



An ethnobotanical study of medicinal plants against some common diseases in Shekhupura village, district Bulandshahr, UP, India

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Abstract

A field-based ethnobotanical study was conducted to document the medicinal plants used by the local inhabitants of the village Shekhupura, District Bulandshahr, U.P., India. Medicinal plants have been playing an essential role in the development of human culture as a source of medicine. Medicinal plants have always been at the forefront of virtually all cultures of civilizations. Medicinal plants are regarded as rich produced resources of traditional medicines and from these plants to many of the modern medicines are for thousands of years. Medicinal plants have been used to treat health disorders, to add flavour and conserve food and to prevent diseases epidemic. The secondary metabolites produced by the plants are usually responsible for the biological characteristics of plant species used throughout the world. The microbial growth in diverse situations is controlled by plant-derived products. The information about the medicinal use of plants was collected from personal interviews of several people the present paper reported 54 medicinal plants which were collected by local people of Shekhupura village, region of Khanpur (B.S.R.). These medicinal plants are used by people for the treatment of various diseases like anaemia, low blood pressure, headache, antiseptic cough, skin disease, piles, asthma, diabetes, purify blood, fever, madness disorders, discharges and many other diseases the present focus on medicinal use of plants.

Keywords: Ethnobotany, medicinal plants, traditional medicine, indigenous knowledge, Shekhupura village, Bulandshahr, herbal remedies, ethnomedicinal uses

Introduction

Village Shekhupura, located in the Bulandshahr district of Uttar Pradesh, India, is a typical North Indian rural settlement known for its agricultural landscape, rich biodiversity, and traditional way of life. The village is characterized by fertile alluvial soil, a subtropical climate, and adequate seasonal rainfall, which together support the growth of a wide variety of plant species, including several medicinal plants of significant ethnobotanical importance. Medicinal plants have been an integral part of the traditional healthcare system of Shekhupura for generations. The local population possesses valuable indigenous knowledge regarding the identification, cultivation, and medicinal uses of various herbs, shrubs, and trees found in agricultural fields, wastelands, roadsides, and home gardens. These plants are commonly used to treat ailments such as cough, cold, fever, digestive disorders, skin infections, wounds, and other minor health problems. Due to their easy availability, low cost, and effectiveness, medicinal plants continue to play an important role in the healthcare practices of rural households. The diversity of medicinal flora in Shekhupura contributes not only to the well-being of the local community but also to the conservation of traditional knowledge and cultural heritage. The use of herbal remedies reflects centuries of accumulated experience and wisdom passed down through generations. Such traditional practices provide valuable insights for modern scientific research and pharmaceutical development, highlighting the importance of documenting and preserving indigenous medicinal knowledge in addition to their medicinal value, plants perform several ecological functions that are essential for maintaining environmental balance. They provide habitat and shelter for wildlife, improve soil fertility, and contribute to biodiversity conservation. Many plant species also supply

food, fodder, fuelwood, timber, oils, and other economically important products that support rural livelihoods. The present study focuses on the medicinal plant diversity of village Shekhupura and examines their traditional uses, ecological significance, and contribution to rural healthcare. Understanding the medicinal wealth of the village can help promote sustainable utilization, conservation of plant resources, and preservation of valuable ethnomedicinal knowledge for future generations.

Materials and Methods

The ethnobotanical survey was conducted in Shekhupura Village, Khurja Tehsil, Bulandshahr District, Uttar Pradesh, India. In the duration of field visit, information was gathered by having personal interaction with elderly people of the village. Many of them did not cooperate and bluntly refused to give information, but some of them told the local names of the medicinal plants being used for the treatment of diabetes and other diseases. These local names of the plants were verified by collecting samples from the locality. These collected plant specimens were identified with the help of available taxonomic literature (Duthie 1994, efloras 2008 and Herbarium Catalogue 2021). A survey of the study area was carried out from January to May 2026 to get ethnomedicinal information following the prescribed protocols for the collection of ethnobotanical facts. The plant specimens collected and photography were also done during the field survey. The identification of tree species has been done with the help of regional floras and existing literature. Different online databases such as the International Plant Name Index (www.ipni.org) have been used for the correct and updated identification and nomenclature of tree species.

