



Research Paper

An ethno medicinal survey on medicinal plants used by the traditional healers from the north-eastern village of Orissa

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ABSTRACT

Ethno botanical survey and study has identified not only the medicinal plants collected for medical purposes by local tribal people of Kaptipada and Udala block of odisha, but also uses and local names of all these plants. The present study tried to provide sources for chemist and researchers are studying in ethno botany, pharmacology, chemistry and who involve in drugs making by comparing the information obtained from traditionally used herbs with previous laboratory studies. Based on ethano botanical survey this current study aims to identify wild medicinal plants collected for medical purposes by the local tribal people of Kaptipada and Udala block located in the district of Mayurbhanj, Odisha and to establish the ethnic uses and other popular name of these plants.

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INTRODUCTION

Human are part of nature, as nature is part of their being. Some tribal inhabitants possess incredible knowledge of a number of herb, shrubs and plant based formulations. According to the World Health Organisation about 80% of the world populations living in the developing countries rely exclusively on traditional medicine for their primary health care needs. Ethnobotany is broadly defined as the study of the relationship between plants and people (McClatchey et al., 2009). Our country has an excellent heritage of traditional medicine. These traditional medicines are based on different systems like - Ayurveda, Siddha and Unani. In India, the Ayurvedic system of medicine developed an extensive use of medicines from plants dating from at least 1000 B.C. Now an emerging interest in the world to adopt and study the traditional system and to exploit their potentials based on different health care systems, the evaluation of the rich heritage of the traditional medicine is essential. However the medicinal plants play a crucial role in the traditional medicine. India has a rich heritage of traditional medicine and the traditional health care system have been flourishing for many centuries. In general tradition and medicinal plants,

continue to be a powerful source of new drugs now contributing about 90% of the newly discovered pharma products. In the developing world, traditional medicine continues to provide health coverage for over 80% of the world population, especially in the developing world. These ethno botanical studies give information awareness about herbal medicine in North-eastern village area of Orissa.

Ethno medicinal or ethno botany studies are providing information to identify new medicinal plant and their beneficial activity (Mahwasane et al., 2013). The most ethno botanical studies report on the important plant families' use as medicine and drugs (Koleva et al., 2015). The ethno botanical survey was first focused on herbal remedy oral history used by nomad people of a region, recognize new herbal plants and utilize them for preparation of drug. The aim of this study is to distribute different knowledge and information about medicinal plant or herbal remedy in the indigenous community (Miara, 2019). Antimicrobial activity means to kill the microorganism and stop their growing. In advanced realm importantly in India poor people such as farmers, people of villages and local inhabitants use progenitor medicine for

Table 1: List of medicinal plants used for ethno botanical purposes.

Sl.no	Botanical name	Family	Local name	Habit	Part use	Mode of uses and Cure diseases
1	<i>Achyranthes aspera</i> L.	Amaranthaceae	Apamaranga	Herb	Leaf, root and whole plant	The leaves paste apply in teeth to relief pain and root extract adding with milk taken once a day in empty stomach to cure piles, colic in children.
2	<i>Adhatoda vasica</i>	Acanthaceae	Basanga	Shrub	Bark and leaf	Leaf juice mixed with 1 teaspoon of honey taken twice a day in empty stomach to cure cold, cough, asthmatic attack, ulcer
3	<i>Aegle marmelos</i>	Rutaceae	Bela	Tree	Fruit, leaves	Leaf are taken in empty stomach in morning to reduce acid, digestion and gastric problem
4	<i>Ageratum conyzoides</i>	Compositae	Pokasunga	Herb	Leaf	Fresh leaves are eaten in 3 days in empty stomach to increasing milk flow by nursing mother, leaf extract 2 teaspoon taken twice a day to cure diarrhea and dysentery and without flower the whole plant paste mixed with neem paste to cure scabies.
5	<i>Allium cepa</i>	Amaryllidaceae	Piaja	Herb	Bulb and leaf	Bulb paste mixed with honey and lemon juice and apply on head to cure Hair fall, dandruff and blood purification
6	<i>Allium sativum</i>	Amaryllidaceae	Rasuna	Herb	Bulb	Boil bulb and brassica oil then apply on feet and body to cure Cold, joint pain, body pain
7	<i>Aloe vera</i>	Asphodelaceae	Ghikuari	Herb	Whole plant	Leaf gel mixed with lemon juice and honey and applies on skin to cure Skin disease, pimple and acid.
8	<i>Ananas comosus</i>	Bromeliaceae	Sapuri	Herb	Leaf	Leaf juice taken twice a day to cure wound, ring wound
9	<i>Andrographis paniculata</i>	Acanthaceae	Bhuinimba	Herb	Leaf and root	Whole plant juice or syrup taken once a day in empty stomach to cure Colic pain, high blood pressure and fungal and skin infection.
10	<i>Argemone maxicana</i>	Papaveraceae	Kantakusuma	Herb	Leaf	Leaf paste apply rat bite place to reduce poison and it also to cure Fever.
11	<i>Artocarpus integrifolia</i>	Moraceae	Panasha	Tree	Root	Root juice taken once a day for Lactation in expectant mother.

