure scabies and skin allergy.
<i>Achyranthes aspera</i> L.	Amarathaceae	<i>Nayuruvi</i>	Herb	Leaf	Paste	Topical	Skin Allergy	10gm of fresh leaf crushed made extract is gently fried in coconut oil and the extract is applied externally to 3 days treat skin allergy.
<i>Achyranthes bidentata</i> Blume.	Amaranthaceae	<i>Sighappu Nayuruvi</i>	Herb	Roots	Paste	Orally	Leucorrhoea	10gm of young roots crushed juice are taken orally with water twice a day for cure 3 days.
<i>Aegle marmelos</i> (L.) Corr.	Rutaceae	<i>Villvam</i>	Tree	Leaf	Paste	Topical	Itches	50gm fresh leaves are made into paste with a few drops of water; the paste is applied externally on the affected skin twice a day for a period of two to three days to get relief from itches.
<i>Aerva lanata</i> (L.) Juss.ex Schultes	Amarathaceae	<i>Poolai</i>	Herb	Leaf	Juice	Orally	Eczema	50gm of fresh leaf crushed Juice prepared mixed with water is taken orally three times a day for a period of two days to reduce eczema.
<i>Alangium salvifolium</i> (L. f.) Wang.	Alangiaceae	<i>Alangi</i>	Shrub	Leaf	Paste	Topical	Scabies wound swelling	50gm fresh leaves crushed made into a paste with water and the paste is externally applied twice a day to treat scabies and wound swelling.
<i>Aloe vera</i> (L.) Burm. f.	Liliaceae	<i>Kathallai</i>	Herb	Leaf	Paste	Topical	Burns Wounds Heals cracks	100gm of fresh succulent leaf they made paste of the entire plant is used to cure burns, wounds, dark spots, and wrinkles and also used for fairness.
<i>Andrographis paniculata</i> (Burm.f.) Wall.ex Nees	Acanthaceae	<i>Nellaveambu</i>	Herb	Leaf	Paste	Topical	Scabies Ringworm	50gm fresh leaves crushed made into a paste with water and the paste is externally applied twice a day to treat leprosy, scabies and the ringworm infection.
<i>Aristolochia indica</i> L.	Aristolochiaceae	<i>Adhduthinna Palai</i>	Climber	Leaf	Paste	Topical	Poison bite infection	20gm Fresh leaves are ground to paste; Paste of leaves in water is applied externally two times a day for three days to treat insect bite poison infection area on the skin cure.