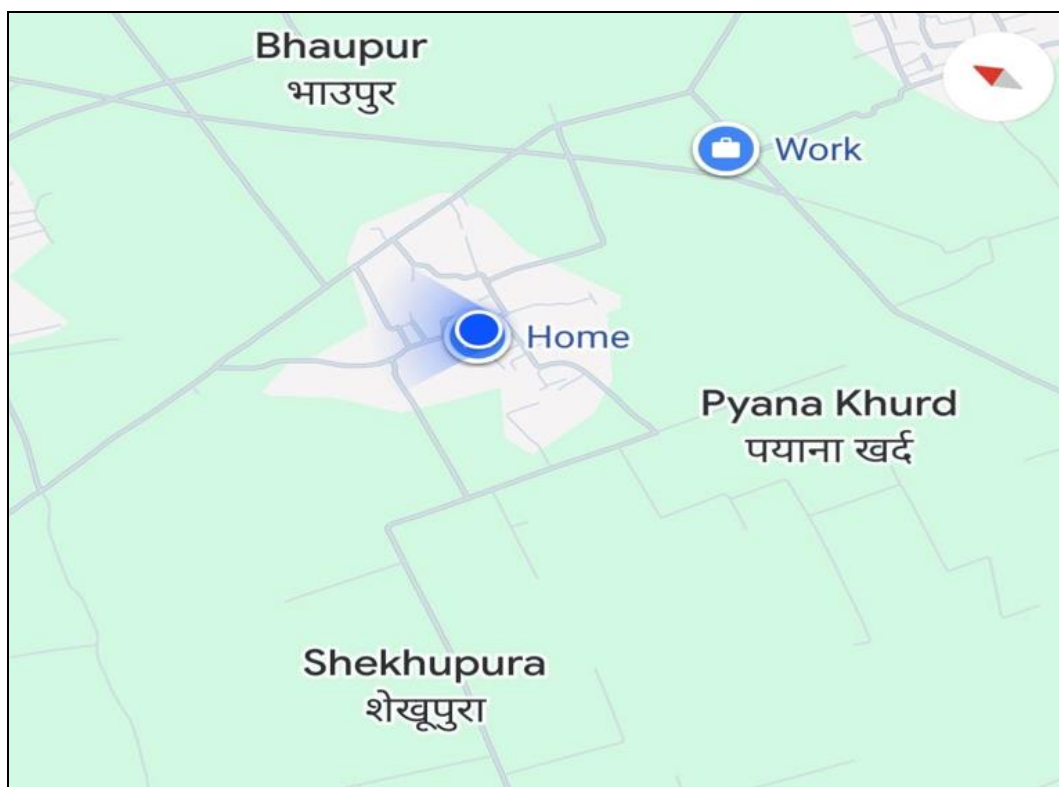


Fig 1: Study area map of shekhupura, Bulandshahr, Uttar Pradesh

List of some Ethnomedicinal plants of shekhupura Village
Medicinal trees

S.No	Scientific name	Family	Common Name	Habitat	Medicinal uses
1	<i>Azadirachta indica</i>	Meliaceae	Neem	Roadsides, village commons, dry tropical areas	Village Pharmacy; bark and leaves used for skin care and skin diseases.
2	<i>Terminalia arjuna</i>	Combretaceae	Arjun tree	Riverbanks, moist soil areas	Bark used for cardiovascular diseases, high blood pressure and cholesterol.
3	<i>Moringa oleifera</i>	Moringaceae	Moringa	Home gardens, cultivated fields	Used to help prevent malnutrition and to support the immune system.
4	<i>Saraca indica (Saraca asoca)</i>	Caesalpiniaceae	Ashoka Tree	Gardens, moist subtropical regions	Used to treat menstrual disorders and uterine issues.
5	<i>Aegle marmelos</i>	Rutaceae	Bael tree	Dry wastelands, grazing lands	Treats digestive problems, especially constipation.
6	<i>Syzygium cumini</i>	Myrtaceae	Jamun	Moist areas, village ponds, fields	Digestive issues; fruit, seeds and bark help control blood sugar.
7	<i>Mangifera indica</i>	Anacardiaceae	Mango tree	Orchards, cultivated lands	Leaves help control blood sugar; bark for diarrhea and throat infection; fruit rich in vitamins A and C.
8	<i>Ficus religiosa</i>	Moraceae	Peepal tree	Roadsides, temples, open lands	Used for asthma, cough, respiratory disorders; bark helps wounds and skin diseases.
9	<i>Ficus benghalensis</i>	Moraceae	Banyan tree	Village commons, roadsides	Aerial roots strengthen teeth and gums; leaves used for joint pain and inflammation.
10	<i>Acacia nilotica</i>	Mimosaceae	Babul tree	Dry wastelands, grazing lands	Datun strengthens gums and teeth; bark decoction used for mouth ulcers.
11	<i>Ficus racemosa</i>	Moraceae	Gular	Riverbanks, moist areas	Diabetes management, wound healing, skin care; anti-inflammatory.
12	<i>Eucalyptus globulus</i>	Myrtaceae	Safeda (Eucalyptus)	Plantations, roadsides	Oil used for cold symptoms, nasal congestion, bronchitis and joint pain.
13	<i>Artocarpus heterophyllus</i>	Moraceae	Katahal	Home gardens, orchards	Diarrhoea and dysentery.
14	<i>Pongamia pinnata</i>	Fabaceae	Papori	Field boundaries, wastelands	Whooping cough (seeds).
15	<i>Psidium guajava</i>	Myrtaceae	Amroud	Home gardens, orchards	Stem for amoebiasis; fruit for diarrhea and dysentery.
16	<i>Tamarindus indica</i>	Fabaceae	Imli	Roadsides, village commons	Leaf: dysentery; flower: blood dysentery; seeds: cold and cough.
