

AN ETHNOMEDICINAL STUDY OF PLANTS USED FOR THE TREATMENT OF VARIOUS SKIN PROBLEMS IN THE SIDHI DISTRICT OF MADHYA PRADESH, INDIA

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ABSTRACT

An Ethnobotanical study was made on the medicinal plants frequently used for the administration of skin problems in Sidhi district of Uttar Pradesh by traditional healers. The study revealed 30 species of plants belonging to 27 genera of 26 families. Leaves are the most frequently used plant part of ethnomedicinal species. It was also found that the ethnomedicinal plant species are over exploited in the study area. So there is urgent need to document ethnobotanical information before they get extinct and continuous efforts should be made to collect the information which will provide opportunity for future generation.

Key words: Ethnobotanical, Skin problems, Sidhi, Traditional healers.

INTRODUCTION

Since time immemorial mankind has been dependent on plant for food, medicines, fiber, fodder and other purposes. Our knowledge on intimate relationship between man and plants in his immediate surrounding has been passed on through generations (Dam *et al.*, 1998). Ethnobotany is perhaps the most important method to study the relationship between plants and local people. It provides us opportunities to work with these local people to explore indigenous knowledge. Ethnomedicinal study provides valuable information regarding the past and present relationship between plants and people (Maurya *et al.*, 2012 and Pankaj, 2013).

Million of rural householders use medicinal plants in self aid mode. Over one of the half million practitioners of the Indian system of medicine use medicinal plants for preventive, promotive and curative applications. These plants gain further importance in the regions where modern facilities are neither available nor easily accessible particularly in tribal areas (Amstrong and Cohen, 1999).

Madhya Pradesh not only has the largest tribal population of India but also possesses rich diversity in the tribal communities which may be seen in the lifestyle and cultural tradition, social and economic structure, religious beliefs, language and speech, customs etc. The tribes of district Sidhi are Gond, Baiga and Kol.

Among these Baiga tribe is the pursuit of therapeutic uses of plants (Dwivedi *et al* 2006). In the district majority of the population are scheduled tribes. Of the total population 28.89% are scheduled tribes. They reside mainly in forest area and utilized forest resources for food, fiber, fodder, medicine, dye, gum, agriculture, household articles etc.

MATERIALS AND METHODS

Study area:

The study area lies on the Vindhyan plateau in Sidhi district of Madhya Pradesh (24.42 N latitude and 81.88 E longitude). The average elevation of above the sea level is 272 meters. The district is bounded on the West by Rewa district, North-East by Singrauli district, on the East by Koriya district of Chhatisgarh, on the North by Mirzapur district of Uttar Pradesh and on the South by Shahdol district (Figure-1).

The total area in the district is 10,536 square kilometer. Forest areas cover about 40% of the land in the district out of which 24 percent of the total area or about 2400 Sq. Km. has dense canopied forest (density above 0.8) and about 16 percent or about 1600 Sq. Km. are has open forest that has a density between 0.3 and 0.4. The average annual rainfall is about 900 mm which is received largely from southwest monsoon. The annual mean temperature is 25.33°C. The highest mean maximum temperature is about 42°C recorded in May-June and the mean minimum temperature is about 8.1°C recorded in January- February.

Methodology:

Several ethnobotanical surveys were conducted during the period from February 2012 to July 2012. The survey was conducted in the rural areas of Sidhi district such as Rampur, Majhiluli, Kusmi, Sihawal, Devsor, Chitrangi, Waidhan.

Figure-1: Location map of study area.

