

Rural Indigenous Knowledge and Ethnobotany: A Way of Survival in Local Ecology

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Abstract

Rural Indigenous knowledge is significantly applicable in survival of local community, like tribal districts of Indore division, Dhar, Jhabua, Alirajpur etc. The indigenous knowledge is highly scattered, secretive and instant in nature that requires appropriate efforts in bringing it to the community. Ethnobotany can play an important role in exploring this knowledge to the community. As local people deal with roots and herbs effectively available, in their local environment limiting the regional biodiversity. Plenty of literature reviews is available on ethnobotany focusing on local medicinal roots and herbs. It is an exploratory study on medicinal plants being used by local tribal people in region. Observation and reports from agriculture research centres have been incorporated for this study. Ethnobotany in local region requires conservation and cultivation to maintain the balanced ecology with this knowledge for survival of local community. This paper is an effort to bring those beneficial knowledge area and ethnobotany together for the academic and social relevance.

Keywords: Rural Indigenous Knowledge, Ethnobotany, Local Ecology, Ethnomedicine.

Introduction

Ancient Indian knowledge system of human survival in Bio-diversified ecology is only key component to develop indigenous knowledge people and society. India has rich heritage of knowledge on plant based drugs both for use in preventive and curative medicines. Besides the classical work of the Ayurveda, ancient Indian scholars like 'Charak', 'Sushrita' and others produced remarkable description of Indian medicinal plants. They described the properties of medicinal plants and preparation in such details that most of the plants and their preparation are still held in high repute in the medical profession. In fact, our Ayurvedic system of medicine is predominantly a plant-based Materia-medica, making use of most of our native plants to make the health care cheap and acceptable [1].

Khargone district formerly known as West Nimar district is a district of Madhya Pradesh state in central India. The district lies in Nimar region, and is part of Indore Division. Khargone town is the headquarters of this district. Khargone district had been part of the Nerbudda (Narmada) Division of the Central Provinces and Berar, which became the state of Madhya Bharat (later Madhya Pradesh) after India's independence in 1947. On 1 November 1956 this district became part of the newly formed state of Madhya Pradesh. On 25 May 1998 West Nimar district was bifurcated into two districts: Khargone and Barwani. Area of the district is 8030 km². The district is situated between 21°22' and 22°35' north latitudes and 74°25' and 76°14' east longitudes. The district is

surrounded by Dhar, Indore and Dewas in the north, state of Maharashtra state in the south, Khandwa, Burhanpur in the east and Barwani in the West. Deepali was the princess who ruled city in 20th century. The Relationship between man and plants has been very close throughout the development of human cultures. Through most of Man's history, botany and medicine were, for all practical purposes, synonymous fields of knowledge, and the shaman or witch-doctor-usually accomplished botanist-represents probably the oldest professional man in the evolution of human culture. Perhaps in no other has the interdisciplinary approach been so essential and so effective. The basic disciplines involved, naturally have been botany chemistry and pharmacology; but anthropology, archaeology, linguistics, history, sociology, comparative religion and numerous other specialities have likewise contributed appreciably to the search for new biodynamic plants. This intertwining of data and points of view from sundry fields has often been called ethnobotany or in respect to drug plants ethnopharmacology [2]. Ethnobotany term was given by Harshberger J.W. in 1896. It is the art of collection of useful plants by the society and describes its uses. Ethnobotany deals with the uses of the plants for fiber, fuel, fodder, dyes, tannin, gum. Use of plants based drugs and chemicals for curing various ailments and personal adornment is as old as human cultivation [3].

India is good sources of medicinal plants approximately 7500 species. Important information of medicinal plants is also given in Rigveda. It is one of the oldest book on medicinal plants. Medicinal Plants and its parts are good sources of medicine even today it is the backbone of pharmaceutical companies. Medicinal plants have been used in our country since time immemorial. Thousands of Indians are used herbal drugs regularly. They are used spices in their food for good health. Since last four decades considerable progress has been made in the field of ethno medicine. A review of literature on ethnomedicine indicates that various workers have contributed from different parts of India including Madhya Pradesh [4,5]. But still there are some interior areas which could be served intensively for the search of new traditional medicines [6]. Generally local medicine man or knowledgeable of medicinal plants of Bhils and Bhilala tribes is known as 'Badwa'. They keep secrecy about medicinal plants and uprooted according to required proportion. Usually they collect these plants after rainy season or Dusshera festival. Tribal's live close to the forest and are largely dependent on the wild biological resources for their livelihood. They utilizes a various kinds of plant in their basic needs, such as food, fiber, fodder, wood, medicine, gum, tannin, resin, dye and shelter. Literature review for the paper includes ethnobotanical work done in Madhya Pradesh are [7-29,34]

Underground plant parts mean plant parts found in the soil or embedded in soil in the form of root, rhizome, corm, bulb etc. In olden days sages and saints were used to live in the forests, they used to eat Kandmool (Underground parts). Kandmool gives them so much energy that they could live many days without taking any type of food materials. Some people believe that the underground plant parts have magic power so that they can live longer without hunger. Jhabua district is situated in the western most part of Madhya-Pradesh state. Most of the village inhabitants of Jhabua district belong to tribal communities. Major part of the district is covered by dense forest area in which various tribes like Bheel, Bhilala and Pataya are living in majority. Out of these tribes Bheel and Bhilala stand high in strength, scattered in most of the villages of the district. These tribals live close to the forest and are largely dependent on the wild biological resources for their livelihood. Underground plant parts are well known in Jhabua district as 'Kandmool' or 'Kando' which are eaten at time of scarcity and used for curing various ailments by the tribal people. In the interior areas of Jhabua district, plants become the only source of medicine because lack of modern facilities and remoteness. Traditional knowledge in this area

is rapidly degrading due to modernization of that area and the younger generation is not interested to learn from older generation. Thus, man important information may be lost in absence of proper documentation.