Table 1: Continued

12	<i>Asparagus racemosus</i>	Liliaceae	Satabari	Shrub	Tuber	The plant part paste applied the place of Joint pain and leaves juice use to cure stomach pain.
13	<i>Azadiracta indica</i>	Meliaceae	Nimba	Tree	Leaf and bark	The leaves paste mixed with <i>Curcuma longa</i> and applied through skim to cure Skin disease, chicken pox, fungal infection, blood purification.
14	<i>Bacopa monnieri</i>	Plantaginaceae	Brahmi	Herb	Leaves and whole plant	Two teaspoon of plant juice mixed with <i>Azadiractaindica</i> leaf juice and <i>Mentha spicata</i> leaf juice taken once a day in empty stomach to cure skin infection, increase immunity system and blood purification and whole plant use to development of memory power
15	<i>Balanites ruxburghii</i>	Zygophyllaceae	Hengu	Shrub	Seed, leaf	The seed powder of half teaspoon mixed with guda taken once a day in three days in full stomach to treatment of abortion and the root paste use to cure teeth pain.
16	<i>Barleria prionitis</i>	Acanthaceae	Daskarandi	Herb	Leaves and whole plant	2.5 ml of leaves decoction is given with <i>Momordica charantia</i> leaf juice 2.5 ml to cure wound and leaf paste used to cure bleeding from teeth, teeth pain.
17	<i>Basella alba</i>	Basellaceae	Poi	Climber	Leaves	The leaf fine paste is use the place of insect bite and leaf juice is taken for the treatment of dysentery.
18	<i>Bauhinia voriegata</i>	Fabaceae	Kanchana	Tree	Leaf and root	50 ml of leave decoction given 2 Paper nigrum to treat Blood impurification.
19	<i>Beta vulgaris</i>	Amaranthaceae	Beet	Herb	Root	Half teaspoon of beet juice mixed with coconut oil to treatment of Cracked lips and bulb juice taken during weakness.
20	<i>Bombax malabaricum</i>	Bombaceae	Simili	Tree	Seed and root	2 teaspoon of dried bark powder mixed with desired amount of honey applied on face to reduce pimple, skin infection and root powder use to cure dysentery.
21	<i>Brassica juncea</i>	Brassicaceae	Sorisa	Herb	Seed (oil)	Seed oil applied all over body twice a day to treat cold, joint pain and seed oil use to cure synopsis.