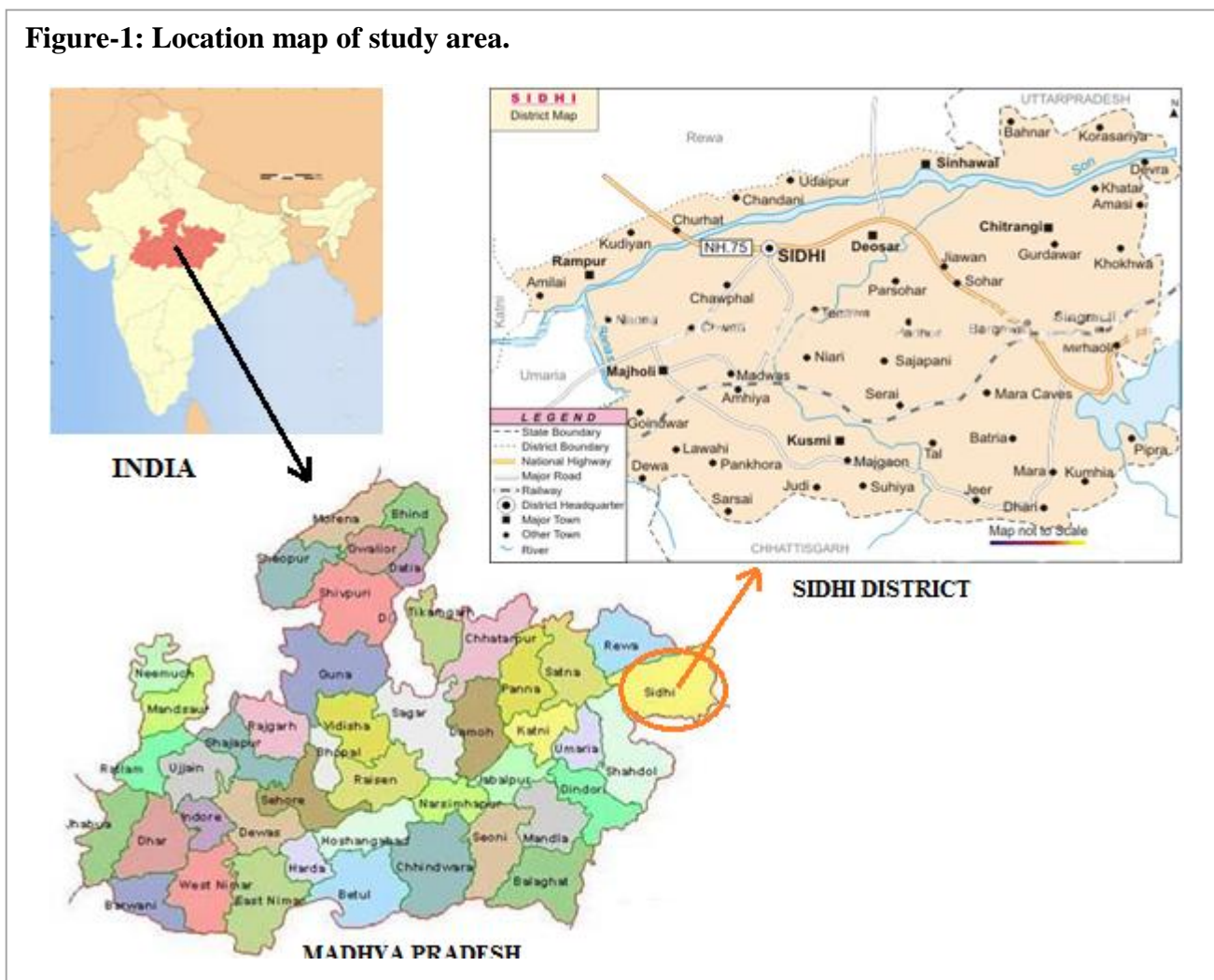
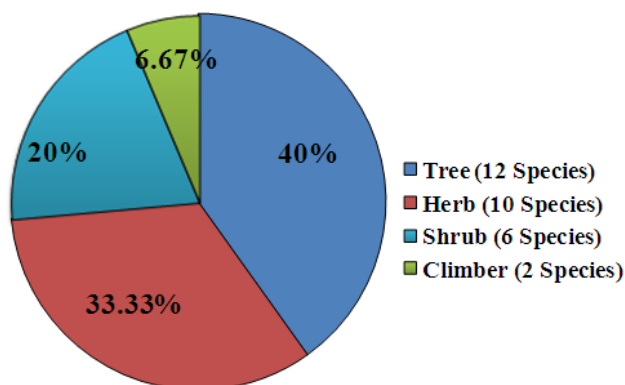
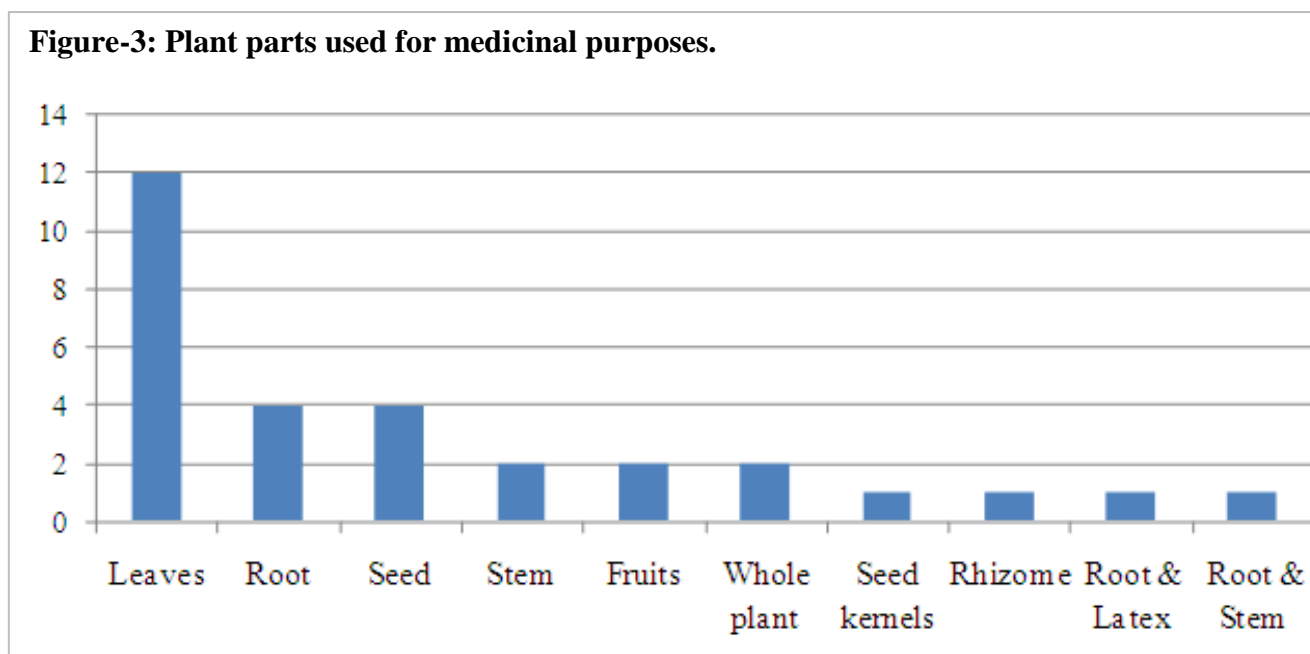


