

Common plants of medicinal values in *Kolams* of Adilabad district, Andhra Pradesh

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ABSTRACT

Background: Common plants of medicinal values in Kolams are used as ethnomedical practices for various ailments and diseases inhabiting the Utnoor division of Adilabad district, Andhra Pradesh, India. **Aim:** This paper provides data on 31 medicinal plants used by *Kolams* for curing various ailments along with their local names, method of preparation, mode of administration and use. **Materials and Methods:** Our collections of ethnomedicinal plant specimens from this area were deposited in the Andhra University Herbarium (AUH), Visakhapatnam, Andhra Pradesh, India. Detailed interviews were conducted on four ethnomedical specialists drawn from the six study villages of the selected two Jainoor and Narnoor mandals of Utnoor division of Adilabad district, Andhra Pradesh. **Results:** The ethno-medical system among *Kolam* is quite diverse and the local knowledge is used mostly in primary health care. The vast traditional knowledge present among *Kolam* is mostly attributed to their cultural framework. **Conclusion:** The present study revealed the situation with regard to use common plants of medicinal values in the study area. 31 plant species from Utnoor division of Adilabad district in Andhra Pradesh were used to treat 57 different ailments and diseases. Among these plant species only few species are used to treat more than one disease. Medicinal pastes are prepared from stem, root, and leaves to treat diseases by the tribal people.

Key words: Ethnomedicine, medicinal plants, *Kolam*, Andhra Pradesh

INTRODUCTION

Primitive man closely associated in the nature and directly depended on it for his survival for food, fuel medicine, and fodder. Evolution of human life and culture has directly or indirectly been associated with

and influence by the surrounding environments. 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 folklore uses of plants and plant product must be documented and preserved. It is important to document and understand the medical heritage of a changing culture before it is lost entirely to future generations. Ethnomedicine is the study of the beliefs and practices concerning illness in different human populations. It observes and describes hygienic, account temporal and spatial references.^[1]

Ethno-medical practices are linked to environmental, biological and cultural factors, which affect the pattern of disease recognition and the behavior associated with certain illnesses.^[2] Health and diseases are the measures of the effectiveness with which human groups, combining biological and cultural resources adapt to their environment.^[3] The culture of a community determines its health culture.^[4] Among scheduled tribes of Andhra Pradesh, Gonds, Lambada, Kolams, Pradhans, Manne, Naikpods, Thoties, Yerikalas, Koyas are the major communities in the Utnoor Division of Adilabad District, Andhra Pradesh, India of several natural forest ecosystems in the district.

Andhra Pradesh consists of 35 tribal populations and among them Kolam, Thoti, Chenchu, Konda Reddi, Porja, Khond, Gadaba and Savara were considered as Primitive tribal groups (PTG). The study on Common Plants of Medicinal Values in Kolams, a primitive tribal group of Adilabad district, Andhra Pradesh was conducted during the years 2010-2011. The Telugu people call them as *Mannervarlu*. According to Census of India, their population is 45,671.^[5] They speak their own dialect called 'Kolami'. The data were collected from key respondents of the study villages of Jainoor and Narnoor mandals of Utnoor division of Adilabad district and from medicine men, known as 'Vaidyalak'. *Kolam* has its own culture and follows its traditions, beliefs and practices concerning diseases and evolves its own system of medicine in order to treat diseases in its own way. The herbal specialist collects the medicinal plants and preserves them due to their non-availability during summer season like medicinal twines called as 'Kaurka'. The collection of medicinal plants is done usually after rainy season where a variety of them are found.

