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A SURVEY ON MEDICINAL PLANTS OF THENGAPATANAM REGION, KANYAKUMARI DISTRICT, TAMILNADU, INDIA

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ABSTRACT: Folk medicine is one of the natural health care systems that have been practiced by all human cultures from the beginning of civilization. Biodiversity current in each area additionally plays an inevitable function in the improvement of such healthcare practices. Kanyakumari district, the southernmost part of India is also blessed with one of the most luxuriant flowers and its variety, its indigenous humans have found to make use of this wealthy biodiversity to meet their healthcare needs for the millennia. The collected medicinal plants were identified for their local medicinal uses through interviews with local healers, and medicinal plant collectors. The present paper deals with 47 plants belonging to 32 families used by the local healers, and traditional practitioners of the thengapatanam region, of the Kanyakumari district for the treatment of various diseases. For each species botanical name, family, local name, parts used, and method of preparation have been recorded. The medicinal plants have rich therapeutical values and economically value of plants has been present in the area.

Keywords: Traditional Knowledge and Plants, Thengapatanam Region, Kanyakumari District.

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1.INTRODUCTION

The World Health Organization estimated that 80% of the developing world population uses traditional medicine [1]. Traditional medicinal plants have been found to produce an important role in the primary health care and treatment of disease [2]. Ethnobotany may be defined as an anthropocentric technique to botany and is concerned with accumulating information on flora and

their use. The ethnomedicinal survey is one of the reliable sources for natural and synthetic drug discovery [3]. Traditional medicine is one of the natural health care systems that have been practiced by all human cultures from the beginning of civilization [4]. An ethnomedicinal survey is one of the reliable resources for herbal and synthetic drug discovery. Plants are gambling an important function within the health of hundreds of thousands of human beings' lifestyles in many villages of India of their day-to-day existence using its traditional utilization [5]. Since time immemorial plants and their derived products have a traditional use for the treatment of numerous pathological illnesses [6]. Many works have been reported especially from among the rural and tribal communities of India [7]. The pharmaceutical industry continues to investigate and confirm the efficacy of many medicines and toxins used by traditional communities [8]. The identity of local names, scientific names and indigenous makes use of plant life no longer best preserves indigenous knowledge but also helps destiny studies on the safety and efficacy of medicinal flora in the remedy of diverse illnesses. Ethnomedicine practices are mainly based on culture and orally used one-of-a-kind sorts of flora and plant components [9]. Even with conventional or orthodox medicine available most people, especially from rural areas, still prefer using traditional medicine to treat most ailments [10]. Side outcomes of several allopathic tablets, improvement of resistance to currently used tablets for infectious sicknesses population upward push, and inadequate supply of medication and unaffordable value of treatments have led to accelerated significance on the use of plant substances as a supply of drugs for an extensive sort of human illnesses. Ethnomedicinal studies have offered immense opportunities for the development of new drugs [11]. Moreover, flora additionally serves to enhance air first-rate, prevent land erosion, and assist water recycling. Medicinal plants and plant-based medicines are extensively used in healthcare systems Plants in many developing countries, and also appreciated in many developed countries [12]. Folk medicine is one of the natural health care systems that have been practiced by all human cultures from the beginning of civilization [6]. The traditional systems of medicine include Ayurveda, homeopathy, Siddha, Unani, etc. Ethnobotany also multidisciplinary science and the unique values of plants. The present study mainly focuses on plant species used by the local people's knowledge of Thengapatanum (Keezhkulam Panchayat) of the Kanyakumari District for their primary healthcare needs.

2. MATERIALS AND METHODS

Description of the study area

The present study was carried out in and around the Thengapatanam Region in the Kanyakumari District. Thengapatanam small city in the Kanyakumari district of Tamil Nadu, India. The location of the Kanyakumari district is bounded between 77°15' and 77°36' east longitude and 8°03' and 8°35' north latitude. Thengapatanam region, with a population of about 26813. The 13244 males and 13569 males respectively. The total geographical area of Thengapatanam Town is 11km into the Tamilnadu border from Kerala. The natural vegetation of this region represents biomass ranging

from southern thorn forests, dry deciduous, moist deciduous, semi-evergreen forests to ever-green hill shoals with grassy downs. Well, adaptability, climatic, and characteristic features of plants have been present in the study area. The maximum temperature here reaches up to 34°C and the minimum temperature goes down to 20.3°C.

