

Ethnobotanical Survey of Medicinal Plants Commonly Used by Traditional Medicine Practitioners in Sindhudurg Region, India

Research Article

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Abstract

The traditional healers in Sindhudurg region practice plantbased therapy to manage various health conditions. The present investigation aims to represent the ethnobotanical knowledge of different Traditional practitioners. Sindhudurg is rich in flora and fauna. Traditional practitioners have wide and in-depth knowledge of plants and their medicinal use. They use these plants to treat various ailments. The Present paper provides information on the traditional uses of medicinal plants found in Sindhudurg District. An ethnobotanical survey was undertaken to record information on medicinal plants from traditional medical practitioners in Sindhudurg. Traditional Medical Practitioners, the primary informants were interviewed using semi-structured questionnaires and open-ended conversations. The survey identified and recorded 100 plant species along with their medicinal uses.

Key Words: Medicinal plants, Survey, Sindhudurg, Traditional Practitioners.

Introduction

Man has relied on nature for their basic needs, including food, housing, medicine, clothes, fertilisers, and transportation. Herbal medicines have been widely used in the healthcare system to treat different diseases. Medicinal plants are used to develop new drugs. The plants continue to exist to provide new remedies to humankind. In countries like China, India, Japan, Pakistan, Sri Lanka, and Thailand, use of traditional medicine is widely practised. Since the beginning of time, people have sought out natural remedies for their illnesses(1). Even now, plants are essential to healthcare and represent the finest source for securing future drug supply. Due to the few side effects and the synergistic effects of the substances used in the formulation, traditional plant medicines continue to hold a prominent position in the modern pharmaceutical industry. Plant constituents have the main role in curing illness(2). There are a large number of patients going for herbal therapy. Herbal medicines have widerange of benefits. Plant based drugs are inexpensive compared to modern synthetic medicines. Herbal medicines have

good compatibility with the human body. They are cheaper in cost(3,4).

Diverse therapeutic effects are brought on by various phytoconstituents found in plants. India is frequently referred to as the emporium of medicinal plants because there are over 45000 plant species in its diverse regions. The industry receives its supply of therapeutic herbs from wild sources. By taking traditional folk medicine into account, new drugs can be developed. The majority of people's needs for basic health care are met by phytoconstituents (5).

The Himalayas, Aravalis, Chota Nagpur plateau, Eastern and Western Ghats, and tropical forests might be home to about 70% of India's medicinal plants. The Kashmir Himalayan region is located in the Himalayas, which has recently been recognised as a hotspot for biodiversity worldwide (6).

Sindhudurg is rich in natural resources. There are varieties of plants found in this region that possess medicinal property. Traditional Practitioners in this region have a lot of knowledge regarding the uses of these rich medicinal plants. Traditional healers prescribed these herbs to treat different ailments. Information was collected from these traditional healers and compiled together (7).

Methodology

The information regarding the medicinal uses of plants was collected from local traditional practitioners in the Sindhudurg region. They have sound knowledge of medicinal plants. During the survey period the information was gathered using questionnaire The

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information was cross-checked by the information provided by other traditional practitioners. We summarized their ethnobotanical use along with their local name. The botanical name and family of plants were enlisted. In this study, 100 species of plants with good medicinal property were taxonomically identified with the help of flora; "The Flora of Presidency of

Madras" by Gamble, 1936(8) and other related works (9,10,11). The method of collection of voucher specimens, preservation, herbaria and technique for the collection of ethnomedicinal information was followed as per Jain and Rao, 1977(12).

