

An ethnobotanical approaches of medicinal plants and their uses in the Tribal areas of Shahdol district (M.P.)

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Abstract

The present paper deals with discussion of conventional ethnographic knowledge of different tribes located in the Shahdol district of Madhya Pradesh. It is appreciably inhabited by tribal population such as the Gond, Konda, Kol, Baiga, Bharia. Even today, the largest segments of tribal population are dependent on plant resources for the treatment of different disease and ailments. Presently, it is crucial to discover this traditional medicinal system, ensure its continuity, document the appropriate research, and seek out models. This approach will prevent these plants from being eradicated for agricultural purposes and alleviate the pressure on overexploited natural habitats. A total of 38 plant species belonging to 15 families were used to treat different diseases. Therefore, it is essential to investigate the potential for the propagation and cultivation of these plants in the region to achieve sustainable development. Additionally, further research into the medicinal plants referenced in this study may yield valuable insights for the search for bioactive compounds and the development of new pharmaceuticals to combat diseases.

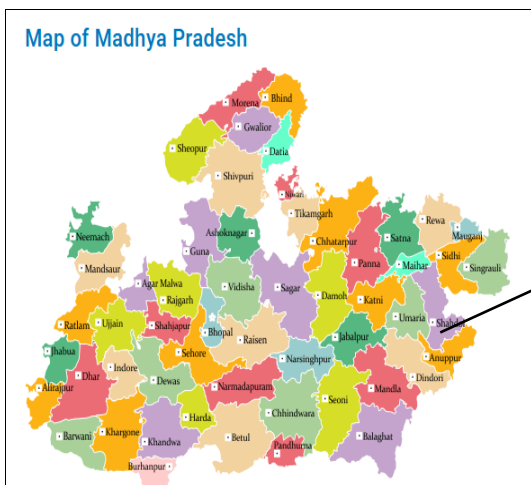
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Introduction

Since the start of society, medicinal plants have been an important part of keeping people healthy. In India most of the population lives in rural areas where adequate formal medical facilities are not available. Due to the rising cost of treatment through allopathic science and adverse effects of synthetic medicines, people all over the world are seeking medicinal plants for their health needs. Medicinal plants are becoming more popular in both developing and developed nations. A lot of their trade still comes from gathering plants in the wild (Zahoor *et al.* 2013) [1]. Indigenous knowledge creates as much as human civilization. Over the millenniums man has used plants to treat various ailments. In India, about 15,000 species of flowering plants about 17% are considered medicinal (Jain, 1968) [2]. Shahdol district of Madhya Pradesh is appreciably inhabited by tribal population such as the Gond, Konda, Kol, Baiga, Bharia. Even today, the largest segments of tribal population are dependent on plant resources for the treatment of different disease and ailments. Throughout history, individuals have

shared narratives regarding these plants. The folk medicines utilized in contemporary times are exceedingly uncommon. The younger generations are at a greater risk of losing this invaluable knowledge as older generations show little interest, and young individuals often migrate to urban areas for employment opportunities. Presently, it is crucial to discover this traditional medicinal system, ensure its continuity, document the appropriate research, and seek out models. This approach will prevent these plants from being eradicated for agricultural purposes and alleviate the pressure on overexploited natural habitats. Sahu (2010), Rothe (2005), Afsana and Biswas (2021), Upasani *et al.* (2017), Jain (1991), Chopra *et al.* (1956, 1969), Harshbarger (1895), [3-10]. The present ethno-medicinal study was carried out to record traditional knowledge on plants used for medicinal purpose by the tribal and local peoples of Shahdol district.

Material and Methods Study area



Map 1: Location map of Madhya Pradesh and study area of Shahdol district.

Shahdol District is situated in the northeastern part of the Madhya Pradesh provinces of India. Because of the division of the district on 15-08-2003, the area of the district remains 5671 km². It is surrounded by Anuppur in the southeast, Satna & Sidhi in the north and Umaria in the west. The district extends 110 km from east to west and 170 km from north to south. This district is situated between 22°38' N latitude to 24°20' N latitude and 80°28' E Longitude to 82°12' E longitude. The District is located in the northeastern part of the Deccan Plateau.

Data Collection

During field survey, detailed information on types, traditional method of preparation, mode of consumption, shelf life and ethnic value of the medicinal plants were collected from elderly persons and traditional healers of tribal communities. Information was collected through well structured pretested questionnaires and discussions among the informants in their local language.

Ethno botanical informations were collected by standard method of Jain and Rao (1977) [13]. A questionnaire was prepared to gather data for this purpose, the collected plant specimens were dried, chemically treated, and herbarium sheets were prepared and identified by using flora and others standard literature (Jain and Rao, 1991, Mudgal, *et al.* 1997, Singh, *et al.* 2001 and Verma, *et al.* 1993) [14-17]. Information on ailments, plant part used, formulation along with dose and duration etc. gathered from tribals have been enumerated.