Medicinal plant survey

An extensive systematic field survey of the plants for the period of two months (January 2021 to February 2021). The plant specimens were collected at various seasons and that different reproductive stages (flower either fruit or both) from their natural habitats. When floristic documentation of study area Thengapatanam Region, interviews were conducted with local people, medicine men, and elderly settlers near the medicinal plants for documenting indigenous knowledge of the local people and utilization value of the plant species [13]. Each specimen was identified and critically examined with the help of written floras [14].

3. RESULTS AND DISCUSSION

The present study revealed the use of 47 species of plants distributed in 42 genera belonging to 32 families which were commonly used by elderly people and Traditional healers of the thengapatanam region, for the treatment of various diseases. Name of the plants, family, local name, habits, and medicinal uses was also provided in Table -1. They consist of herbs, shrubs, trees, and climbers. They are generally discovered developing in diverse locations and sometimes broadly distributed in all places. Some of them are cultivated near the houses, particularly by medicinal healers. Herbs form the major source of medicine consisting of about 36% followed by trees, shrubs, and climbers comprising 34%, 24%, and 6%, respectively. Different plant parts like leaves, leaves and stems, flowers, fruit, Rhizome, Root and leaf, latex, bark, stem, root, seed, and sometimes the whole plant are used as medicine for the treatment of various diseases. Lamiaceae have a greater number of representatives with 5 species. Families like Solanaceae and Oleaceae are represented by three members each. Acanthaceae, Apocynaceae, Lythraceae, Malvaceae, Fabaceae, Annonaceae, Moringaceae, Asteraceae, and Piperaceae are represented only by 2 members each. Acoraceae, Rutaceae, Asphodelaceae, Bromeliaceae, Meliaceae, Caricaceae, Apiaceae, Vitaceae, Euphorbiaceae, Boraginaceae, Cucurbitaceae, Rutaceae, Musaceae, Phyllanthaceae, Myrtaceae, Rubiaceae, Zingiberaceae, Rhamnaceae are represented by one member each. The most dominant genera of the study area are *Solanum* which includes 3 species. It is followed by *Annona, Piper*, and *Jasminum* having 2 species each. The remaining 38 genera are represented by single species. Several plants are used by the people directly because most of the people in the study area know about the uses of common medicinal plants. For simple wounds, cuts, etc. the people never go to a hospital or to herbal doctors. For, example, the people squash the leaves of *Eclipta*, etc., and apply the juice over the wound directly and get a cure. Different plant parts such as bark, seed, fruit, latex, flowers, whole plants, rhizome, and roots are used for the preparation of herbal medicine to cure different

diseases. Leaves from 23 plants, seed from 5 plants, fruit from 3 plants, latex from 1 plant, flower from 2 plants, 8 whole plants, leaves and Fruits from 2 plants, Stem alone from 2 plants, Rhizome alone from 1 plant, Flower, Root, and Leaves from 1 plant were used to treat various diseases. The present observation revealed that different types of diseases such as cuts, wounds, stomach pain, skin problem, kidney stone, cough and cold, asthma, eye disease, animal bite, fever, jaundice, joint pain, leg pain, throat problem, chickenpox, urinary disease, cancer, piles, memory power, paronychia, diarrhea, foot eruption, jaundice, rheumatism, earache, ringworm and hair problem are cured by 47 medicinal plants. Plant-based totally conventional know-how has grown to be a recognized tool within the search for new assets of drugs and nutraceuticals. The traditional use of plants has declined due to the scarcity of species, which is caused by human activities and overgrazing by animals. Therefore, it has become essential and needs of the hour to focus on the conservation of these plants. Internal uses (60%) were predomination over external or topical uses (40%). Almost all medicinal remedies were based on the preparation of a single plant, a few of them in combination with other plant parts. During the present investigation, a total of 47 medicinal plants were collected from the Thengapatanam Region to treat various types of diseases. In the Kanyakumari district, a Total of 62 medicinal plants [6]; 39 plant species [15]; 54 plant species in Kanyakumari district mentioned [17]. A Total of 106 plants species [18]; Total 150 plants species [19]; 81 plant species [20]; Total of 48 plants species [21]; 59 plant species [22]; All these 54 plants species [23]; In total, 138 plant species [23]; A total of 89 plant species [24]; 44 plants species [16]; In 55 medicinal plant species curing skin disease is similar [25] are reported.