Result and Discussion

Table no. 1: Information of Medicinal Plants

Sr no	Scientific name	Family	Part	Local name (Marathi)	Ethnobotanical use in local region
1	<i>Tinospora cordifolia</i> (Willd.) Hook.f. & Thomson	Menispermaceae	Stem	Gulwel	Fever, Skin problems
2	<i>Garcinia indica</i> (Thours) Chois	Clusiaceae	Leaves, Fruits	Kokam	Digestive issues, Pruritis
3	<i>Bauhinia purpurea</i> L.	Caesalpiniaceae	Leaves, Fruits	Apta	Scorpio bite, Relieves pain
4	<i>Andrographis paniculata</i> (Burm.f.) Wall.	Acanthaceae	Leaves, Stem	Bhuinimb	Fever, Antiseptic, Skincare
5	<i>Elephantopus scaber</i> L.	Asteraceae	Whole Plant	Pathari	Kidney stone, Diabetes
6	<i>Piper nigrum</i> L.	Piperaceae	Fruits	Miri	Rheumatism, Appetizer, treats diarrhoea
7	<i>Tacca leontopetaloides</i> L.	Taccaceae	Tuber	Ransuran	Body ache & Headache
8	<i>Costus speciosus</i> (J. Koenig) Sm	Costaceae	Rhizome	Pewa	Burns, Constipation, Skin diseases
9	<i>Eucalyptus globulus</i> Labill.	Myrtaceae	Leaves, Bark	Nilgiri	Anti-inflammatory, Treats skin problems
10	<i>Cymopogon citratus</i> (DC.) Stapf	Poaceae	Leaves	Gavaticaha	Fever, Stomach cramps
11	<i>Pandanus tectorius</i> Parkinson	Pandanaceae	Root, Fruits	Kevada	Diuretic, Skin problems, Reduces swelling
12	<i>Asparagus racemosus</i> Willd.	Liliaceae	Rhizome	Shatavari	Food, Medicine for women.
13	<i>Smilax zeylanica</i> L.	Smilacaceae	Leaves, Root	Ghotwel	Antiseptic, Skin problems, Relieves from pain
14	<i>Gnidia glauca</i> (Fresen.) Gilg	Thymelaeaceae	Leaves, Bark, Fruits	Daantapadi	Cancer, Sore throat, Burns, Wounds, Gynecological disorders
15	<i>Barleria prionitis</i> L.	Acanthaceae	Whole Plant	Katekoranti	Toothache, Joint pain, Lung diseases
16	<i>Mesua ferrea</i> L.	Clusaceae	Bark	Nagkeshar	Astringent, Treats skin infections
17	<i>Ficus racemose</i> L.	Moraceae	Fruits, Leaves	Umber	Food, Antiseptic
18	<i>Caesalpineia crista</i> L.	Caesalpinceae	Stem, Bark, Leaves	Sagargoti	Diabetes, Fever, Anthelmintic
19	<i>Mucuna pruriens</i> (L.) DC.	Fabaceae	Leaves	Khachkuli	Deworming, Anti-diabetic
20	<i>Luffa acutangula</i> (L.) Roxb.	Cucurbitaceae	Leaves, Seeds	Phagul	Diabetes, Tinea, Ulcers, Leprosy, Emetic
21	<i>Cynodon dactylon</i> (L.) Pers.	Poaceae	Roots	Durva	Urine infection, Acidity, Menstrual problems
22	<i>Allium sativum</i> L.	Liliaceae	Ripe bulb	Lasun	Prevents abscess, Common cold
23	<i>Bacopa moniera</i> L.	Scrophulariaceae	Leaves, Entire plant	Bramhi	Nervine tonic; Hair preparations, Skin care
24	<i>Myristica fragrans</i> Houtt.	Myristicaceae	Fruit	Jaiphal	Improve blood circulation, Cure toothache

