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TRADITIONAL USES OF ETHNOMEDICINAL PLANTS IN VISAKHAPATNAM DISTRICT, ANDHRA PRADESH, INDIA

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ABSTRACT

The medicinal plants study indicates the traditional knowledge of present days that are useful in curing various diseases from ancient days. The present study includes the normally available various vegetable and fruit species in Visakhapatnam District, Andhra Pradesh, India. Ethno medicinal uses of 30 plant species along with botanical name, vernacular name, family, plant parts and disease are presented. They belong to 36 genera and 26 families. These plants used to cure 30 types of ailments. Most of the remedies were reported to have been from herb and trees species. High number of medicinal plant species obtainable for the treatment of dysentery, skin disease and fever etc.

KEYWORDS

Ethno medicinal plants, Investigation, Tribal people and Visakhapatnam District.

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INTRODUCTON

In India, Ayurvedic medicine has used from many plants mostly herbs such as turmeric probably as early as 1900 BC¹. The earliest writings such as Atharva and Rig Veda are a few of the available credentials detailing the medical information that produced the basis of the Ayurveda system². The ancient Indian herbalists used various herbs in Ayurveda like Charaka and Sushruta attributed to the 6th century BC describes nearly 700 medicinal plants, 57 preparations based on animal sources and 64 preparations from mineral sources³. Shennong is one of the important Chinese emperor said to have written the first Chinese pharmacopoeia, the "Shennong Ben Cao Jing". The

"Shennong Ben Cao Jing" lists nearly 365 medicinal plants and their uses - including hemp and chaulmoogra (one of the first successful treatments for leprosy) and Ephedra (the shrub that introduced the drug ephedrine to modern medicine)⁴. The Roman and Greek medicinal practices, as conserved in the writings of Hippocrates (e.g. *De herbis et curis*) and - particularly - Galen (e.g. *Therapeutics*), provided the pattern for later western medicine⁵. The various Medicinal plants were identified and utilized throughout the human history. Plants which have the capability to manufacture a diversity of innate compounds that are employ to execute most important biological functions and to defend against attack from predators such as fungi, herbivorous mammals and insects. Nearly 12,000 such compounds were isolated thus far, a number predictable to be fewer than 10% of the overall⁶.

The plants contain chemical compounds which are mediate their effect on the human body through processes identical to those previously well silent for the chemical compounds in predictable drugs; thus herbal medicines do not differ very much from conventional drugs in terms of work. This enables herbal medicines to have advantageous pharmacology, but also gives them the same possible as predictable pharmaceutical drugs to cause harmful side effects⁷. The Ethnobotany, the learn of traditional human uses of plants, is documented as an effective way to discover future medicines⁸.

The employ of plants as drugs to cure various illness conditions from ancient days indicates history. The Ethnobotany, the study of human uses of traditional plants, is documented as an successful way to determine future medicines. The utilization of plants to treat disease is a universal among non-industrialized societies and is often more inexpensive than purchasing contemporary pharmaceuticals⁹. Government of India had, during its Indigenous drugs committee, set indiscriminate and slightly unproductive awareness to the source and use of indigenous drugs, but it necessary the incentive of the war and the resultant insufficiency of drugs up to then imported-many, if not most, of which could be through in India from plants grown

in that nation-to make an confront to offer more frequent study to the focus of drug production¹⁰.

Medicinal plants play an important and essential role in the improvement of human culture, for example different ceremonies and religions. (e.g. Datura has extensive been connected with the devotion of Shiva, the Indian god)¹¹. The significance of medicinal plants is very important to especially human being to include like many of the existing medicines are produced not directly as of medicinal plants, for instance aspirin. The plants are directly utilized in majority of cultures as medicines by a around the world, for example Chinese medicine and Indian medicine. Several food crops also have medicinal effects, for example garlic. The studying medicinal plants helps to know the plant toxicity and protect human and animals from natural poisons. Preservation and cultivation of medicinal plants defend biological diversity, for example metabolic engineering of plants¹². Generally plants manufacture numerous secondary metabolites which are biosynthetically derived from primary metabolites and comprise an important source of many pharmaceutical drugs, pesticides and microbicides. From ancient days the traditional medicinal plants or their secondary metabolites have been indirectly or directly playing a significant role in the human society to battle diseases¹³.

MATERIAL AND METHODS

The data were collected through secondary sources mainly from the website of Government of Andhra Pradesh, State Medicine Plant Board of Andhra Pradesh and Forest department of Andhra Pradesh. References from research papers, books, news paper and articles were in use for understanding of data.