Table 1: List of medicinal plants in the Thengapatanam Region

Sl. No	Botanical Name / Family	Local Name / Habit	Uses
1.	*Abutilon Indicum* (Link) Sweet. (Malvaceae)	Cheepukai / Shrub	Crushed leaves juice cure piles
2.	*Acorus calamus* L., (Aceraceae)	Vasambu / Annual shrub	Leaves break down snack poison.
3.	*Aegle marmelos* (L.) Correa (Rutaceae)	Vilvam / Tree	Raw leaves reduce corneal redness.
4.	*Aloe vera* (L.) Burm. f. (Asphodelaceae)	Katazhai / Herb	Reduce burning sensation due to burning.
5.	*Ananas comosus* (L.) Mar. (Bromeliaceae)	Anansi / Shrub	Total fruits reduce stomach worm
6.	*Andrographis paniculata* (Burm.f.) Nees (Acanthaceae)	Nilavembhu / Herb	Whole plant crush and extract cure viral fever
7.	*Annona reticulata* L. (Annonaceae)	Chema manuhiri / Tree	Leaves reduce cancer cell
8.	*Annona squamosa* L. (Annonaceae)	Munthiri /Tree	Seed powder reduces dandruff
9.	*Azhadirachta indica* A. Juss. (Meliaceae)	Vembu / Tree	The whole plant reduces inflectional activity
10.	*Carica papaya* L. (Caricaceae)	Papali / Tree	Fruit paste reduces black dots and leaves paste reduces toothache.
11.	*Catharanthus roseus* (L.) G.Don. (Apocynaceae)	Nithyakalyani / shrub	Flower paste reduces tumor cell
12.	*Centella Asiatica* (L.) Urban (Apiaceae)	Vallari / Herb	Leaves powder increases memory power
13.	*Cissus quadrangularis* L. (Vitaceae)	Pirandai / Herb	Stem paste increase born strengthening
14.	*Clitoria ternatea* L. (Fabaceae)	Sangupushpam / climber	Flower, root, and leaves extract increase memory power
15.	*Cynodon dactylon* (L.) Pers. (Lamiaceae)	Pull / Herb	Whole plant cure blood purification
16.	*Eclipta prostrata* (L.) L. (Asteraceae)	Kaiyanthirai / Shrub	Crushed leaves and stems extract cure wound healing.