25	<i>Zingiber officinale</i> Roscoe	Zingiberaceae	Rhizome	Sunth	Effective cure for indigestion, Sore throat, Cold & cough, Relieves pain and reduces inflammation
26	<i>Aloe vera</i> (L.) Burm.f.	Liliaceae	Juice of leaves	Korphad	Anti-acne, Treats dry skin, Hair care
27	<i>Swertia chirata</i> Roxb. ex (fleming) Karst	Gentianaceae	Entire plant	Chirata	Used in constipation, tonic digestive herb
28	<i>Ficus religiosa</i> L.	Moraceae	Leaves	Peepal	It treat asthma, jaundice, diabetes, Used in healing wounds
29	<i>Lawsonia inermis</i> L.	Lythraceae	Leaves	Mehendi	It cures all types of skin conditions like itching, allergy, skin rashes
30	<i>Mimosa pudica</i> L.	Mimosaceae	Leaves, Entire plant	Lajari	Piles, Urogenital disorder, Relieves pain
31	<i>Psidium guajava</i> L.	Myrtaceae	Fruit, leaves	Peru	Treats toothache, Improve eyesight, Boost immunity
32	<i>Pongamia pinnata</i> L.	Fabaceae	Leaves	Karja/ Karanji	Piles, Skin diseases
33	<i>Curcuma amada</i> Roxb.	Zingiberaceae	Rhizome	Ambehalad	Treats acne & boils, remove scars
34	<i>Ferula foetida</i> (Bunge) Regel	Apiaceae	Rhizomes & roots	Hing	Digestive problems, Whooping cough, Respiratory infection
35	<i>Brassica nigra</i> (L.) K. Koch	Brassicaceae	Dried ripe seeds	Mohari	Oil is used to relieve pain
36	<i>Azadirachta indica</i> A. Juss.	Meliaceae	Leaves	Kadunimb	Used to treat itching and acne
37	<i>Catharanthus roseus</i> L.	Apocynaceae	Entire plant	Sadaphuli	Gentle laxative for children
38	<i>Artemisia nilagirica</i> (C.B. Clarke) Pamp	Asteraceae	Entire plant	Surpin	Used in constipation & stomach ache, Treats Skin problems
39	<i>Curcuma longa</i> L.	Zingiberaceae	Rhizomes	Halad	Antiseptic, Anti-acne, helps in wound healing
40	<i>Annona squamosa</i> L.	Annonaceae	Leaves	Sitaphal,	Uterine problems, anthelmintic
41	<i>Chromolaena odorata</i> (L.) R.M. King & H. Rob.	Asteraceae	Leaves	Ranmodi	Wounds, burns and fever, malaria, diabetes
42	<i>Ficus racemosa</i> L.	Moraceae	Fruit, bark, root, leaf	Rumbad	Diabetes, liver disorder, diarrhea, urinary disease, hemorrhoids
43	<i>Murraya koenigii</i> (L.) Spreng	Rutaceae	Leaves	Kadhipatta	Constipation, diarrhea, dysentery, piles, nausea, boating
44	<i>Celastrus paniculatus</i> Willd.	Celastraceae	Seed, Bark	Malkamni	Reduces muscle pain
45	<i>Bryophyllum pinnatum</i> (Lam.) Oken	Crassulaceae	Leaves	Panfuti	Diabetes, diuresis, Dissolves and flushes kidney stones, Respiratory tract infections
46	<i>Kaempferia rotunda</i> L.	Zingiberaceae	Rhizomes, Young leaves	Bhuichafa	Treats sprains, skin problems, diabetes and atherosclerosis
47	<i>Crocus sativus</i> L.	Iridaceae	Stigmas	Kesher	Gastric ulcers, Disorder of nervous system, Asthma, Inflammation
48	<i>Nyctanthes arbor-tristis</i> L.	Oleaceae	Leaves, Stem	Parijatak	Fever, cough, arthritis, worm infestation, joint pain, malaria