Figure-2: Ethnomedicinal plant species recorded under skin problems from traditional healers.



The present ethnobotanical study documented 30 medicinal plant species, distributed across 27 genera of 26 families used by local communities of the study area. The study revealed that among the traditional healers of the study area, Caesalpiniaceae family is the dominating family with 3 plant species which is followed by Fabaceae and Moraceae with 2 plant species each. Rest 23 families represented by single plant species. Out of total 30 plant species, the highest number of species belongs to trees (12 species, 40%) which is followed by herbs (10 species, 33.33%), shrubs (6 species, 20%) and climbers (2 species 6.67%) (Figure-2).

Figure-3: Plant parts used for medicinal purposes.



The ethnobotanical data were obtained from tribal people, Vaidyas, Ojhas and other experienced of herbal having knowledge of folk medicine. During the interviews local names, family, useful plant parts, ailments were recorded and presented alphabetically (Table-1). The ethnobotanical data was collected according to the methodology suggested by Jain and Goel (1995). The plants were collected with the help of floristic literature (Oomanchanl, 1996), and their herbarium was prepared as per standard protocol as described by Varghese (1996) and Dwivedi and Pandey (1992).

RESULT AND DISCUSSION

As per plant part used by the local people, the maximum number of species is harvested for leaves (12 species); followed by roots and seeds (4 species each); stem, fruits and whole plant (2 species each); and seed kernels, rhizome, root and latex, root and stem (1 species each) (Figure-3).

During the study it was found that people are hesitant to expose their traditional knowledge because this knowledge provides them recognition in the society and hence they do not want to share it. It was also found that this knowledge has been orally transmitted from one generation to other and at each level of

Table-1: Description of medicinal properties of plants used by traditional healers from rural areas of Sidhi District, Madhya Pradesh, India.