Few studies are available on tribal health care such as Ravi Shanker and Henry was publishing a note on the medicinal plant wealth of Adilabad district.^[6] Later Pullaiah, Prasanna, and Vand Obulesu reported Ethnomedicinal plants, the scientific and

vernacular names of the District;^[7] Mubeen, R. Sadia Fathima, Atiya Khanum, Irfan Ali Khan and S.Y. Anwar studied the Medicinally important plants growing in the around Adilabad, District of Andhra Pradesh used in the treatment of different ailments.^[8] Swamy, NSNS reported 366 ethnomedicinal plants used by tribes in the Adilabad District, in UGC Minor research project under plan.^[9] Ethno-medicine or Folk medical systems were developed in the context of physical environment and socio-cultural milieu of the respective tribal communities. The magico-religious specialist of Savaras is also called *Kudanboi*, who is also a specialist in ethno-medicine. Among savaras, medicine prepared from the seeds of *Sitagar* or custard apple is used for treatment of Jaundice, Scabies is treated with a medicine prepared by mixing neem (*Azadirachta indica* A. Juss.) and Karanja (*Carissa carandas* linn.) oil in different proportions.^[10] V.L.N. Rao et al. made a note of ethnomedicinal practices among Khonds of Visakhapatnam district;^[11] *Jaunsaris* of West Bengal, Orissa and Bihar dried petals of Banafshah flower (*Viola pilosa* Blume) and Pudina (*Mentha arvensis* Linn.) are used for treatment of fever.^[12] The ethnomedicinal study conducted on *Saharias* of Rajasthan indicate the use of neem leaves (*Azadirachta indica* A. Juss.) along with basil leaves (*Ocimum sanctum*) for testing stomachache and eye infection.^[13] In the present work, an attempt is made to present some interesting ethno medicinal observations recorded in Utnoor division, Adilabad district of Andhra Pradesh, India. While carrying out the fieldwork, help was taken from the traditional healers in the plants of medicinal values and information, as they are familiar with the plants around them. The findings of this study can provide useful leads for pharmacological, conformation of these reported uses which might in time become useful for mankind.

MATERIAL AND METHODS

The study is based on the data collected on Common Plants of Medicinal Values in Kolams of Utnoor Integrated Tribal Development Agency (ITDA) of Adilabad district, Andhra Pradesh, India during July 2010 to December 2010. The survey was conducted in selected tribal pockets of Andhra Pradesh, the first field trip of the study area was devoted to acquaintance with the local chiefs, priests, Vaidyas, herbal doctors, headman's and elderly people of both men and women. The methodology was adopted as described by Jain, S.K.,^[14] Chadwick and Marsh.^[15] Structured questionnaires, interviews and participatory

observations were used to illicit information from the resource persons using standard methods.^[16] Random sampling method can be applied for detailed interviews were conducted on four Ethnomedical specialists drawn from the Six study villages of the selected two mandals of Adilabad district, Andhra Pradesh. The following key informants, Atram Bheemu (Sungapur) of Narnoor mandal, Sidam Maru and Sidam Somu, Madavi Bheemrao (Scorpion bite), Atram Bheemu (Snake bite) belonging to (Gouri), Atram Barik rao of Jainoor mandal shared their valuable information. Data were collected during field trips on the basis of interviews with the traditional practitioners, men folk on the use of various medicinal plants in curing various ailments and were also taken into jungles as guide for collection of plant specimens. After documentation, the treatment pattern of various ailments were cross checked and confirmed. The specimens were collected in their natural form and identified. Additional information was collected on socio-economic aspects, health profile and other cultural aspects.

RESULTS

Table 1 shows the distance of the villages from the nearest Primary Health Care (PHC).

The herbal specialist *Delak* collects medicinal plants and plant products from their natural habitat whenever a patient or another villager with a health complaint approaches him, prepare decoctions or paste with plant parts and administer the respective medicine in appropriate doses to the patient. The duration of the treatment vary for different ailments. Seasonal availability of certain species is observed at the time of survey. But the data collected from ethno- medical specialists clearly indicate the existence of ethno-medical practices for curing various ailments. The local names of the medicinal plants as mentioned by the medicine man were noted and presented. The plant species were identified consulting the Head quarters, Department of Botany, Andhra University, Visakhapatnam. Common plants of medicinal values in Kolams are used as ethnomedical practices for various ailments and diseases inhabiting the Utnoor division of Adilabad district are given for each plant name, family, local name, part used, use, recommended dosage and photos with a view to provide basic information for further follow up studies (figure 1 and table 2).