Result

The medicinal qualities of 38 traditional plants from 15 families are shown in Table 1 along with a list of those properties. Based on data research, these plants are used by native people to treat different diseases. The family, botanical name, local name and medicinal uses are tabulated as follows: -

Table 1: The list of Ethnobotanical medicinal plants of Tribal areas in Shahdol district.

	Family		Botanical name	Local name	Medicinal uses
I.	Acanthaceae	1	<i>Carviacallosa</i> Nees.	Karvi	Sticks are used to build the cottage's wall. Crushing Karvi leaves and using the juice to treat stomach problems.
		2	<i>Hygrophila spinosa</i> (Tand).	Talmakhana	In case of jaundice, the leaves and seeds are used. Seeds that are eaten with milk, which makes you more sexual.
II.	Amaranthaceae	3	<i>Achyranthesaspera</i> L.	Chirchita	People with diarrhoea take the root powder three times a day. The mixture of roots is also used to treat scorpion stings. Root as his given to kids who cough. Putting drops of leaf juice in your nose can help with headaches. People with fevers are given dried plants that have been boiled in water.
		4	<i>Amaranthus spinosus</i> L.	Chaulai (kateeli)	Juice from roots is used to treat diarrhea and illness. Half spoon of root juice should be drunk twice a day.
III.	Apocynaceae	5	<i>Carissacongesta</i> Wt. Icon.	Karaunda	Women who have just given birth are given a decoction of plants to ease the pain of giving birth. People put latex on their lips in the winter to keep them safe.
		6	<i>Wrightiatinctoria</i> R.Br.	Kali dudhi	Bark and curd mixed together and given to dissolve stones in gall bladder. Bark and seeds are used in jaundice.
IV	Asclepidaceae	7	<i>Calotropisprocera</i> R.Br.	Aak	When someone has headache, they put a mixture of latex and cold water on their face. If someone has malaria, they are given a decoction of root wood with black pepper.
		8	<i>Calotropisgigantea</i> L.	Safed aak	Honey mixed well with dried flower powder is used to treat bronchial asthma.
		9	<i>Cryptolepis buchanani</i> R. & S.	Bel	Latex is applied on goitre. Root paste is applied over bone fracture.
		10	<i>Hemidesmus indicus</i> (L.) Schultes.	Anantmul	For bladder problems, the roots are crushed and the powder is taken by mouth. On snake bites, root paste is put inside the body.
V	CCaesalpinaceae	11	<i>Cassiafistula</i> L.	Amaltas	Seed powder is given to babies who have fevers. People with thrush and some skin diseases use the tree's fresh leaves and flowers to get better. A root solution in water is used to treat common fever.
		12	<i>Cassiatora</i> L.	Chakuda	The leaves and stems are used as vegetables. A whole plant extract is used to cure psoriasis.
		13	<i>Tamarindus indica</i> L.	Imali	Boiling leaves in water. The water is used for bathing after it has cooled down. It makes body pain go away.
VV I	CCombretaceae	14	<i>Terminaliaarjuna</i> (DC) Weight and Arn.	Arjun	People use the bitter bark of this species to get rid of fevers, cool down, and boost the heart. A bark mixture mixed with cow's milk is given to people who have chest pain and irregular heartbeats. People make furniture out of the wood from this tree.
		15	<i>Terminalia bellarica</i> Roxb.	Bahera	The dried fruit of this tree is used in the treatment of cough, fever, indigestion, dropsy, leprosy, piles, etc. The fruit used in the Ayurvedic preparation called "Triphala Churna," which also contains the fruit of <i>T. chebula</i> and <i>E. officinalis</i> .
VV II.	EEuphorbiaceae	16	<i>Euphorbianerii folia</i> L.	Dudhi	Latex is taken from the stem and mixed with mother's milk. A baby with a stomachache can takes this mixture by mouth at night.
		17	<i>Embilca officinalis</i> Gaertn.	Amla	The bark and fruit decoction mixed with the fruits of <i>Terminalia chebula</i> (Hirda) are used on vomiting. The fruit powder and bark juice are used in stomach trouble. Konkana, Mahadev Kol and other tribes consume ripe