The field work in the various areas of Visakhapatnam District including hill ranges was carried out during the year 2012- 2014. The tribes namely, Yerukala, Yanadi and Sugali, are living in the study area and provide 50 informants between the ages of 45 - 65. Information acquired from the local informants for the various medicinal plants were selected based on the knowledge in the preparation of medicines and their ability to treat a specific disease. Thus the information was cross checked with the available literature (Madhusudan Rao, 1989) and information from neighboring

herbalists. The methods of plant collection and preparations of herbarium were recognized taxonomically (Gamble and Fischer 1915-1936). The identified plant specimens were then confirmed by comparing through the types specimens in Madras herbarium (MH), Coimbatore, India.

The detailed interviews were conducted and information was together on the nature and employ of medicinal plants in therapeutic various ailments. The specimens were collected in their natural form and transported to the headquarters for conducting taxonomic classification. Additional information is collected on the religious, socioeconomic and ethnomedicinal, cultural aspects practices, etc. Andhra Pradesh has relatively high concentration of tribal population, i.e. nearly about 33 scheduled tribes with 41.99 lakhs. The major tribal groups inhabiting the study area are *Konda Dora, Gadaba, Khond, Konda Reddy, Konda Savara, Porja, Bagatha, Jatapu, Valmiki, Konda Kammara, Mali, Mukha Dora, Kotiya, Koya*, etc.

RESULTS AND DISCUSSION

The present survey on medicinal plants results shown in Table No.1. A total of 37 plant species (belonging to 36 genera and 26 families) of ethnobotanical importance were reported. The ethnobotanical information for each Species were consisting of botanical name, family, local name, plant parts used and their use in treatment of various diseases.

The leading families of ethnobotanical importance are Fabaceae, Cucurbitaceae, Moraceae, Nymphaeaceae, Rutaceae and Zingiberaceae are more and remaining species also noticed in table includes are Amaranthaceae, Annonaceae, Apocynaceae, Acanthaceae, Ascalpidaceae, Basellaceae, Brassicaceae, Caricaceae, Combretaceae, Rhamnaceae, Euphorbiaceae, Lamiaceae, Lythraceae, Liliaceae, Malvaceae, Meliaceae, Mimosaceae, Musaceae, Solanaceae and Xanthorrhoeaceae. The treatment of medicinal plants based on their use in 31 diverse diseases were found to be extraordinarily valuable such as Jaundice, Wounds, Diabetes, Anti-typhoid, rheumatism, diabetes, piles, Anti-helminthic, Urinary diseases, Constipation, Insomnia, Stomachache, Ulcers, Contraceptive, Leprosy, Encephalitis, Headache, Fever, Mennorrhagia, Antifungal, Dysentery, Itching, psoriasis, burns and Food poisoning etc. The majority of the herbal remedies are in use externally in the form of decoction and extract. A considerable finding of this cram is that, a good number of the plants collected in various areas of Visakhapatnam District are reported. The preparation of medicines are completely based on the various plant parts used includes leaves, bark and rhizomes etc.

Table No.1: Ethnomedicinal plants used by people of Visakhapatnam District

S.No	Botanical Name	Family	Local Name	Habit	Parts Used	Medicinal Uses
1	<i>Achyranthes aspera</i> Linn.	Amaranthaceae	Uthareni	Herb	Root	Jaundice
2	<i>Annona squamosa</i> . Linn	Annonaceae	Sitaphalam	Tree	Seeds	Wounds
3	<i>Catharanthus roseus</i> . Linn	Apocynaceae	Billa ganneru	Shrub	Roots,	Diabetes,
4	<i>Andrographis Paniculata</i> Linn.	Acanthaceae	Nelavemaa	Herb	Whole plant	Antityphoid
5	<i>Calotropis gigantean</i> Linn.	Ascalpidaceae	Jilledu	Herb	flowers	Antihelminthic
6	<i>Basella rubra</i> Linn.	Basellaceae	Bacchali koora	Herb	Leaves	Piles
7	<i>Raphanus sativus</i> Linn.	Brassicaceae	Mullangi	Herb	Root	Urinary trouble
8	<i>Carica papaya</i> Linn.	Caricaceae	Boppayi	Tree	Fruit	Constipation