Exploring the hidden traditional knowledge is the understanding of the inherent perceptions of the primitive tribes with regard to illness. The method of indigenous treatment prevalent among *Kolams* for various ailments such as typhoid, jaundice, chicken pox, safe delivery, stomach pain, snake bite, scorpion bite, tooth ache, white patches on body, vomiting, blood motions, abortions, and infertility.

Table 1: Distance of villages from the nearest PHC

Name of the Village	Distance from PHC (Kms)	Total Population
Jainoor	3.5	5119
Patnapur	22	1788
Narnoor	4.5	3999
Sungapur	26	684
Gouri	14	127
Jamgaon	18	1573

Source: National Population Stabilization Fund, based on Census 2001

The herbal specialist '*Vaidyalak*' performs puja at the site of the plant by litting incense sticks and then pluck the plant parts like leaves, bark, seeds, fruit, bud, branches, flowers, root during evening hours especially before sunsets which is considered as an effective and curative time for collection of certain varieties of medicinal plants. Ethno-medical specialist collects the medicinal plants after rainy season and preserves them for future diagnosis. He also performs rituals to ward off pathogenic agents or evil spirits and in this regard he advises the housewife or villagers in general by litting smoke with *tulasi* leaves (*Occimum indica*) or with sandal wood bark or *Tandikaurka* leaves.

In curing method of certain ailments such as blood motions, fire is made with dung and a bowl is placed in reverse position such that the heat is accumulated and that bowl is placed on the stomach region of the patient for 2-3 minutes to relieve the person from pain. There are specialists for healing snake bite and scorpion bite and they will spell charms and hymns for 5-10 minutes after administering the decoction prepared in required doses. Among *Kolams*, a strong belief is observed to exist in the usage of fresh water exclusively for the preparation of decoctions and the fresh water is drawn from either from wells or bore

wells. The present documentation of traditional knowledge from an area where novel information has been generated will not only provide recognition to this knowledge but will also help in its conservation vis-à-vis providing pharmacological leads for the betterment of human society.

DISCUSSION

This belief system was originally passed from older generation to the younger generation and still persists. The early generation herbalists were reported to spell charms while using the fresh water and administered it to patients which cured their illness completely within no time. The 'Vaidyalak' reminds the villagers about their god 'Bheem', 'Jangubai', 'Pochammathalli' while administering the medicine to the patient. Typhoid fever in *kolami* is called as *Madinamma*. The prepared decoctions are reported to be administered to the patient either before or after meals. Herbal practitioners and the

local community in the study area should be educated on sustainable methods of harvesting medicinal plants without compromising their availability for future use. It is also imperative to train the community on the proper propagation techniques in order to encourage the domestication of valuable and threatened medicinal plants. The domestication of medicinal plants will create new opportunities for the local people such as provision of an alternative income and could help reduce the pressure on the tribal population.

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Figure 1: Plants of medicinal values in *kolams* of Adilabad district