17	<i>Morus alba</i>	Moraceae	Shatoot	Cultivated lands, gardens	Fruits edible; wood and medicinal

					uses.
18	<i>Phyllanthus emblica</i>	Phyllanthaceae	Amla	Dry deciduous areas, farms	Rich source of Vitamin C; reduces hair fall and good for eyes.
19	<i>Ziziphus jujuba</i>	Rhamnaceae	Ber (Tree)	Dry scrublands, agricultural fields	Fruit used medicinally; antipyretic; eye and liver disorders.

Medicinal Shrubs of Village Shekhupura

S.No	Scientific name	Family	Common name	Habitat	Medicinal uses
20	<i>Murraya koenigii</i>	Rutaceae	Curry leaf plant	Home gardens, cultivated areas	Improves digestion, controls diabetes and reduces hair fall
21	<i>Aloe vera</i>	Asphodelaceae	Ghritkumari	Dry gardens, pots, wastelands	Used in skin wounds, care burns
22	<i>Rosa damascena</i>	Rosaceae	Rose	Gardens, cultivated flower beds	Digestive health, skincare, pain, mental wellbeing, women's health
23	<i>Datura metel</i>	Solanaceae	Datura	Roadsides, wastelands	Used to alleviate asthma symptoms, chronic cough; toxic plant
24	<i>Hibiscus rosa-sinensis</i>	Malvaceae	Hibiscus	Gardens, hedges	Helps blood pressure, hair health, antioxidant
25	<i>Bougainvillea glabra</i>	Nyctaginaceae	Bougainvillea	Fences, gardens	Antibacterial, anti-inflammatory, anti-diabetic, antioxidant
26	<i>Nerium indicum</i>	Apocynaceae	Kanher	Roadsides, ornamental gardens	This is highly toxic; all parts of the plant are poisonous to humans and pets. Extracts are traditionally used topically to treat skin diseases, tumors, and as a potential anti-cancer agent.
27	<i>Calotropis gigantea</i>	Apocynaceae	Aak	Dry wastelands, open scrublands	Aak is a potent Ayurvedic medicinal plant used for treating arthritis, respiratory issues (asthma), digestive issues, and skin diseases like eczema.
28.	<i>Cassia auriculata</i>	Fabaceae	Cassia	Dry tropical scrublands	Used in diabetes management. Acts as a laxative, often used to treat constipation due to its anthraquinone content. Also used for skin infections and joint pain.
29	<i>Ricinus communis</i>	Euphorbiaceae	Arandi (Castor)	Wastelands, field margins	Arandi oil is a fast-acting purgative that stimulates bowel movement. Anti-inflammatory properties help reduce joint pain, swelling, and arthritis symptoms.
30	<i>Abutilon indicum</i>	Malvaceae	Kanghi	Roadsides, open fields	Leaf: Dysentery; Root: Amoebiasis.
31	<i>Abelmoschus esculentus</i>	Malvaceae	Bhindi	Cultivated agricultural fields	Aids in blood sugar management, improves digestive health due to high fiber, and has potential anti-cancer properties.