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49	<i>Terminalia arjuna</i> (Roxb. ex DC.) Wight & Arn.	Combretaceae	Roots	Arjun	Cardiotonic in heart failure
50	<i>Annona reticulata</i> L.	Annonaceae	Seeds	Ramphal	Diabetes, skin and hair, weak joint, boosts immunity
51	<i>Momordica charantia</i> L.	Cucurbitaceae	Fruit	Karle	Reduce blood sugar, cancer fighting, Aid weightloss, decrease cholesterol level, Anti-diabetic
52	<i>Calotropis gigantea</i> (L.) Dryand	Asclepiadaceae	Leaves	Rui	Fever, Intestinal worm stomach
53	<i>Hibiscus rosa-sinensis</i> L.	Malvaceae	Leaves flowers	Jasvand	Loss of appetite, Treats cold, heart and nerve disease, upper respiratory tract infection, pain, swelling and stomach irritation
54	<i>Argemone mexicana</i> L	Papaveraceae	Leaves, seeds, roots	PiwlaDhotra	Analgesic, Antispasmodic
55	<i>Trichosanthes tricuspidata</i> Lour.	Cucurbitaceae	Fruit, root	Kavandala	Lung disease, headache asthma, migraine, Skin problems
56	<i>Mammea longifolia</i> Planch. & Triana	Clusiaceae	Flowers	Surangi	Aromatherapy
57	<i>Crotalaria verrucosa</i> L.	Fabaceae	Leaves	Ghagari	Jaundice, Diabetes
58	<i>Clitoria ternatea</i> L.	Fabaceae	Leaves, root	Gokarn	Nephro protective
59	<i>Centella asiatica</i> L.	Apiaceae	Leaves, stem	Ekpanibramhi	Leprosy, diarrhea, fever, lupus, varicose ulcers
60	<i>Dillenia pentagyna</i> Roxb.	Dilleniaceae	Bark	Karmel	Treatment of digestive problems
61	<i>Alangium salviifolium</i> (L.f.) Wangerin	Cornaceae	Leaf	Ankol	Locally used in treatment of snake bite, dog bite and scorpion bite
62	<i>Hemidesmus indicus</i> (L.) R. Br. Ex Schult	Apocyanaceae	Root	Anant mool	Topically used in eczema, pimples and acne
63	<i>Erythrina variegata</i> L.	Fabaceae	Bark & leaves	Pangara	Nervine sedative; Dental problems, relives pain
64	<i>Semecarpus anacardium</i> L.f	Anacardiaceae	Fruit	Biba	Cures diseases related to digestive system, Increase sperm count, improve sexual power
65	<i>Tamarindus indica</i> L.	Caesalpiniaceae	Fruit, leaves	Chinch	Wound healing, respiratory problems, abdominal pain
66	<i>Bauhinia variegata</i> L.	Caesalpiniaceae	Bark & root	Kanchan	Bark is used as tonic, treatment of ulcers and skin disease, Roots are used as antidote in snake poison
67	<i>Juglans regia</i> L.	Juglandaceae	Leaves, fruits, bark	Akrod	Fruits are used in the treatment of skin diseases, wounds and herpes, Improving physical strength
68	<i>Rubia cardifolia</i> L.	Rutriaceae	Root & stem	Manjishtha	Treat blood disorders, Treat cardiovascular disorder

69	<i>Rosa indica</i> L.	Rosaceae	Flowers	Gulab	Used to treat skin diseases and inflammation of mouth
70	<i>Leucas aspera</i> (Willd.) Link	Lamiaceae	Root, leavea& flowers	Thumba	Root is used in cytotoxic activities. Plant decoction is used in Treatment of malaria. Leaves juice is used in psoriasis, scabies and urinary problems. Flowers are administered in the form of syrup or with honey for cough and cold.
71	<i>Sesbania sesban</i> (L.) Merr.	Fabaceae	Leaves	Jayanti	Demulcent and purgative
72	<i>Schleichera oleosa</i> (Lour.) Oken	Sapindaceae	Seeds & bark	Kusum	Powdered seeds are used for wounds and ulcers of cattle to remove maggots. Bark is astringent and is used against leprotic ruptures, skin inflammation and ulcers.
73	<i>Moringa oleifera</i> Lam.	Moringaceae	Root, seeds, bark, fruit & flowers	Shigru	Used in thyroid disorders, headache, stomach pain, seizures, intestinal spasms
74	<i>Gardenia resinifera</i> Roth.	Rubiaceae	Resin	Dikamali	Used in skin diseases as carminative and expectorant
75	<i>Pterocarpus marsupium</i> Roxb.	Fabaceae	Heartwood, bark, leaves and gum	Bija	Used for the treatment of elephantiasis, diarrhoea, cough and prevents greying of hair
76	<i>Abroma augusta</i> L.	Sterculiaceae	Dried roots	Ulatkambal	Uterine disorders, menstrual disorders
77	<i>Dendrobium nutans</i> (L.) L.f.	Orchidaceae	Tuberous roots	Dandeamri	Used as emollient and prevents abscesses formation
78	<i>Mentha spicata</i> L.	Lamiaceae	Leaves	Pudina	Relieve common digestive problems and nausea
79	<i>Ocimum sanctum</i> L.	Lamiaceae	Leaves	Tulsi	Improve digestion, protection from infection, skin and hair benefits
80	<i>Andrographis paniculata</i> (Burm.f.) Nees	Acanthaceae	Leaves	Kalmegh	Improve digestion, laxative
81	<i>Aegle marmelos</i> (L.) Correa	Rutaceae	Leaves Bark Root	Bel	Reduces cold and cough. Used in treatment of jaundice
82	<i>Justica adhatoda</i> L.	Acanthaceae	Leaves	Adulsa	Expectorant
83	<i>Acorus calamus</i> L.	Acoraceae	Roots	Vekhand	Analgesic
84	<i>Tectona grandis</i> L.f.	Lamiaceae	Wood	Sag	Diuretic
85	<i>Trigonella foenumgraceum</i> L.	Fabaceae	seeds	Methi	Vitamin source
86	<i>Trachyspermum ammi</i> (L.) Sprague	Apiaceae	Leaves	Oava	Stomach problem
87	<i>Calendula officinalis</i> L.	Asteraceae	Flower	Zendu	Skin diseased, Treats boils and skin problems
88	<i>Butea monosperma</i> (Lam.) Tubert	Fabaceae	Flower	Palas	Expectorant