17.	*Euphorbia hirta* L. (Euphorbiaceae)	Amman pacharisi / Herb	Milky latex scrub and reduce black dots
18.	*Heliotropium Indicum* L. (Boraginaceae)	Thel Koduku / Herb	Leaves paste injury place
19.	*Jasminum grandiflorum* L. (Oleaceae)	Mullai / Shrub	Flower suppresses lactation.
20.	*Jasminum officinale* L. (Oleaceae)	Pitch / Shrub	Crushed leaves paste cure foot eruption
21.	*Justicia adhatoda* L. (Acanthaceae)	Adathoda / Herb	Leaves extract substance cure cough and cold
22.	*Lawsonia inermis* L. (Lythraceae)	Maruthi / Shrub	Leaves paste cures paronychia
23.	*Leucas aspera* (Willd.) Link (Lamiaceae)	Thumbai / Herb	Leaf paste cures ringworm
24.	*Mexican mint* Lour. (Lamiaceae)	Navarapachali / Herb	Leaves extract cures cold
25.	*Mimosa pudica* L. (Moringaceae)	Thotazhi / Herb	Whole plant kidney, liver cure stone
26.	*Momordica charantia* L. (Cucurbitaceae)	Pagarkai / Climber	Leaves reduce suger level
27.	*Moringa oleifera* Lam. (Moringaceae)	Murungai / Tree	Leaves increase hemoglobin in the blood.
28.	*Morinda tinctoria* Roxb. (Rubiaceae)	Manchanathi / Tree	Leaves extract reduces thyroid
29.	*Murraya koenigii* (L.) Sprengel (Rutaceae)	Karuvepilai / Tree	Leaf powder reduces stomach germ
30.	*Musa paradisiaca* L. (Musaceae)	Vazhai / Tree	Stem extract reduces kidney stone
31.	*Nyctanthes arbor - tristis* L. (Oleaceae)	Pavalamalli / Tree	Crushed leaves paste used for rheumatism
32.	*Ocimum tenuiflorum* L. (Lamiaceae)	Vezha thulasi/Herb	The whole plant reduces cold (mucus)
33.	*Pergularia daemia* (Forssk.) Chiov. (Apocynaceae)	Veliparuthi / Climber	Whole plant extract wound healing
34.	*Phyllanthus niruri* L. (Phyllanthaceae)	Keezhanelli / Herb	Whole plant extract substance reduces jaundice

35.	*Piper betle* L. (Piperaceae)	Vettilai / Shrub	Leaf extract reduces cold
36.	*Piper nigrum* L. (Piperaceae)	Nallamilagu / Herb	Seed powder will break poison.
37.	*Psidium guajava* L. (Myrtaceae)	Parikai / Tree	Raw leaf chewing reduces toothache.
38.	*Punica granatum* L. (Lythraceae)	Mathulai / Tree	Leaves reduce diarrhea
39.	*Solanum nigrum* L. (Solanaceae)	Manathakali / Herb	Fruits reduce mouth aches
40.	*Solanum torvum* SW. (Solanaceae)	Sundakai / Herb	Seed powder cures stomach germ
41.	*Solanum trilobatum* L. (Solanaceae)	Thithuvazhai / Herb	Crushed Leaves cure asthma
42.	*Tamarindus indica* L. (Fabaceae)	Puzhi / Tree	Seed powder cures blood clot
43.	*Thespesia populnea* (L.) Sol. ex Correa (Malvaceae)	Chenanthi / Small tree	Seed powder cures skin disease
44.	*Vitex negundo* L. (Lamiaceae)	Notchi / Small tree	Leaves extract cures cough and cold
45.	*Weddelia chinensis* Jacq. (Asteraceae)	Manjal karisalai / Shrub	Leaves paste reduces premature white hair
46.	*Zingiber officinalae* Roscoe (Zingiberaceae)	Inghi / Shrub	Rhizomes reduce throught infection cure cold
47.	*Ziziphus jujuba* Mill. (Rhamnaceae)	Ilanthai / Tree	Fruit reduces hungry

4. CONCLUSION

The gift study furnished evidence that the medicinal flowers endured playing a crucial position in the healthcare machine of this community. Forty-seven medicinal plants collected from the present area are used by the local people for treating various kinds of diseases. Hence there is a need for a detailed investigation of ethnomedicinal knowledge held by these indigenous people before such valuable knowledge is forever. This vegetation might also imply compounds and it requires a look for capability new drugs to treat diverse ailments. Its great contribution to society, conventional medication has skilled very little interest in current studies and development and much less effort has been made to upgrade the exercise.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Not applicable.

HUMAN AND ANIMAL RIGHTS

No Animals/Humans were used for studies that are base of this research.

CONSENT FOR PUBLICATION

Not applicable.

AVAILABILITY OF DATA AND MATERIALS

The author confirms that the data supporting the findings of this research are available within the article.

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CONFLICT OF INTEREST

No conflict of interest.

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