<i>Asparagus racemosus</i> Willd	Liliaceae	<i>Thanirvettan Kellangu</i>	Climber	Tuber	Powder	Orally	Leucorrhoea	50gm tuber made powder prepared from root/ tuber is taken orally with goat's milk (or) over night fermented cooked rice water three times a day for a couple of days to treat leucorrhoea.
<i>Azadirachta indica</i> A. Juss.	Meliaceae	<i>Veambu</i>	Tree	Leaf Seed	Decoction	Topical/ orally	Scabies Itching Chicken box	100gm of fresh leaves made extract decoction of leaves is used to wash skin thrice a day to treat scabies and other skin diseases. Seed oil with powdered fruit of <i>Terminalia chebula</i> is used externally thrice a day for skin diseases until recovery.
<i>Boerhavia diffusa</i> L.	Nyctaginaceae	<i>Mukkuratai</i>	Herb	Leaf	Paste	Topical / Orally	Ringworm infection	100gm of leaves boiled in coconut oil and extract is applied topically twice a day to treat scabies and the ringworm infection.
<i>Butea monosperma</i> (Lam.) Taub.	Fabaceae		Tree	Leaf	Paste	Topical	Ringworm	50gm of crushed made Leaf paste of an older tree is applied on ringworm infected area about twice a day.
<i>Calotropis gigantea</i> (L.) R.Br.	Asclepiadaceae	<i>Earukku</i>	Shrub	Latex	Paste	Topical	Heals cracks	5-10 drops latex along with turmeric powder is gently heated up in coconut oil and the extract is applied topically to treat on foot heals cracks.
<i>Cassia fistula</i> L.	Caesalpiniaceae	<i>Konnai</i>	Tree	Flowers	Paste	Topical	Wound Infection	50gm Fresh Flowers are ground to paste; Paste of leaves in water is applied externally three times a day for three days to treat injuries/ wounds on the skin.
<i>Datura metel</i> L.	Solanaceae	<i>Umathai</i>	Herb	Seeds	Paste	Topical	Scabies and psoriasis	10gm of warmed seeds paste with <i>Seasam</i> oil is applied to 3 days cure scabies and psoriasis.
<i>Eclipta prostrata</i> (L.)	Asteraceae	<i>Karisalamkanni</i>	Herb	Leaf	Paste	Topical	Ringworm infection Dandruff	50gm of fresh leaves are ground to paste; Leaf paste is used to treat the ringworm infection. Leaves gently heated up in coconut oil and the extract is applied on head for a week to treat dandruff.
<i>Euphorbia hirta</i> L.	Euphorbiaceae	<i>Amman Pacharaci</i>	Herb	Latex	Paste	Topical	Burn Wound	5-10 drops of Latex mixed with coconut oil made paste is applied to cure burn wounds and boils.
<i>Ficus racemosa</i> L.	Moraceae	<i>Atthi</i>	Tree	Latex	Aste	Topical	Heal cracks	5-10 drops Stem latex mixed with <i>curcuma longa</i> powder and coconut oil made paste applied externally on the foot twice a day heals cracks and fissures.
<i>Hemidesmus indicus</i> R.Br.	Asclepiadaceae	<i>Nannari</i>	Climber	Root	Decoction	Topical	Eczema, scabies	50gm of the dried young roots are pounded and boiled in 100 ml of coconut oil. Few drops of the oil extract are externally applied twice a day to treat eczema and the scabies cure the infection area.
<i>Hibiscus micranthus</i> L.	Malvaceae	<i>Theangapundu</i>	Shrub	Leaf	Paste	Topical	Eczema Wound Healing	50gm fresh young leaves are ground to paste; Leaf paste is applied externally to treat eczema. A handful of entire plant is made to paste and applied on cuts and wounds promote healing.
<i>Hibiscus rosa-sinensis</i> L.	Malvaceae	<i>Seamparuthi</i>	Shrub	Flowers	Paste	Topical/ Orally	Skin allergy Itching	50gm flowers ground to paste applied externally two times a day for three days to skin allergy and itching.
<i>Hyptis suaveolens</i> (L.) Poit.	Lamiaceae	<i>Naithulasi</i>	Shrub	Leaf	Paste	Topical	Fungal infections	10gm young fresh leaf made paste is applied on sores and fungal infections.
<i>Jatropha curcas</i> L.	Euphorbiaceae	<i>Katamannaku</i>	Shrub	Latex	Paste	Topical	Eczema, scabies Ringworm infection	5-10 drops latex mixed with coconut oil made paste is applied topically to treat cure.
<i>Leucasia flora</i> (Vahal)R.Br.	Lamiaceae	<i>Naithumbai</i>	Herb	Leaf	Paste	Topical/ Orally	Poison bite Infection Scabies	50gm fresh leaves crushed extract made paste externally applied 3days affected area infection, skin allergy and orally take 200ml mixed extract give 2times day.