Table 2: Plants used for medicinal purposes by Kolams of Andhra Pradesh

Plant Name	Family	Local name	Parts used	Use
<i>Ailanthus excels</i>	<i>Simaroubaceae</i>	<i>Gandighuand</i>	<i>Bark</i>	Dose: 2-3 gms. Frequency: 3 times in a day Duration: one week Bark paste is mixed in fresh water and that decoction is administered to patients suffering from Typhoid and Jaundice. Fresh water bath taken after consumption.
<i>Cassia fistula</i>	<i>Ceasalpiniaceae</i>	<i>Relamaakh</i>	<i>Bark</i>	
<i>Dolichondron atrovirum</i>	<i>Bignoniaceae</i>	<i>Voddihmaakh</i>	<i>Bark</i>	Dose: 2-3 gms. / 250ml. Frequency: 2 times in a day Duration: 2 days Powdered bark is used to relieve stomach pain. Decoction taken as beverage or bark is eaten directly.
<i>Madhuca indica</i>	<i>Sapotaceae</i>	<i>Ippa maakh/ Ippa sara/ Ippa parka oil</i>	<i>Bark</i>	Dose: 100ml. Frequency: Once during labor pains Decoction prepared from powdered bark is used for safe delivery.
<i>Dalbergia paniculata</i>	<i>Fabaceae</i>	<i>Toppargh</i>	<i>Bark</i>	Dose: 150ml. Frequency: 2 times in a day Duration: 15 -20 days Decoction prepared from bark paste is used in the treatment of Chicken-pox.
<i>Butea monosperma</i>	<i>Fabaceae</i>	<i>Modiga maakh</i>	<i>Bark</i>	Dose: 100ml. Frequency: 2/3 times in a day Duration: 3-4 days Stem bark decoction is consumed to control vomiting.
<i>Lantana Camara</i>	<i>Verbanaceae</i>	<i>Boothganza</i>	<i>Leaves</i>	Dose: 10gms. Frequency: 2 times in a day Duration: Once Smoke evolved from the burnt leaves is exposed to keep children hale and healthy.
<i>Maytenus emarginata</i>	<i>Celastraceae</i>	<i>Danthimaakh</i>	<i>Bark/ Leaves</i>	Dose: 5gms. Frequency: Once Duration: 14 days Bark/leaves are directly consumed to cure stomach tumors.
<i>Woodfordia fruticosa</i>	<i>Lythraceae</i>	<i>Samurthamaakh</i>	<i>Leaves</i>	Dose: 5gms. Frequency: Once To attain menarche.
<i>Curculigo orchioides</i>	<i>Hypoxidaceae</i>	<i>Adavi vulligadda (Kakagadda)</i>	<i>Rhizome/ Root</i>	Dose: 20gms. Frequency: 3 times in a day Duration: One week Root paste is applied on the swollen portion of the skin (gaggalu) as a layer, which is called as 'Gandalu' in kolami language.

<i>Dillenia pentagyna</i>	<i>Dilleniaceae</i>	<i>Seedimaakh (Geedipandu)</i>	<i>Seed/ Fruit</i>	Dose: 10gms./ 10ml. Frequency: Once Duration: One week Seed gel is applied to relieve swellings and in the treatment of seasonal cough. Consumption of ripen fruit to cure cough.
<i>Hemidesmus indicus</i>	<i>Asclepiadaceae</i>	<i>Chayaveru</i>	<i>Stem</i>	Dose: 10-12gms. Frequency: 2 times in a day Duration: 3-4 days Powdered stem is used in the treatment of headache, cold and cough / in the tea preparation.
<i>Phyllanthus emblica</i>	<i>Euphorbiaceae</i>	<i>Usharika chekka and</i>	<i>Bark</i>	Dose: 20gms. Frequency: Once Duration: 2 days Bark paste of the both the trees is chewed and collected in a leaf (<i>Modigamaakh–Butea monosperma</i>) order to filter by the herbal specialist and then pours in the patient's ear to relieve jaw pain associated with toothache.
<i>Madhuca indica</i>	<i>Sapotaceae</i>	<i>Ippa chekka</i>	<i>Bark</i>	
<i>Madhuca indica</i>	<i>Sapotaceae</i>	<i>Ippamaakh,</i>	<i>Bark</i>	Dose: 30gms. Frequency: 3 times in a day Duration: 2 days Bark paste decoction is administered for two consecutive days to relieve typhoid fever. The inner layer of the stomach gets cleaned. Works as germicide.
<i>Termanalia alata</i>	<i>Combretaceae</i>	<i>Maddimaakh (Madigi)</i>	<i>Bark</i>	
<i>Cleistanthus collinus</i>	<i>Euphorbiaceae</i>	<i>Odassah,</i>	<i>Bark</i>	
<i>Butea monosperma</i>	<i>Fabaceae</i>	<i>Modiga,</i>	<i>Bark</i>	
<i>Diospyros melanorylon</i>	<i>Ebenaceae</i>	<i>Tuniki (Tumki),</i>	<i>Bark</i>	
<i>Lagerstromia parviflora</i>	<i>Lythraceae</i>	<i>Vayala,</i>	<i>Bark</i>	
<i>Tectona grandis</i>	<i>Verbanaceae</i>	<i>Teak (Thekh),</i>	<i>Bark</i>	
<i>Azadirachta indica</i>	<i>Meliaceae</i>	<i>Vepa (Leemmaakh)</i>	<i>Bark</i>	