Table 1: Continued

22	Bryophyllum calycina salisb.	Crassulaceae	Hemsagara	Herb	Leaves	Leaf juice mixed with palm candy and 125 gm of fresh milk taken 3 to 5 days in empty stomach to cure Leucorrhoea and leaf juice also use for the treatment of dysentery and dysuria.
23	Bryophyllumfedtschenkoi	Basellaceae	Garden plant	Herb	Leaves	Leaf paste mixed with potato juice is use for the treatment of appearance of blisters all over body.
24	Butea superba Roxb	Fabaceae	Polasa	Shrub	Leaves and root	Root pastes apply on the place of crack to cure joint facture, bone facture.
25	Cajanus cajan	Fabaceae	Harada	Shrub	Leaves	2 teaspoon of leaf juice is taken once a day in empty stomach in 1-2 week to cure urine infection, menstruation problem.
26	Calotropis procera	Apocynaceae	Arakha	Shrub	Leaves	The leaves are binding on the lower feet keep it over night for the treatment of cold.
27	Canabis sativa	Cannabaceae	Bhanga	Shrub	Leaves and seed	Leaves juice 1.5 ml is taken once a day in full stomach and leaf and seed use to cure Chickenpox and headache.
28	Canna indica	Cannaceae	Sarbojoa	Herb	Leaves and rhizome	2 teaspoon of fresh rhizome or rhizome powder mixed with 2 cup of boil water is taken twice a day for the treatment of Blood pressure and rhizome also uses to cure dysentery and diarrhea.
29	Cardiospermumhelica cabum	Sapindaceae	Phutiphtica	Herb	Leaves and root	Tuber or root paste apply on place and keep overnight to cure joint pain.
30	Carika papaya	Caricaceae	Amrutabhanda /papaya	Tree	Fruit	The ripe fruit paste mixed with 2 teaspoon of milk and some honey apply on skin to cure black spot skin disease, glowing skin.
31	Cassia fistula	Fabaceae	Sunari	Tree	Leaves, bark and root	The leaf paste mixed with neem leaf paste use to cure Sin infection, itching.
32	Cassia occidentalis	Fbaceae	Kalachanjunda	Herb	Leaves and root	Taken 2 teaspoon of leaf juice once a day in empty stomach to cure wound.

Table 1: Continued

33	Centellaasiatica	Apiaceae	Thalkudi	Herb	Leaf, whole plant	Leaf paste or juice mixed with Alovera jell and 1 teaspoon of honey apply on face to cure pimple, black spot and leaf also use to cure acid, and gastric.
34	Chenopodium ambrosioides	Amaranthaceae	Kendiriphulo	Herb	Stem	The leaf juice 1.5ml taken once a day in empty stomach to cure Leishmaniasis and nervous disorder.
35	Cicerorientinum	Fabaceae	Buta	Herb	Leaves, seed	2 teaspoon of seed powder mixed with 4 teaspoon of tomato juice and 1 teaspoon haldi powder and apply on face and body to cure pimple, dark circle on face and eye.
36	Cinnamomumzeylanicum	Lauraceae	Dalchini	Tree	Leaves, bark	Leaf juice or paste apply on place of insect bite to decrease poison and infection and leaf juice use to cure Insect bite, headache.
37	Cissampelospareira L.	Menispermaceae	Akanbindi	Herb	Root and leaf	Leaf juice taken twice a day in full stomach to cure dry cough and leaf also use to cure sore.
38	Cissusquadrangularis L.	Vitaceae	hadabhanga	Climber	Whole plant	Whole plant paste apply twice a day on the place of fracture to cure bone fracture both human and animal.
39	Citrus lemon	Rutaceae	Lembu	Shrub	Fruit, leaf	2 tea spoon of fruit juice taken to cure acid and fruit juice also use to cure dandruff, hair fall, pimple.
40	Clitoriaternatea	Fabaceae	Aparajita	Climber	Root	4cm of root taken and bind on wrist and abdominal to cure abdominal pain and root also used to cure irregular menstruation.

treatment of infection. The plant parts have been used in the form of decoction, juice and teas to treat different infectious disease. More people trust healers and shamans cause of their experience to prepare herbal remedy for treatment of different infectious disease because the herbal remedy has antimicrobial activities (Mathur et al., 2010). The past and the present are all full of living examples of discoveries of drugs, ranging from minor diseases to antiasthma, anti diabetic, antihypertensive and anti

cancer.

MATERIALS AND METHODS

A field study and survey had been carried out for a period of approximately 6 months (November 2019 - May 2020). During this period, total 125 vascular plant specimens were collected and studied at the rich source of devkund, kundabai,

sridamchandrapur, balichatra, nudhudiha, sambrukya, kaladem, suneidem, sankua, podadiha, pingu, divyasinghpur, urmad, kukrdima, kaptipada, kasigadia, dehasahi, khapra pahar, tangrasunipahar, nuagaon, jamdiha, budamara, chuiposi, hatigodia, hatingsai, adapal, baliposi, bankapal, belpal, gobindapur, Jaida etc. village of Udala and Kaptipda area of Mayurbhanj district. A questionnaire was administered to the local kaviraj people, through face-to-face interviews technique as described in

