ETHNOMEDICINAL PLANTS SURVEY AMONG THE POPULATION OF BAGICHA BLOCK IN JASHPUR DISTRICT, (C.G)

Dr Chandni Afsana,
HOD Department of Botany
Bharti Vishwavidyalaya, Durg, C.G

ABSTRACT

To investigate the knowledge of medicinal plants and their usage in the research region, an ethnobotanical plant survey was carried out. The ethno-medicinal survey comprises 36 plant species from 32 genera and 24 families that are used by the inhabitants of Bagicha block, Jashpur district, Chhattisgarh, India. It was established that traditional knowledge of individuals with trustworthy ethno medical skill in the preparation of the medicine using readily available herbs and its dose was used. During the field excursions in the research region, the pertinent data were gathered using questionnaires and casual one-on-one interviews. From November 2022 to February 2023, these data were recorded. The medicinal herbs that were gathered were used to treat wounds, jaundice, renal problems, headaches, and diabetes etc. The Bagicha people's medicinal plants are organised in a sequential manner according to the plant's name, family name, neighbouring name, part used method of treatment, and related illnesses that were recorded. To combat the prevalent sickness, it is necessary to preserve both the flora and the ethno-medicinal practises. This has prompted us to return to the practise of natural healing in order to improve people's health in the future.

Keywords— -medicine, Inhabitant, Traditional, Questionnaires, Healing

INTRODUCTION

Since ancient times, herbal medicine has been used extensively around the world. Although 80% of the world's rely on the population on the conventional healthcare system, these medications are both ecologically friendly and safe (Rajadurai *et al.,* 2006). Traditional medicine in a great contributor to its health care's that is pointed out by world health organization (WHO). Since ancient times, especially in tribal societies, The use of plants in conventional healthcare systems (Uma *et al.,* 2020). This dependency has developed through many generations of experience and practise, and many The use of both wild and domesticated plants is important to their culture and traditions, rituals and other things (Ganie Aijaz Hassan *et al.,* 2013, Rashida *et al.,* 2021).

REVIEW OF LITERATURE

There has always been an unbreakable bond between people and plants. They are crucial to the survival of tribal and ethnic civilizations and a substantial source of medications. The tribes are environmentally conscious those who coexist peacefully with nature and uphold the vital relationship between humans and the environment (Senthil Kumar *et al*., 2013). Since the majority of this information about the usage of medicinal plants has not been documented, it is typically verbally passed down from one generation to the next (Anup Kumar Dey *et al*., 2014).

Herbs have long been utilised by humans as a source of nutrition, apparel, shelter, and medicine. Traditional medical practitioners employed plants, and Prior to the invention of contemporary conventional medicine and synthetic medications, a variety of illnesses were treated with a combination of plant, animal, and, to a lesser extent, mineral products. (Uma *et al*., 2021). Historically, all medicines have come from plants, whether in the more straightforward combination of a crude extract or in the more complicated form of essential plant components (Shosan *et al*., 2004). According to WHO assessments, around 80% of people in underdeveloped countries rely only on plants for their medicinal requirements (Ganie Aijaz Hassan *et al*., 2013). The area's biodiversity must now be preserved by providing sustainable ecological services and opportunities. The purpose of this research is to examine the richness and variety of plant species (Neil Alejandro *et al*., 2015).

Recent interest in ethnobotanical investigations on a global and national scale has helped Harshberger (1896) and Ammal (1956) after then various workers have contributed to the field of ethnobotany viz. Dhole *et.al*. (2009), Ganesan (2008), Dwivedi *et.al.*(2009), Datar and Vartak (1975),Ekka and Dixit (2007), Dwarakan and Ansari (1992)

MATERIALS AND METHODS

Survey: The ethno botanical fieldwork was conducted in 5 villages of Bagicha block, Jashpur district, Chhattisgarh. Data was collected from local villagers, such as elder persons, medicine men, vaidyas and herbalists, through personal interviews on the spot from November 2022 to February 2023.

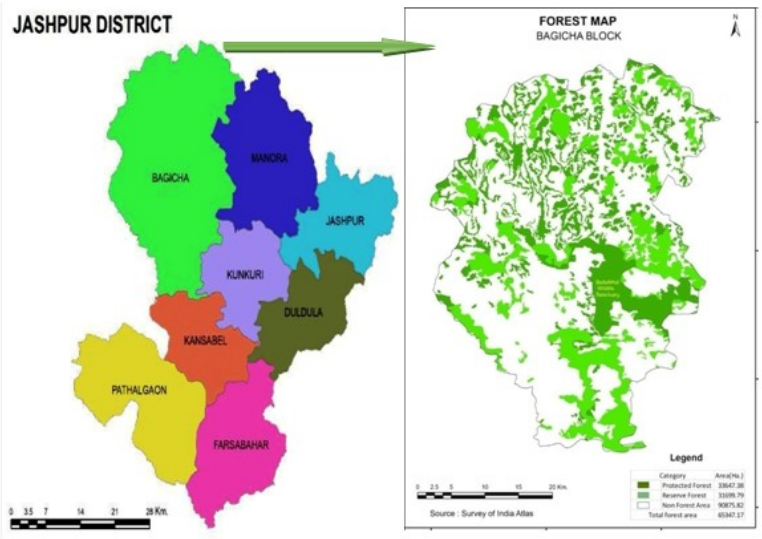

Fig. 1 Location map of study area Bagicha forest map with map of Jashpur district.

Bagicha is a Town and Tehsil responsible for the administration and revenue collection of its local community. According to census 2011 information Bagicha Block (CD) has a total area of 1,486 km2 and a population of 1,71,711 people, with a population density of 115.5 inhabitants per square kilometre. There are 137 villages in Bagicha block.