<i>Mangifera indica</i>	<i>Anacardiaceae</i>	<i>Mamidi</i>	<i>Bark</i>	
<i>Syzygium Cermini</i>	<i>Myrtaceae</i>	<i>Alaneredu (Eleh)</i>	<i>Bark</i>	
<i>Zizyphus oenoplia</i>	<i>Rhamnaceae</i>	<i>Rehnga (Regipandu chettu)</i>	<i>Branch</i>	Dose: 2-3 gms. Frequency: 4 times in a day Duration: 5 days Branch paste is applied as antiseptic to cure scorpion bite.
<i>Carica papaya</i>	<i>Caricaceae</i>	<i>Boppayyeemaakh</i>	<i>Latex</i>	Dose: 3-4ml. Frequency: Once Duration: Half an hour Latex is applied to relieve severe pain of scorpion bite.
<i>Xanthium Strumarium</i>	<i>Asteraceae</i>	<i>Sapotagaddi</i>	<i>Leaves</i>	Dose: 5gms. Frequency: 3-4 times Duration: One week Leaf juice applied to clear white patches/ spots.
<i>Lagenaria ciseraria</i>	<i>Cucurbitaceae</i>	<i>Burrah (Chedu-Anapakaya)</i>	<i>Fruit</i>	Dose: 30 ml. Frequency: 2-3 times in a day Duration: 2 days Water stored in dried fruit for 5 minutes and the resultant decoction mixed with the Neem leaf juice, is administered to relieve body poisoning from snakebite. Red chili taste or hair plucking test is done to patient to know the presence/ reduction of poison content in the body.
<i>Azadirachta indica</i>	<i>Meliaceae</i>	<i>Neem</i>	<i>Leaves</i>	
<i>Terminalia bellerica</i>	<i>Cobretaceae</i>	<i>Thandimaakh</i>	<i>Bark</i>	Dose: 10 gms. Frequency: 3 times in a day Duration: 3 days Tree bark eaten to relieve stomach pain.
<i>Chloroxylon swietenia</i>	<i>Flindersiaceae</i>	<i>Kingheneh maakh</i>	<i>Branch</i>	Dose: tuft of branches Frequency: until dried leaves fell/ one month Duration: During rainy season Branches used as Mosquito repellent.
<i>Holarrhena pubescens</i>	<i>Apocynaceae</i>	<i>Dharugu maakh and</i>	<i>Bark</i>	Dose: 20-25 ml. Frequency: 3 times in a day Duration: 5-7 days Standstill bark paste decoction is used to cure loose and blood motions.
<i>Tectona grandis</i>	<i>Verbanaceae</i>	<i>Sama maakh</i>	<i>Bark</i>	

The domestication of medicinal plants will create new opportunities for the local people such as

provision of an alternative income and could help reduce the pressure on the tribal population.

The present study revealed an important and alarming situation with regard to utilization of morphological plants in ethnobotanical practices of 31 plant species from Utnoor division of Adilabad district in Andhra Pradesh to treat 57 different ailments and diseases. Among these plant species only few species are used to treat more than one disease. Medicinal pastes are prepared from stem, root, and leaves to treat diseases by the tribal people. The indigenous system of curing disease and on herbal medicines that is easily available around their locality for treating many common diseases. But with the development of education and their awareness towards importance of health and health care and also with the advent of modern health care facilities, Government health measures these people are becoming more interested in taking modern medicine instead of traditional herbal medicine. These people can easily avail modern medical facilities from the nearby town and it is found that they are in favor of taking these facilities. However, the older generations still have inclination towards herbal medicine and indigenous methods of treatment. The new generations are not very much interested in the indigenous methods of treating diseases.

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