Literature Review

The plant species used by the rural people for the treatment of various joint diseases are very common, easily available everywhere and low cost. Their mode of preparation and mode of administration are also simple and convenient. The common man can easily afford to take the treatment without side effect. Based on the initial reconnaissance survey and group discussion, it was found that information on the medicinal use of plant is mostly confined to elder people. Younger generation is ignorant about the vast medicinal resources available in their surrounding and is more inclined towards the conventional medicines. It was also found that the tribal practitioners are hesitant to disclose their knowledge. The indigenous knowledge system of herbal practice is still very rich and available among tribal community. The establishment of modern medicinal health centres is in progress in many rural areas that may gradually change the existing pattern of indigenous knowledge system of health care. Hence it is necessary to document the traditional knowledge of useful plants and their therapeutic uses before being lost forever from the community. It is significant to mention here that as the treatment given by tribals is found very effective. Hence there is need to raise awareness among people about this flora and to assist them for cultivation and conservation of the plant to local people of the area to meet their own medicinal needs [27,33].

Medicinal plants constitute the base of health care of system in many societies. Globally, about 85 % of the traditional medicines used for primary health care derived from plants [30]. Today, according to the World Health Organization (WHO), as many as 80% of the world's people depend on traditional medicine and in India, 65% of the population in the rural areas use Ayurvedic and medicinal plants to help meet their primary health care needs [31]. In India, more than 43% of the total plants are reported to be of medicinal importance [32]. In one of the study plant and plant parts are used for medicine in Alirajpur to treat different diseases have been explored in which Fruits are used in case of digestive problem, Pneumonia, Abortion; Roots are used to cure Cough, Increase sexual vigor, Male impotency and Sexual weakness; Leaves are helpful in treatment of Uterus displacement, Leucoderma, Tuberculosis and Increase memory; Seeds are used in curing of Scorpion bite and Diabetes; Bark and Whole plant are usable in curing of White discharge and Menorrhoea respectively. *Butea monosperma* (Lam.) Taubert were the common plant species is used by the tribal of the region to treat scorpion bite [6]. One study reports 86 plants species which are included fewer than 71 genera and 47 families which are used for the treatment 35 types of diseases. Most of the traditional medicines were prepared by healers from fresh material harvested from wild. Dried materials often given as powder form, prescribed to take as a juices, decoction or infusion of whole plants or plant parts given to patient and most commonly. The data on the ethenobotanically important plants used in skin disease, diarrhea and dysentery, cough and cold or branchities or asthma , fever and typhoid, snake and scorpion bite, jaundice, bone fracture [27,33].

Research Method

The study is based on ethnobotanical information regarding the use of wild plants and in addition of some cultivated plants. Open informal interviews and observations were the tools to perform data

collection. Local residents, belonging to families living in the study area since generations and involved at least partially in agriculture were the population of the study. People of this region can easily understand and speak Hindi, Nimari and Malwi with their own tribal languages. The survey was across the seasonal so as to get maximum information and also to cross check the information provided by the local informants during the earlier visits. The examination was carried out where the population was dense. During the trips, the villagers, Badwas of the different villages were interviewed.

Conclusion

Achyranthes aspera which is locally known as Andijhada its root paste given internally in hydrophobia, fever, anaemia and night blindness, specific in piles and paste of leaves in sukha roge like wise *Argemone mexicana* L. which is locally named as Peli katel its Small pieces of roots are chewed with a leaf of Paan (*Piper betle*) in jaundice, another plant known as *Boerhavia diffusa* Purnava; the root paste is given in cases of blood dysentery two times a day, in empty stomach and the urinary problems. like wise *Ichnocarpus frutescens* which is commonly called Dudhi its root paste is applied on body to cure fever another plant *Madhuca longifolia*, Mahua is used to make A sweet dish by boiling the flowers in milk and taken regularly for a long duration to cure male impotency its Bark paste applied externally on tonsil and Seed extract is given internally. The *Madhuca longifolia* var. *latifolia* (Roxb.) Chevalier (*Sapotaceae*), local name Mahua, useful in Gout by using seed oil applied on affected parts. *Plumbago Zeylanica* L. (*Plumbaginaceae*), locally known as Chitawal used as Gout treatment, through root paste boiled in mustard oil and massaged over affected parts. *Tinospora cordifolia* (Willd.) Miers ex Hook f. and Thoms (*Menispermaceae*), locally known as Giloy beneficial in Arthritis as 5ml stem decoction is given orally twice a day. *Jurung Abrus precatorius* L. *Leguminosae* using Leaf to cure Mouth sores known and Scorpion bite local name Punarnava known as *Boerhavia diffusa* *Nyctaginaceae* Leafs to cure.

Discussion

Traditional healers from the region provided plant remedies to humans and livestock health problems. The study shows that tribal of Nimar Region (Khargone including Dhar, Alirajpur and Jhabua, etc) are dependent upon the plant resources for medicine and other purposes. It is helpful to pharmaceutical companies to discover a new drug. Further work in ethnobotanical studies is in progress. The flora of Nimar region provides very good source of many medicinal plant used as traditional medicine.

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