S.N.	BOTANICAL NAME	COMMON NAME	FAMILY	PART USED	MEDICINAL USES
1	<i>Andrographis paniculata</i>	Kalmegh	Acanthaceae	Root	Itching and skin rashes
2	<i>Annona squamosa</i>	Sitaphal	Annonaceae	Leaves	Eczema
3	<i>Argemone mexicana</i>	Satyaanaashi	Papaveraceae	Root Latex	Leprosy, Wound
4	<i>Azadirachta indica</i>	Neem	Meliaceae	Leaves	Leprosy, boils & pimples
5	<i>Bacopa monnieri</i>	Brahmi	Plantaginaceae	Whole plant	Leprosy
6	<i>Buchanania lanzan</i>	Chironji	Anacardiaceae	Seed kernels	Pimples, prickly heat & blotch
7	<i>Butea frondosa</i>	Palash	Fabaceae	Seeds	Leprosy
8	<i>Calotropis gigantea</i>	Madar	Asclepiadaceae	Leaves	Boils
9	<i>Carissa carandas</i>	Karonda	Apocynaceae	Stem, Root	Leprosy, Eczema
10	<i>Cassia fistula</i>	Amaltas	Caesalpinaceae	Leaves	Ringworm & itching
11	<i>Cassia occidentalis</i>	Kasoundi	Caesalpinaceae	Seed	Ringworm
12	<i>Cassia tora</i>	Chakoda	Caesalpinaceae	Leaves	Herpes, blotch, eczema & leprosy
13	<i>Celastrus paniculatus</i>	Malkangani	Celastraceae	Seed	Leprosy
14	<i>Citrullus colocynthis</i>	Indrayan	Cucurbitaceae	Leaves	Wounds
15	<i>Clitoria ternatea</i>	Aprajita	Fabaceae	Root	Leprosy
16	<i>Cordia macleodii</i>	Dahiman	Boraginaceae	Stem	Wounds
17	<i>Curculigo orchitoides</i>	Kali musli	Hypoxidaceae	Rhizome	Wounds
18	<i>Cynodon dactylon</i>	Doob	Poaceae	Whole plant	Wounds
19	<i>Datura stramonium</i>	Dhatura	Solanaceae	Leaves	Skin burn
20	<i>Emblica officinalis</i>	Awala	Euphorbiaceae	Fruits	Cuts
21	<i>Feronia limonia</i>	Kiatha	Rutaceae	Seed	Eczema & scabies
22	<i>Ficus benghalensis</i>	Bargad	Moraceae	Leaves	Skin burn
23	<i>Ficus glomerata</i>	Gular	Moraceae	Fruits	Wounds
24	<i>Grewia hirsuta</i>	Mahabala	Tiliaceae	Root	Wounds
25	<i>Helicteres isora</i>	Marodphali	Sterculaceae	Root	Cuts & wounds
26	<i>Ocimum sanctum</i>	Tulsi	Lamiaceae	Leaves	Ringworm
27	<i>Shorea robusta</i>	Sal	Dipterocarpaceae	Stem	Wounds
28	<i>Tribulus terrestris</i>	Chota gokhru	Zygophyllaceae	Leaves	Wounds
29	<i>Vitex negundo</i>	Neergundi	Verbenaceae	Leaves	Wounds
30	<i>Zizyphus mauritiana</i>	Ber	Rhamnaceae	Leaves	Wounds

transmittance a little of it has been lost. The people themselves say that, compared to their forefathers knew much more. It was also found that the local people are worried about the overexploitation of medicinal plants in wild. Due to recent shift towards herbal medicines the pressures on the resources have increased and the market is fast expanding.

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REFERENCES

1. **Amstrong, D. & Cohen, J.** 1999. Infectious diseases Mosby, Spain. 1(2): 35.1-35.70.
2. **Dam, P.K., Yadav, P., Ramnath, T. & Tyagi, B.K.** 1998. Constraints in conservation of medicinal plants in the climatologically changing Thar desert.

- National Environment Science Academy,
VIII Annual Congress Gulberga.
3. **Dwivedi, S.N. & Pandey, A.**, 1992. Ethnobotanical studies on wild and indigenous species of Vindhya plateau. *Herbaceous Flora. J. Econ Tax Bot Addl.* 1(10): 143-150.
 4. **Dwivedi, S.N., Dwivedi, S. & Patel, P.C.** 2006. Medicinal plants used by the tribal and rural people of Satna district, Madhya Pradesh for the treatment of gastrointestinal diseases and disorders. *Natural Product Radiance.* 5(1): 60-63.
 5. **Jain, S.K. & Goel, A.K.** 1995. *A manual of ethnobotany.* Scientific publishers, Jodhpur, India. 142-153.
 6. **Maurya S.K., Nigam G. and Kumar V.** 2012. Ethnomedicinal Study of Some Medicinal Plants Used by Rural Communities of district Jhansi, Uttar Pradesh. *Online International Journal of Biosolution.* 2 (4), 2012. 106-109.
 7. **Oomanchanl, M., & Shrivastava, J.L.** 1996. *Flora of Jabalpur.* Scientific Publishers, Jodhpur.
 8. Pankaj K. Sahu and Sharmistha Gupta. 2014. Medicinal plants of morning glory: convolvulaceae juss. Of central india (Madhya Pradesh and Chhattishgarh) *Biolife.* 2(2), 463-469.
 9. **Varghese, E.** 1996. *Applied Ethnobotany, A case study among the Khairas of Central India.* Deep Publication, New Delhi.

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