9	<i>Terminalia catappa</i> Linn.	Combretaceae	Badam	Tree	Seed, Bark	Insomnia
10	<i>Benincasa hispida</i> (Thunb.) Cogn.	Cucurbitaceae	Budida gummadi	Creeper	Fruit	Stomachache
11	<i>Cucumis sativus</i> Linn.	Cucurbitaceae	Dosakaya	Climber	Fruit	Urinary disease
12	<i>Momordica charantia</i> Linn	Cucurbitaceae	Kakara	Climber	Leaf	Ulcers
13	<i>Lagenaria siceraria</i> (Molina) Standl.	Cucurbitaceae	Sorakaya	Climber	Root	Jaundice
14	<i>Acalypha indica</i> Linn.	Euphorbiaceae	Kuppinta	Herb	Leaf	Skin disease
15	<i>Abrus precatorius</i> Linn.	Fabaceae	Guriginja,	Seed	Straggler	Contraceptive
16	<i>Cassia fistula</i> Linn.	Fabaceae	Aragvadhamu	Tree	Root stem	Leprosy,
17	<i>Ocimum tenuiflorum</i> Linn.	Lamiaceae	Tulsi	Shrub	leaves	Encephalitis
18	<i>Lawsonia inermis</i> Linn.	Lythraceae	Gorintaku	Shrub	Leaf	Headache
19	<i>Asparagus racemosus</i> Wild.,	Liliaceae	Bheemudu dumpa	Shrub	Tubers, leaves	Fever
20	<i>Hibiscus rosa-sinensis</i> Linn.	Malvaceae	Mandhara	Shrub	Flower	Mennorrhagia
21	<i>Azadirachta indica</i> A. Juss.	Meliaceae	Vepa	Tree	Whole plant	Antifungal.
22	<i>Acacia mangia</i> Wild.,	Mimosaceae	Acash	Tree	Stem bark	Paralysis
23	<i>Ficus benghalensis</i> Linn.	Moraceae	Marri	Tree	Leaf	Skin allergy
24	<i>Ficus microcarpa</i> Linn.	Moraceae	Juvvi	Tree	Bark	Dysentery
25	<i>Musa paradisiaca</i> Linn.	Musaceae	Arati	Herb	Tuber	Dysentery
26	<i>Nelumbo nucifera</i> Gaertn.	Nymphaeaceae	Tamara	Herb	Rhizome	Dysentery
27	<i>Nymphaea pubescens</i> Willd.	Nymphaeaceae	Kaluva	Herb	Root	Dysentery
28	<i>Zizyphus mauritiana</i> Lam.	Rhamnaceae	Regu	Tree	Fruit	Cold
29	<i>Citrus limon</i> (Linn). Burm.	Rutaceae	Nimmakaya	Shrub	Fruit	Stomachic
30	<i>Aegle marmelos</i> (Linn.) Correa	Rutaceae	Maredu	Tree	Fruit	Constipation
31	<i>Murraya koenigii</i> Spreng	Rutaceae	Karivepaku	Tree	Leaf	Vomiting
32	<i>Limonia acidissima</i> Linn.	Rutaceae	Velaga	Tree	Fruit	Dysentery
33	<i>Datura innoxia</i> Mill.	Solanaceae	ummetha	Shrub	Leaves	Itching
34	<i>Aloe vera</i> Linn	Xanthorrhoeaceae	Kalabanda	Herb	Leaves	psoriasis, burns,
35	<i>Alpinia galanga</i> (Linn.) Willd.	Zingiberaceae	Dumpa rashtramamu	Herb	Tuber	Rheumatism
36	<i>Curcuma aromatica</i> Sal.	Zingiberaceae	Kasthuri	Herb	Rhizome	Skin disease
37	<i>Zingiber officinalis</i>	Zingiberaceae	Allam	Herb	Rhizome	Food poisoning

CONCLUSION

The people of Andhra Pradesh have a secure relationship with nature. They are completely reliant upon nature for fruits, fodder, food, and medicinal plants for their healthcare. The local people in this region, particularly tribal people, older age people and women a lot use these traditionally available medicinal plants for healthiness and believe that these are simply obtainable, less pricey and have no side effects as contrast to modern medicine. The current situation of traditional knowledge concerning to medicinal plants all over is an issue of deep anxiety as the traditional knowledge is progressively declining and disappearing from the countryside. Due to the impact of tourism on natural vegetation of this region, deforestation, population explosion and heavily construction of this region for development and many more to responsible for its.

We have to make appropriate policies and do realize these to conserve the forests and medicinal plants. Farmers and local people should be concerned in the cultivation of medicinal plants at least on their barren and fallow land. The popular use of herbal remedies among the tribal people of Visakhapatnam district reflects the resumption of interest in traditional medicine. The scientific validation of these remedies may possibly help in determining new drugs from the plant species. The information on therapeutic uses of plants may give a great potential for discovering of new drugs and promoting attentiveness between the people to use them as remedy in health care system.

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CONFLICT OF INTEREST

We declare that we have no conflict of interest.

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