



Ethnobotanical study of medicinal plants used by traditional users in Kondagattu, Karimnagar District, Telangana

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Abstract

The study of ethnobotanical was carried out along with the ethnic groups present in the Karimnagar district. In the present work an attempt was made to document the ethnobotanical remedies for various ailments of the ethnic tribes inhabiting the Konda gattu division of Karimnagar District, Telangana, India. We reported 45 plant species used by the tribal people in alleviating diseases. The conventional ethnomedicinal plants were mostly used for fever, dysentery, Skin diseases, poison bites, sounds, piles, diabetes and rheumatism.

Keywords: Ethno medicine, Traditional healers, Kondagattu division, Karimnagar District, Telangana

INTRODUCTION

Evolution of human life and culture has directly or indirectly been associated with & influence by the surrounding environments. Primitive man closely associated in the nature and directly depended on it for his survival i.e., for food, fuel medicine and fodder, Heamcee, his life and diet system totally depended on plants, made him to acquire the knowledge of economic and medicinal properties of many plants by gradual growth of thinking, later he became enriched knowledge has been transferred from one generation to another without any written documents, now it is necessary that unwritten folk-lore used of plants and plant product must be documented and preserved. It is important to document and understand the medicinal heritage of a changing culture before it is lost entirely to future generations. (Brumot & Naidu, 2007).

Among the Angiospermic plants, 420,000 flowering plants were reported from the World (Govaeru, 2001) and many tropical species are not yet named. More than 50,000 plants have been used for medicinal purposes (Schippman et al., 2002).

India is represented by rich culture, traditions and natural biodiversity & after unique opportunity for the drug discovery researchers. In India, there are over 17,500 species of higher plants, 64 gymnosperms, 1200 Pteridophytes, 2850 bryophytes, 2021 lichens, 15500 fungi and 6500 algae are reported.

In India, the main traditional systems of medicine include Ayurveda, Unani & Siddha use over 7500 plant species have been reported. Traditional healers provide considerable information about the use of many plants or plant parts as medicine. In this present research article, we report on the information collected from traditional healers to cure various diseases in Kondagattu, Karimnagar district of Telangana State, India.

MATERIALS AND METHODS

Study Area:

Ethno botanical survey :

The ethno medicinal information was collected from knowledgeable local aged people, herdsman and local healers of Kondagattu village of Karimnagar district, Andhra Pradesh aged between 35-78 years. The information on ethnomedicine was collected during August, 2012 to January 2013 through interviews and discussions. The collected information includes useful plant species with local names, parts of the plant used for curing different diseases. The plant specimens collected with the help of the inhabitants of surveyed villages.

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The data collected from different sources of ethnic communities consist of 45 plant species whose different parts are used for curing different diseases.

Methodology:

Ethnobotanical survey was conducted by repeated interviews and conversations with aged ethnic people, local herbal healers, shepherds, tribal headmen, owners of cattle herds etc., in different seasons for two consecutive years. Several field trips were conducted between the years 2012 to 2013 in the district to record the ethnobotanical knowledge of the tribals. The data were collected through questionnaires, discussions among the tribal people. The information on useful plant species, parts used local names and mode of utilization was collected. The data collected were further verified and cross checked in different tribals. Plants used in their daily needs were also collected plants used in their traditional medicinal uses were identified with the help of regional floras (Gamble & Fishcer, 1935; Pullaiah et al. 1992). The plants voucher specimens were pressed and deposited in the Herbarium of Botany Department (KUH), Kakatiya University, Warangal, Andhra Pradesh, India. The stored information on Ethnobotanical knowledge of tribal inhabitants is tabulated alphabetically by botanical names of plants, name of family, vernacular names in Telugu, habit, parts used and uses that includes medicinal or any other purpose.

RESULTS AND DISCUSSION

The present study includes 45 numbers of plant species of Angiosperms belonging to families are reported. The alphabetical order of Scientific name of the plants, their families, local names, diseases, part used, mode of administration with duration and doses are furnished with table-1.

The information provided in the table is collected from local healers through interviews and discussions. They have good knowledge about the use of plants for curing various ailments and also believe in supernatural powers which are also a part of their healing methods. The diagnosis of different pathologies is the first step in Phyto cure treatment which can be known by one's nose, ear, hands & eyes and is interesting.