							Itching	
<i>Leucas aspera</i> (Willd.) Link.	Lamiaceae	<i>Thumbi</i>	Herb	Leaf	Paste	Topical/ Orally	Ringworm infection	50gm young fresh leaves are ground to paste; Leaf paste is applied externally to treat ringworm infection.
<i>Mimosa pudica</i> L.	Mimosaceae	<i>Thottasinigi</i>	Herb	Leaf	Paste	Topical	Wounds Healing	50gm fresh young leaves are ground to paste; Leaf paste is applied externally to treat eczema. A handful of entire plant is made to paste and applied on cuts and wounds promote healing.
<i>Phyllanthus emblica</i> L.	Euphorbiaceae	<i>Nelli</i>	Tree	Fruits	Paste	Topical	Scabies	3 numbers of dried cotyledons are gently heated up in luke warm coconut oil; the extract is applied externally to treat scabies.
<i>Phyllanthus niruri</i> L.	Euphorbiaceae	<i>Kellanelli</i>	Herb	Whole plants	Decoction	Orally	Scabies	50gram of dried cotyledons are gently heated up in luke warm coconut oil; the extract is applied externally to treat scabies.
<i>Piper nigrum</i> L.	Piperaceae	<i>Mellakku</i>	Climber	Leaf	Paste	Topical	Ringworm infection Wounds	5-10 numbers of young fresh leaves are ground to paste; Leaf paste is externally applied twice a day to treat the ringworm infection.
<i>Plumbago zeylanica</i> L.	Plumbaginaceae	<i>Chittiramoolam</i>	Herb	Roots	Paste	Topical	Eczema scabies	50gm of fresh leaves are ground to paste; the mix is applied externally to treat eczema and the scabies cure infection area.
<i>Pongamia pinnata</i> (L) Pierre.	Fabaceae	<i>Pungam</i>	Tree	Bark	Paste	Topical	Eczema scabies Ringworm infection	10gm of dried stem bark powder is gently fried in coconut oil and the extract is applied externally to treat eczema, psoriasis, rashes, scabies and ringworm infection.
<i>Rubia cordifolia</i> L.	Rubiaceae		Herb	Whole Plant	Paste	Topical	Antiseptic	50gm of whole plant materials is made into paste; paste is applied externally on iron weapon injured part of the body during warfare/ fight to promote wound healing; the paste has antiseptic effect.
<i>Santalum album</i> L.	Santalaceae	<i>Santhanam</i>	Tree	Bark	Paste	Topical	Skin allergy Itching	50gm Fresh stem with bark are ground to paste mixed water is applied externally two times a day for three days to skin allergy, itching and heal crack.
<i>Saraca asoca</i> (Roxb) Wild	Caesalpiniaceae	<i>Ashoka</i>	Tree	Flowers	Paste	Topical	Scabies	20gm of dried fresh flowers boiled in coconut oil and the extract is applied externally to treat eczema and scabies.
<i>Terminalia arjuna</i> (Roxb. Ex DC.)	Combretaceae	<i>Marutham</i>	Tree	Bark	Paste Powder	Topical	Burning Wound	250 gm of young bark are washed with water, well crushed and mixed with 100 gm of pure butter to make paste. The paste is applied to the wounds caused due to burning.
<i>Terminalia chebula</i> Retz.	Combretaceae	<i>Kadukai</i>	Tree	Seeds	Powder	Topical/ Orally	Wound Scabies	3numbers of dried cotyledons are gently heated up in luke warm coconut oil; the extract is applied externally to treat scabies.
<i>Thespesia populnea</i> (Linn.) Scl.ex correa.	Malvaceae	<i>Poovarasu</i>	Tree	Flowers	Paste	Topical	Skin allergy Itching	50gm of grain fruit made extract is gently fried in coconut oil and the extract is applied externally to 3 days treat itching and skin allergy.
<i>Tinospora cordifolia</i> (Thunb.) Miers.	Menispermaceae	<i>Kattukodi</i>	Climber	Leaf	Paste	Topical	Wound swelling	50gm young fresh leaves are ground to paste; Leaf paste is applied externally to treat wound swelling and wound infection cure.
<i>Tridax procumbens</i> L.	Asteraceae	<i>Vettukayapondur</i>	Herb	Leaf	Paste	Topical	Eczema Wounds	50gm of fresh leaves are ground to paste along with a pinch of calcium hydroxide; the paste is applied externally on the eczema affected area/ injury made by weapon to promote healing.

<i>Vitex negundo</i> L.	Verbenaceae	<i>Notchii</i>	Shrub	Leaf	Paste	Topical	Ringworm infection	50gm young fresh leaves are ground to paste; Leaf paste is applied externally to treat itching and ringworm infection.
<i>Withania somnifera</i> (L.) Dunal	Solanaceae	<i>Aswakanthi</i>	Herb	Roots	Paste	Topical	Eczema, scabies	50gm of the dried young roots are pounded and boiled in 100 ml of coconut oil. Few drops of the oil extract are externally applied twice a day to treat eczema and the scabies cure the infection area.
<i>Zingiber officinale</i> Roscoe	Zingiberaceae	<i>Engii</i>	Herb	Bulb	Paste	Topical/ Orally	Skin allergy	10gm bulb grain made powder mixed with 200ml water making drink day in 2times and extract mixed with oil externally applied skin allergy cure

Table 2: Percentage of the genus and species medicinal plants in Skin diseases

Family	Genus	Percentage (%)	Species	Percentage (%)
Euphorbiaceae	4	15.38	6	12
Malvaceae	4	15.38	6	12
Amaranthaceae	2	7.69	3	6
Fabaceae	3	11.53	3	6
Lamiaceae	2	7.69	3	6
Mimosaceae	2	7.69	3	6
Asclepiadaceae	2	7.69	2	4
Asteraceae	2	7.69	2	4
Caesalpiniaceae	2	7.69	2	4
Combretaceae	1	3.84	2	4
Liliaceae	2	7.69	2	4
Solanaceae	2	7.69	2	4
Acanthaceae	1	3.84	1	2
Alangiaceae	1	3.84	1	2
Aristolochiaceae	1	3.84	1	2
Meliaceae	1	3.84	1	2
Menispermaceae	1	3.84	1	2
Moraceae	1	3.84	1	2
Nyctaginaceae	1	3.84	1	2
Piperaceae	1	3.84	1	2
Plumbaginaceae	1	3.84	1	2
Rubiaceae	1	3.84	1	2
Rutaceae	1	3.84	1	2
Santalaceae	1	3.84	1	2
Verbenaceae	1	3.84	1	2
Zingiberaceae	1	3.84	1	2
Total	26	100	50	100