				fruits as a blood purifier.	
		18	<i>Jatropha curcas</i> L.	Jamal gota	People with gum disease use the young sticks as tooth brushes. People with muscle pain and body swelling use the seed oil. People who have gas or diarrhoea take fresh root powder mixed with black pepper and a small amount of asafetida powder by mouth.
VII I	Fabaceae	19	<i>Abrus precatorius</i> L. Syrt.	Ghungchi	Concentrated seed extract taken as blood purifier. Whole plant is dried, roasted and ash is applied on wounds.
		20	<i>Buteamono sperma</i> (Lam.) Taub	Chhiwala	For cracks in the foot, the gum is put on at night while you sleep. Inhaling a decoction of stem bark can help with asthma, coughs, and colds.
		21	<i>Dalbergia sissoo</i> Roxb.	Shisham	People with gonorrhoea are given powdered bark to take. Furniture is made from the hard wood.
		22	<i>Macrotyloma uniflorum</i> (Lam.) Verde.	Kulthi	Kulthi decoction is used to help women who have just given birth get rid of their placenta. Seeds are used to get rid of parasites.
		23	<i>Pongamiapinnata</i> (L) Pierre.	Karanj	Bark powder is put on animal wounds to help them heal. People with skin problems use oil made from seeds.
		24	<i>Psoraleacoryli folia</i> L.	Bavachi	As a powder, the seeds are used to help people go to the bathroom, get rid of parasites, and make them pee. People with leprosy, eczema, and skin diseases that make the skins well use seed powder or paste.
IX	Liliaceae	25	<i>Allium sativum</i> Linn.	Lahsun	Cloves are fried in sesame oil and that oil is used in earache. Cloves are useful in asthma. It is also used in arthritis and rheumatism.
		26	<i>Aloevera</i> (L.) Burm.	Gheekunwar	Smoked leaf juice is used to treat colds, coughs, and fevers. The leaf itself is used to treat skin damage. Aloe jell is used to get rid of wrinkles in beauty products. And helps heal burns. People with severe heartburn and jaundice drink leaf juice mixed with ginger juice.
X	Malvaceae	27	<i>Hibiscus aculeatus</i> Roxb	Amari	Used to treat scurvy and pain while urinating. Acidity can be lowered by fruits.
		28	<i>Sidacarpini folia</i> Linn.	Kareta	Warm leaf extract and sesame oil and put the monboils to get the pus out. Root powder is taken by mouth to help with constipation.
XI	Menispermaceae	29	<i>Tinospora cordifolia</i> (willd) Miers.	Gurich	Concentrated root extract is used to cure fever. To treat diabetes.
XII	Mimosaceae	30	<i>Acaciachundra</i> (Roxb. exRottl.) Willd	Khair	This wood is used to make tools for farming. It is a fuel for homes. To feed horse, the leaves of this tree are used.
		31	<i>Acacia nilotica</i> (L.) Willd	Babul	People put stem bark powder mixed with common salt on their teeth and gums to get rid of bad breath and as a tooth powder. People clean their teeth with young twigs.
XIII I	Moraceae	32	<i>Ficus exasperata</i> Vahl.	Karvat	When bark is boiled in water, the juice is given to women to help them get pregnant. The filtrate is given every day until the baby is born.
		33	<i>Ficus recemosa</i> L.	Umar	People with soft gums use the rough leaves of this species as a mouth wash. The rubber from the stem can help with piles and diarrhoea. Fruits can be eaten and can make you feel full. These things can help with stomachaches.
		34	<i>Ficus religiosa</i> L.	Pipal	Leaf juice applied on bleeding from nose.
XI V	Sterculiaceae	35	<i>Helicteresis ora</i> L.	Marodfali	Bark powder is given to people who have been bitten by snakes. Fruits are rubbed together to make a smooth paste that is given to children who have gas or colic. Root decoction is taken by mouth to treat diabetes.
XV	Zingiberaceae	36	<i>Costus speciosus</i> (Koenig) J.E.Sm.	Keokand	If you plant this plant around crop areas, the crops will not get any disease.
		37	<i>Curcuma aromatica</i> (Salish).	Haldi	The stem and roots are used as medicine and to aid digestion. Used to clean the blood.
		38	<i>Zingiber officinale</i> Ale.	Adharakh	Rhizome can be fresh or dried. It is boiled in water and used to treat cough and colds.

The reported plants were arranged according to their family, botanical name, local name and medicinal uses. Most of the plants reportable during this study were collected from natural vegetation (72.00%) and few of them from home gardens (28.00%). These plants are used for the treatment of many diseases of human beings such as stomach pain, constipation, piles, dysentery, jaundice, diabetes, fever, asthma, menstrual disorders, snake bite, and skin diseases etc. Majority of the medicinal plants were herbs than shrubs, trees and climbers respectively and the part of the plants which used for the medicinal purpose was leaves, root, flower, bark, fruits, and rhizome etc.

Discussion

In every nook and cranny of the Shahdol district, plants are utilized for medicinal purposes. The herbal concoctions

derived from traditional medicinal plants were primarily employed to address cuts and wounds, as well as stomachaches and abdominal disorders, for the treatment of jaundice and liver ailments, and to combat intestinal worms and fevers. The research indicated that a significant number of the gathered plants were utilized for the treatment of various diseases.

The utilization of medicinal plants by the tribal communities in Shahdol district for the treatment of various ailments has certainly been overshadowed by allopathic medicine in contemporary times. Nevertheless, their reliance on local flora for relief from everyday health issues remains indisputable. However, individuals who utilize these plants for medicinal purposes have expressed concerns regarding the gradual decline of numerous medicinal species in their environment. It is likely that the presence of such plants

nearby could enhance their use as natural remedies. Therefore, it is essential to investigate the potential for the propagation and cultivation of these plants in the region to achieve sustainable development. Additionally, further research into the medicinal plants referenced in this study may yield valuable insights for the search for bioactive compounds and the development of new pharmaceuticals to combat diseases.

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