Parts using from the different plants:

The tribal healer's preparations are either based on single plant part of combination of several plant species parts. The mode of ethno medicine usage for different diseases is in various forms, such as aqueous extract, paste and oil. In addition, milk, ginger, pepper, oil, turmeric and Jiggery etc., are used as ingredients in the administration of ethno medicine.

Figure-1. Different plant parts are used by traditional healers of Karimnagar district.

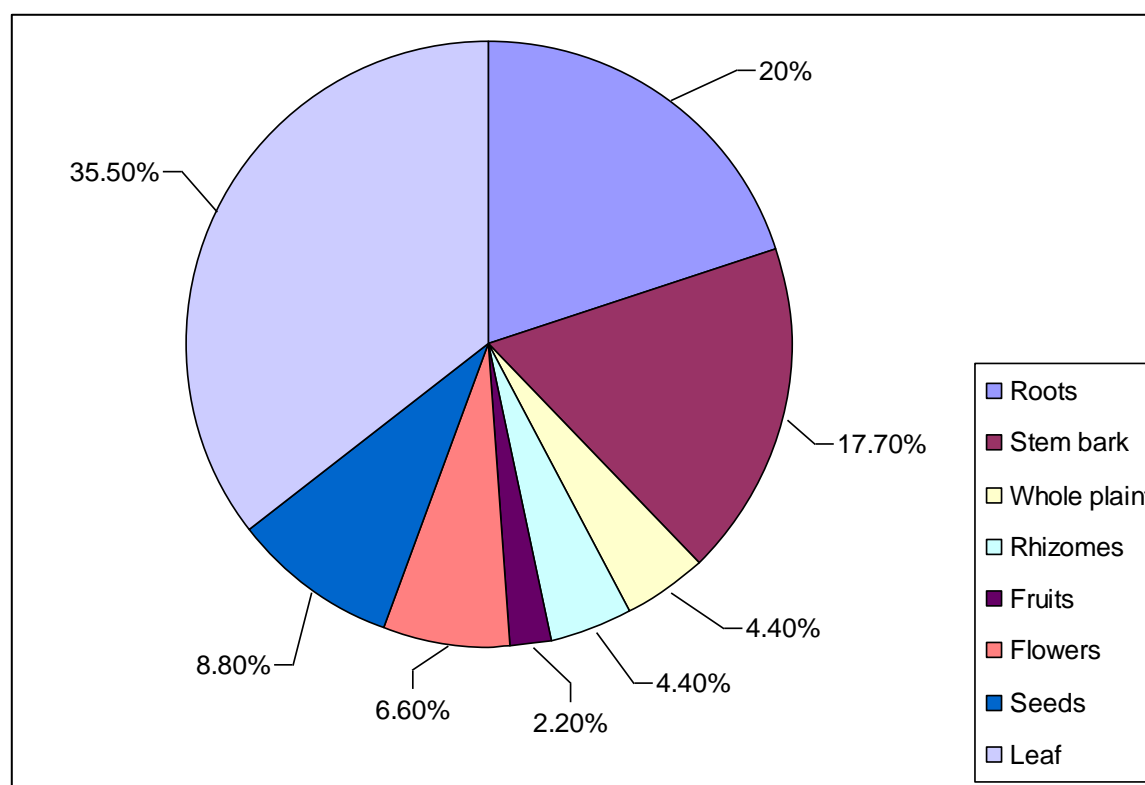


Figure-2. Various disease are treated with medicinal plants by traditional healers of Karimnagar district.