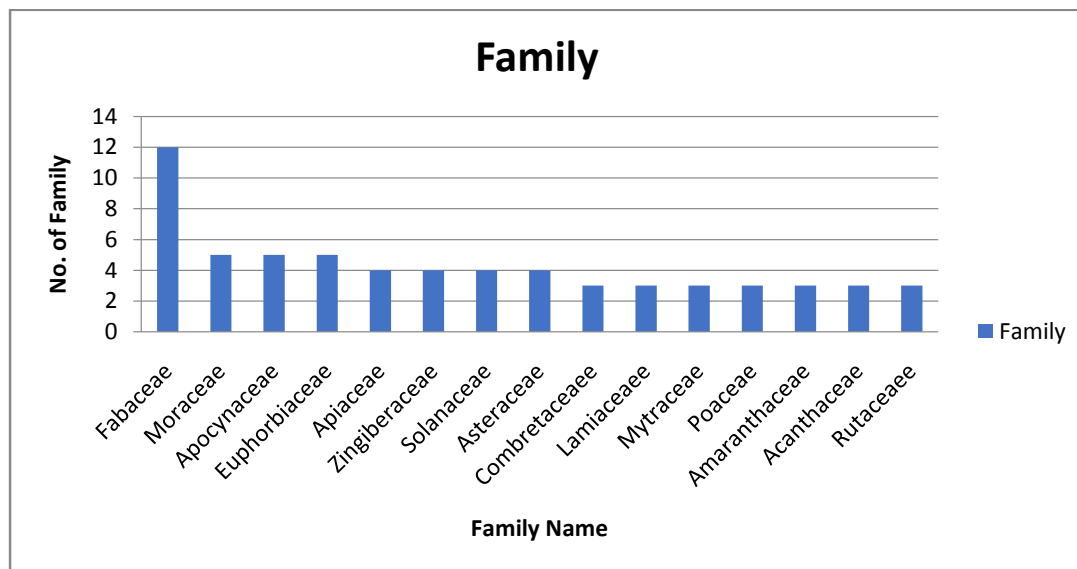


Figure 1: List of family used for ethno botanical purposes.

similar studies (Akaydin et al., 2013; Seid and Aydagnehum, 2013). Demographic characteristics of participants, names of the local plants, their utilized parts and preparation methods were investigated and recorded (Table 1). However all collected medicinal plant species were entitled local name as well as odia, Hindi, English and Sanskrit name also and herbarium materials were prepared. In addition, the medicinal value and ethnical uses of the species was included.

RESULTS

In the area of research, the ethno botanical study documented the use of 125 medicinal plant parts used by indigenous people, ayurvedic doctors and Vaidya kabiraj in this area for the treatment of various diseases. The most plant parts used were leaves 68%, root 37%, seed 30%, bark 22%, whole plant 12%, fruit 11%, stem 7%, rhizome 4% and bulb 2% and rhizome 4% other seeds and fruits were used 41%. In the area of research about 100 individuals who had knowledge about plants were interviewed. Mean age of the respondents was 55 years (in 50–73 years range). In this survey most common families were taken these are Fabaceae, Moraceae, Apiaceae, Asteraceae, Lamiaceae etc. (Figure 1). Out of 125 medicinal plants species the total number of plants their growth habits were herb 51%, tree 42%, shrub 22% and climber 10%.

OBSERVATIONS AND DISCUSSION

The local people of Kaptipada and Udala block of Odisha

have developed vast knowledge of plants as observed by the authors during their field survey from November 2019 - May 2020 of ethno botanical work, the local tribal's and kaviraj have acquired through their traditional practices since time immemorial. After the collection and identifying these plant species in the Herbarium and scrutinizing the data, it was found that the information is quite interesting and worth pursuing for their efficacy. The tribals used certain plants for some particular purposes like Rheumatism, arthritis, lambago, Insect repellents, gout disease and Diabetes etc. The present studies aimed to identify wild medicinal plants collected for medical purposes by the local tribal people of Kaptipada and Udala block located in the district of Mayurbhanj. These all observed listed plants, used for the treatment of many varying diseases, are abundantly found in this region. Local people use medicinal plants in every seasons of the year. These listed plants of mayurbhanj district of Orissa is threatened by such factors as grazing, expansion of new agricultural lands and unsustainable picking of plants to generate income. The tribal's of mentioned village represent an indigenous and invaluable knowledge base some of which are identified and documented but by large to be explored. Steps should be taken immediately to ensure the inclusion of relevant flora within conservation designations and the ethno medical knowledge of these tribal's may provide a strategy for discovery of clinically useful compounds from plant sources.

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