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89	<i>Eclipta prostrata</i> (L.) L.	Asteraceae	Steam	Meka	Hair problem skin diseased
90	<i>Zanthoxylum rhetsa</i> (Roxb.) DC.	Rutaceae	Fruit	Tirphal	Flavoring agent
91	<i>Syzygium cumini</i> (L.) Skeels	Myrtaceae	Seeds	Jamphul	Coloring agent
92	<i>Kaempferia rotunda</i> L.	Zingiberaceae	roots	Bhuichafa	Scabies
93	<i>Carica papaya</i> L.	Caricaceae	Fruit	Papaya	Vitamin Source
94	<i>Xylia xylocarpa</i> (Roxb.) Taub	Papilionaceae	Leaves	Jambha	Kidney stones
95	<i>Mimusops elengi</i> L.	Sapotaceae	Bark, Seed, Flower	Bakul	Headache
96	<i>Cinchona officinalis</i> L.	Rubiaceae	Bark	Cunain	Carminative
97	<i>Piper betle</i> L.	Piperaceae	Leaves	Tamalpatra	Constipation
98	<i>Cinnamomum verum</i> J.Presl	Lauraceae	Bark	Dalchini	Floavouring agent
99	<i>Tribulus terrestris</i> L.	Zygophyllaceae	Fruit	Sarata, Goksura	Kidney disease
100	<i>Santalum album</i> L.	Santalaceae	Bark	Chandan	Fever, cough common cold, skin disease,

A total 100 species of plants were identified as commonly used ethnomedicinal plants by traditional practitioners in Sindhudurg region for treatment of various ailments. All the mentioned medicinal plants have been used in treatment of different disease conditions.

Plants used to treat dermatological infections/diseases and gastro-intestinal disorders had highest use-reports.

Pharmacological studies on the plants should be carried to validate their uses in the management of the said therapeutic applications. Further research on the isolation and characterization of the plant active compounds could lead to the discovery of new potential drugs.

Conclusion

A diverse number of plants species are used for treating different diseases in the Sindhudurg region. This knowledge remains with traditional medical practitioners, mostly older people. The knowledge of the use of plants to treat diseases has been with the people for generations but has not been recorded. Knowledge of the using plants as medicines remains mostly with the older generation, with few youth showing an interest. The youth should be encouraged to learn the traditional medicinal knowledge to preserve it from being lost. Further studies on pharmacognostic parameters and pharmacological activity can be conducted. The extracts of these medicinal plants can be used to formulate stable dosage forms.

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