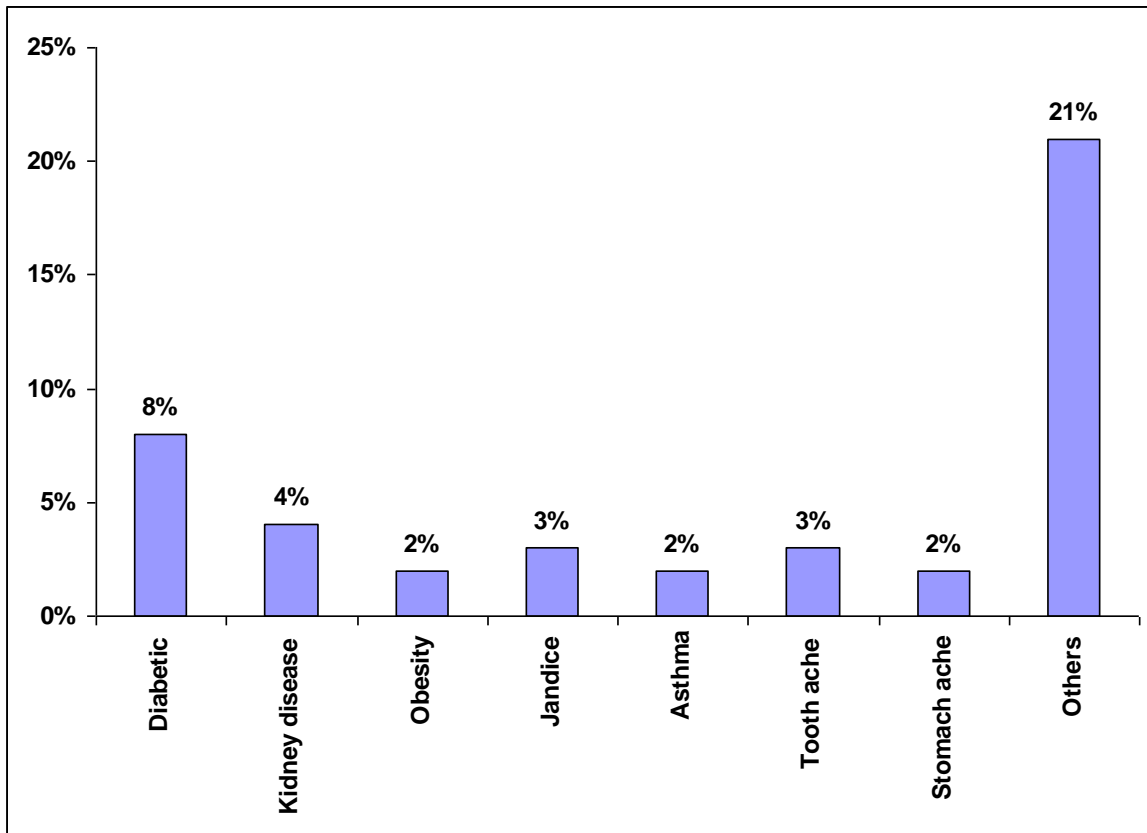


Figure-3. Different preparation methods/forms of medicinal plants used by traditional healers of Karimnagar district