Medicinal herbs of Village Shekhupura

S.No	Scientific name	Family	Common name	Habitat	Medicinal uses
32	<i>Ocimum tenuiflorum</i>	Lamiaceae	Tulsi	Home gardens	Used for cough, cold, fever, immunity.
33	<i>Mentha spicata</i>	Lamiaceae	Pudina	Moist gardens, cultivated beds	Used for digestion, stomach pain, cooling effect.
34	<i>Coriandrum sativum</i>	Apiaceae	Dhaniya	Cultivated fields	Used for digestion, acidity, detox.
35	<i>Curcuma longa</i>	Zingiberaceae	Haldi	Moist cultivated lands	Used for wounds, inflammation, immunity.
36	<i>Aloe barbadensis</i>	Asphodelaceae	Aloe vera	Dry gardens	Used for skin care, burns, digestion.
37	<i>Swertia chirata</i>	Gentianaceae	Chirayata	Herbal gardens,	Used for fever, blood purification.
38	<i>Chenopodium album</i>	Amaranthaceae	Bathua	Agricultural fields	Used for digestion, Vitamins.
39	<i>Achyranthes aspera</i>	Amaranthaceae	Chirchita	Roadsides, wastelands	Used for treating kidney issues, skin disease, and oral health.
40	<i>Allium cepa</i>	Amaryllidaceae	Onion (Piyaj)	Cultivated fields	Cold, cough
41	<i>Allium sativum</i>	Amaryllidaceae	Lahtsun	Cultivated fields	Cold, cough
42	<i>Cynodon dactylon</i>	Poaceae	Doob grass	Lawns, open grasslands	Diarrhea, Dysentery
43	<i>Cyperus rotundus</i>	Cyperaceae	Motha	Moist soils, fields	Dysentery
44	<i>Momordica charantia</i>	Cucurbitaceae	Karela	Cultivated farms	Diarrhea, Dysentery
45	<i>Musa paradisiaca</i>	Musaceae	Kela	Moist cultivated lands	Diarrhea, Dysentery
46	<i>Oxalis corniculata</i>	Oxalidaceae	Khati mithi	Lawns, moist open areas	Skin care, Anemia treatment
47	<i>Solanum xanthocarpum</i>	Solanaceae	Kateri	Dry wastelands	Anti-asthmatic, anti-inflammatory
48	<i>Tribulus terrestris</i>	Zygophyllaceae	Gokhru	Dry sandy soils	Treat kidney stones, boost stamina, high

					BP, high cholesterol
49	<i>Trigonella foenum-graecum</i>	Fabaceae	Methi	Cultivated fields	Antidiabetic, digestive, reduces hairfall
50	<i>Vinca rosea</i>	Apocynaceae	Sadabahar	Gardens, ornamental beds	Used in cancer treatment
51	<i>Tinospora cordifolia</i>	Menispermaceae	Giloy (Climber)	Climbing on trees, hedges	Antipyretic (reduces fever), Detoxifier
52	<i>Nyctanthes arbor-tristis</i>	Oleaceae	Parijatak	Gardens, temple premises	Leaves, flower Properties: Antiallergic, Antifilarial, Anti-inflammatory
53	<i>Solanum nigrum</i>	Solanaceae	Makoi	Wastelands, field margins	Parts used: Leaves, seed, berry. Properties: Antiseptic, Asthma, cold, cough, Earpain, fever, Ringworm
54	<i>Zingiberofficinale</i>	Zingiberaceae	Adrak	Moist cultivated lands	Used part: Root. Properties: Antibacterial, Anti-inflammatory, Angina, Colds, Coughs, Ear infection & fever, Joint pain