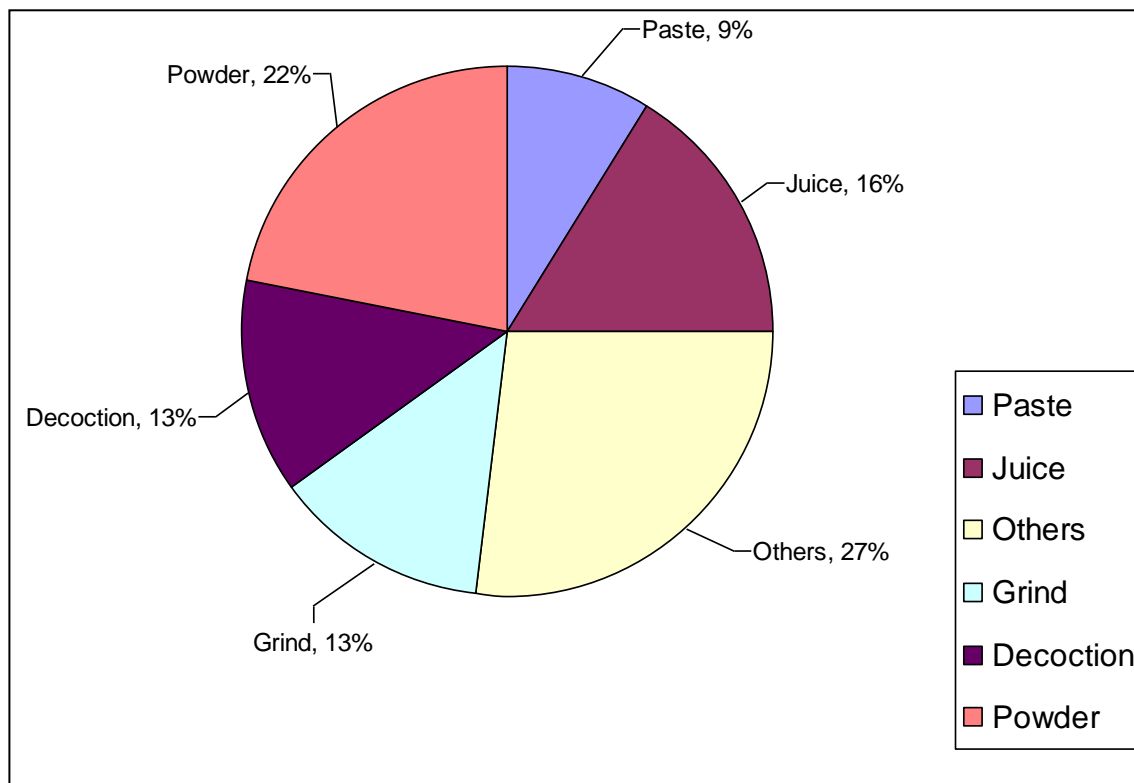


Table-1. List of medicinal plant used by tribals of Kondagattu village, Karimnagar district, Telangana, India.

S. No.	Local Name	Botanical name	Family name	Part used & mode to use	Medicinal uses
1.	Thuthura Benda	Abutilon Indicum	Malvacea	Stem bark, decoction	Diuretic
2.	Sundra chettu	Acacia Chundra	Mimosaceae	Bark ground with Leabase of neem and the paste apply on ulcers of leprosy.	Leprosy
3.	Muripinda	Acalypha Indica	Euphorbiaceae	Roots ground with black pepper.	Anti Emeric
4.	Addasaramu	Adhatoto Zeylanica	Acanthaceae	Leaf, Juice of leaves	Asthma, Cough
5.	Pindikura	Aerva Lenata	Amaranthaceae	Whole plant boiled with Water	Kidney pains
6.	Nevavemu	Andrographis Parculata	Acanthaceae	Leaf Crush	Diabetes
7.	Custard apple	Annona reticulate	Annonaceae	Root Juice	Free motions
8.	Burugu Chekka	Bombox Ceiba	Bombaceaceae	Bark, grind the bark and mixed with water	Body heat regulations
9.	Ranapala	Bryophyllum	Crusulaceae	Leaves, grind the leaf and applied to wounds	Wounds healing.
10.	Modugu	Butea monosperma	Fabaceae	Seeds ground with lemon juice applied on effected area	Ring warm.
11.	Tella Jilledu	Calotropis gigantia	Asclepiadaceae	Root Paste	Fileria
12.	Pogada Chettu	Clerodendrum Paniculatum	Lamiaceae	Main rachis of leaf and roots are used to tooth stick	Tooth ache
13.	Tuniki	Diosphyros melanoxyon	Ebenaceae	Stembark extract given to pregnant women	Anaemia
14.	Usiri	Emblica aphicinalis	Euphorbiaceae	Powder of dry fruit is mixed with turmeric powder along with thangedu leaes.	Diabetics
15.	Neredu	Eugeniajam bolana	Myrtaceae	Seeds, dried and powder eol mixed with water	Diabetics
16.	Medi	Ficus racemosa	Moraceae	Leaves	Small pox
17.	Tella baranki	Ficus tinctoria	Moraceae	Root bark – decoction	Appendicitis
18.	Marri	Ficus Urosfigma	Moraceae	Stem bark juice	Fever
19.	Podapatri	Gymnema Sylvestre	Asclepiadaceae	Leaf decoction	Diabetics
20.	Sunflower	Helianthus annus	Asteraceae	Roots powder	Stones in Urine
21.	Narre mamedidi	Listeasebifera	Lauraceae	Bark, juice of bark is mixed with water	Diabetes
22.	Gorinta	Lowsina	Lythoceeae	Leaves	Jaundice
23.	Mamidi	Mangifera Indica	Anacardiaceae	Leaves	Cold & Cough
24.	Ippa	Modhuca Indica	Convolvunaceae	Flowers and Seeds	Blood Purification
25.	Kakara	Momordica Charantia	Cucurbitaceae	Leaf Juice	Ear Pain
26.	Karevepaku	Murraya Koenigii	Rutaceae	Leaf Powder mixed with hair oil	Lice Killing, dandruff.
27.	Aratic Ehttu	Musa Paradisiaca	Musaceae	Rhizome	Fertility
28.	Ganneru	Nerium Oleander	Apocynaceae	Flowers	Asthma

S. No.	Local Name	Botanical name	Family name	Part used & mode to use	Medicinal uses
29.	Tulasi	Ocimum Tenuiflorum	Lamianaceae	Leaves	Skin allergy
30.	Nagke Saralu	Partheniunhi steroporouose	Asteraceae	Flowers Powdered and mixed with butter milk	Hyper urination
31.	Sarpagandhi	Pauvolfia Serpentina	Apocynaceae	Roots Powder	Blood Pressure
32.	Chitramala	Phyumbago Zeylancia	Plambaginaceas	Roots, bark & leaves	Body pains
33.	Nela Usiri	Phyllanthus amarusschum	Euphobia ceae	Whole plant	Jaundice
34.	Seema Chintha	Pithecellobium dulce	Mimosaceae	Leaves	Dog bite
35.	Pacha ganneru	Plumeria alba	Apocynaceae	Root paste is applied on Snake bite	Snake bite
36.	Tella maddi	Terminalia arjuna	Combretaceae	Bark poder	Obesity
37.	Amudamu	Ricinus Comminis	Euphorbiacea	Leaf paste	Jaundice
38.	Parasu kampa	Sida Acutaburm	Malvaceae	Leaf paste	Bone fracture
39.	Somi	Soymida Febrifuga	Meliaceae	Bark, the bark soaked water	Diarrhera
40.	Baranki	Streblus asper Lour	Moraceae	Leaves Powder	Tooth ache
41.	Neredu	Syzygiumcumini	Myrtaceae	Seed decoction	Diabetics
42.	Tellamaddi	Terminalia arjuna	Combretaceae	Bark Powder	Obesity
43.	Thippa Teega	Tinospora Cordifalia	Menispermaceae	Leaves Powder	Diabetics
44.	Vavili Chettu	Vitex Negundo	Verbenaceae	Leaves boiled in water	Arthritis
45.	Tella garjelu	Zaleya decantra	Aizoaceae	Root juice	Asthma
46.	Allam	Zingiber Officinale	Zingiberaceae	Rhizome ground with lemon juice	Stomach ache

The ethnic tribe of this village is healthy and not suffering from common problems like depression, blood pressure and diabetes which are common in urban people. List of medicinal plants used by tribals of Kondagattu, Karimnagar district, Andhra Pradesh, India. Conversely, the same ethnic tribe occupying different vegetation habitats is to be studied ethno botanically.

Among 45 plants belongs to 32 families, 35.5% of leaves, 17.7% Stem bark, 20% roots, 8.8% seeds, 6.6% flowers, 4.4% Rhizomes, 4% whole plant and 2% fruits are used for various diseases. The most widely sought after plant parts in the preparation of remedies. In the study area are the leaves (35.5%) and roots (20%).

Diseases:

These plant species are used for the treatment and prevention of many ailments and diseases grouped under 9 ailment categories. The main ailments in the study are were diabetics, kidney diseases, obesity, jaundice, asthma, toothache, cold & cough, stomach ache and other diseases. The largest number of medicinal plant species are available for the treatment of skin diseases, body pains and stomach ache. Half of

the remedies for the above ailments are taken orally, followed by external application. Generally, fresh part of the plant is used for the preparation of medicine. To improve the acceptability of certain oral remedies, additives are frequently used. Most of the reported preparations in the area are drawn from a single plant, combinations are used in 12 cases. In other parts of the country, the use of mixtures of plant species in treating a particular ailment is fairly common.

Methods of Preparation:

In the study area, the recommended dosage differs among informant for treating the same health problem. During the interview & discussion with the informants they indicated that the doses for liquid preparations were prescribed through estimation, in terms of a full, half or one fourth of a coffee cup, depending on the age of the patient being treated. With regards to method of preparation most medicinal plant preparations are taken juice 16%, Powder 22%, Decaction 13%, grind 13%, Paste 9%, and others 27%.

CONCLUSIONS

Due to constant association with the forest environment, they have evolved knowledge by trial and error and have developed their own way of diagnosis and treatment for different ailments. The ethnic drug formulations need clinical tests to prove their efficacy and also to develop new herbal drugs for the effective treatment. This data provides basic sources for further studies aimed at conservation, cultivation, improvement of ethnic traditional medicine and economic welfare of rural and tribal population of the region.

The study concluded that the local and tribal people of the Karimnagar district have very good knowledge on the use of medicinal plants. But such knowledge of medicinal plants is restricted to a few persons in rural area. Therefore it is necessary that suitability requirements are needed in order to protect the traditional knowledge in a particular area with reference to medicinal plant utilization and it was found that traditional ethnomedicine still persists among the tribal's in Kondagattu, Karimnagar district.

Competing interests

The authors have declared that no competing interests exist.

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