Digrammatic list of some Medicinal plants



Populus alba



Thevetia peruviana



Tinospora cordifolia



Abelmoschus esculentus



Snowflake



Cannabis sativa



Psidium guajava



Ficus racemosa



Azadirachta indica



Datura stramonium



Ricinus communis



Phyllanthus emblica



Tabernaemontana divaricata



Ficus benghalensis



Ficus religiosa



Morus alba



Coriandrum sativum



Moringa oleifera



Artocarpus heterophyllus



Solanum nigrum



Mentha spicata



Musa x paradisiaca



Catharanthus roseus



Parthenium hysterophorus



Clitoria ternatea



Eucalyptus globulus



Murraya koenigii



Ficus benghalensis



Cynodon dactylon



Nerium oleander



Ocimum tenuiflorum



Mangifera indica



Citrus limon



Ficus racemosa



Ziziphus mauritiana



Aloe vera

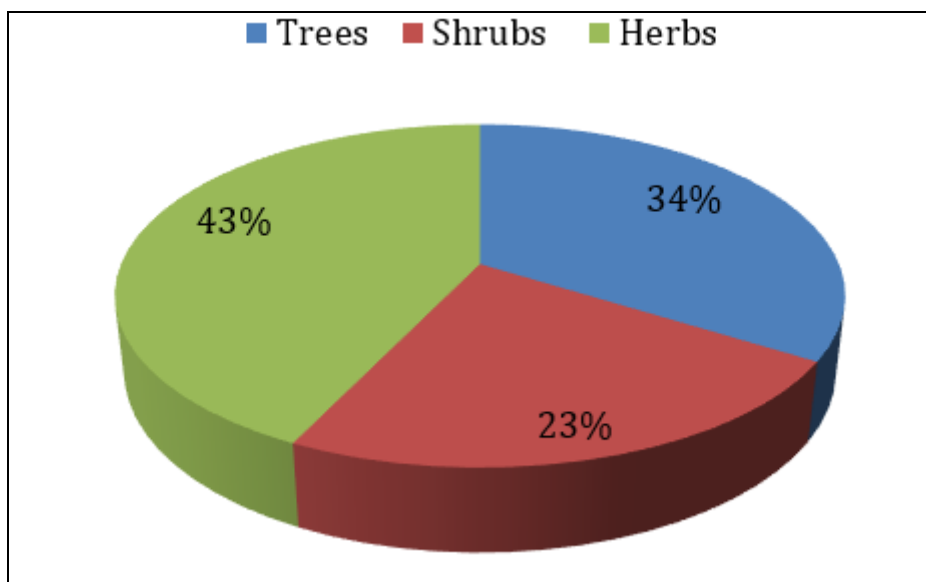


Fig 2: Composition of different habits type of ethnomedicinal plants recorded in Village Shekhupura Bulandshahr

Results and Discussion

The present study revealed the ethnobotanical knowledge of people in Shekhupura village, district Bulandshahr, Uttar Pradesh. In the following medicinal details of identified plants with alphabetical order, followed by local name, family name, part used and medicinal properties. The local people of Shekhupura village used 54 species of plant belonging to 39 families. Mostly plants are belonging to different families *viz-* Caesalpiniaceae, Euphorbiaceae, Fabaceae, Malvaceae, Meliaceae, Mimosaceae, Moraceae, Apocynaceae, Rutaceae, Solanaceae and Zingiberaceae. Among different plant parts used by this people, the leaves are used most frequently to cure wounds and they applied mostly on the external surface of the body. Generally fresh part of the plant can be used for the preparation of medicine. When it is not in available condition the dried leaves or roots are also used. The result of this investigation showed that these local people of Shekhupura village still depend on medicinal uses of plants for the treatment of cough, dysentery, fever, headache, high blood pressure low blood pressure, menstrual disorders, mouthwash, purify blood, skin disease, and many types of diseases.

Conclusion

The survey of medicinal plants in Village Shekhupura showed that the village has a rich diversity of useful medicinal plants. Common plants such as Neem, tulsi, aloe vera, peepal, banyan, mango, and amla are widely used by local people to treat minor illnesses and maintain good health. The survey also highlighted the importance of traditional knowledge passed down through generations. These medicinal plants are valuable natural resources that should be protected and conserved for future generations. Creating awareness about their proper use and conservation will help preserve both biodiversity and traditional herbal knowledge.

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