DATA COLLECTION

Primary data: Elderly people and traditional healers from tribal communities were consulted throughout the field study to gather extensive information on the kinds, Traditional uses, consumption patterns, shelf lives, and cultural significance of medicinal plants. Well-designed, pre-tested survey instruments and conversations between the informants in their native tongue were used to gather information. The resource persons instructed the collection of the plant specimens during fruiting and flowering circumstances. Additionally, digital pictures of the plants were taken.

Secondary data: collected from scholarly databases including Science Direct, Pubmed, and Sci Finder. The working list of all plant species was used to match and order the scientific names of the plants. (http://www.theplantlist.org).

Identification:

For potential identification, collected specimens were dried, chemically processed, and prepared on herbarium sheets. The plants were initially identified using a number of regional floras (Fabricant and Fransworth, 2001; Andrade-Cetto, 2009; Lee *et al.,* 2008; Gamble, 1915; Henry

et al., 1978; Henry *et al.,* 1989; Matthew, 1983; Matthew, 1999; Nayar and Sastry, 1987; Hooker, 1872).

Observation: Listing of medicinal plants

Through ethno botanical interviews with local medicine men, healers, and practitioners of using medicinal plants throughout the research region, the gathered medicinal plants were recognised for their original therapeutic applications. The therapeutic qualities of the plants were determined using freely available literature. All of the medicinal plants were identified using binomial nomenclature, the local name, family, habit, disease, helpful component, preparation process, and applications.

Table 1. Shows data related to plants which are used in different diseases.

S.N.	Botanical Name	Family Name	Common Name	Habit	Uses
1	*Achyranthus aspera* (L.) Blume.	Amaranthaceae	Apamarg	Herb	Well-ground leaves and stem are formed into a paste and administered on wounds.
2	*Alternanthera sessilis*(L.) R. Br. ex-DC.	Amaranthaceae	Gudrisag	Herb	For treating gastrointestinal disorders, stems and leaves are mashed with ginger and garlic and taken orally.
3	*Amaranthus viridis L.*	Amaranthaceae	Chench Bhaji	Herb	To treat hand pain, the entire plant is

					mashed with turmeric and administered as a paste.
4	*Andrographis paniculata*(Burm. f.) Wall.	Acanthaceae	Kalmegh	Herb	Diabetes and fever can be treated orally by combining shade-dried leaves with water.
5	*Annona squamosa L.*	Annonaceae	Sitafal	Tree	Dandruff is reduced by the leaf paste.
6	*Aristolochiabracteolata*Lamk.	Aristolochiaceae	Worm killer	Climber	For scorpion stings that are dangerous, leaf paste is given externally.
7	*Boerhaaviadiffusa L.*	Nyctaginaceae	Punarnava	Climber	To treat asthma, ingest stem and leaf paste on an empty stomach.
8	*Cardiospermum halicacabum L.*	Sapindaceae	Kanphuta	Climber	Joint pain can be relieved by boiling leaves, cumin seeds, and garlic. Rheumatism

					was treated with it as well.
9	*Cassia fistula L.*	Fabaceae	Amaltas	Tree	external application of leaf paste for snake bite.
10	*Cassia occidentalis L.*	Fabaceae	Charota	Herb	To remove kidney stones, a decoction of leaves, cumin seeds, and garlic is consumed orally.
11	*Catharanthus roseus L.*	Apocynaceae	Sadabahar	Herb	Combined whole plant powder with honey, is taken orally to treat cancer.
12	*Cissus quadrangularis* L.	Vitaceae	Hadjod	Climber	To treat a bone fracture, the stem is thoroughly mashed, and the resulting paste is then applied to the damaged area.
13	*Cynodondactylon*L. pers.	Poaceae	Dubghas	Herb	To lower body temperature,

					an oral extract from the entire plant is consumed.
14	*Euphorbia hirta L.*	Euphorbiaceae	Bada dudhi	Herb	To treat pimples, latex is put on top of them.
15	*Ixora coccinea L.*	Rubiaceae	Jejaram	Shrub	Asthma can be treated or prevented by boiling flowerets, onion bulbs, and cumin seeds in water.
16	*Jatropha curcas L.*	Euphorbiaceae	Arandi	Shrub	The decoction made from cumin seeds, garlic, and water is used to treat muscle soreness..
17	*Jatropha gossypifolia*L.	Euphorbiaceae	Ratanjot	Shrub	Foot pain can be treated externally using fresh fruit paste.
18	*Justicia adhathoda L.*	Acanthaceae	Adusa	Shrub	The leaves are processed into a paste by

					grinding them with a small amount of turmeric, a few pieces of garlic, a few onion bulbs, and a few drops of lemon. The paste is externally applied to the ring worm infection..
19	*Lantana camara L.*	Verbenaceae	Putus	Shrub	Root decoction is employed as mouthwash.
20	*Lawsonia inermis L.*	Lythraceae	Mehandi	Shrub	Leaf extracts are used to color hair and treat hair loss.
21	*Leucas aspera* (Willd.) link.	Lamiaceae	Chhota Halkkhusa	Herb	Apply leaf paste to the forehead to relieve a headache..
22	*Momordica charantia L.*	Cucurbitaceae	Karela	Climber	Fever is treated by taking an oral infusion of leaves, cumin

					seeds, garlic, and salt.
23	*Moringa oleifera* Lamk.	Moringaceae	Munga	Shrub	Cooking the fruits and leaves turns them into veggies. Water is boiled with a few leaves and a lot of coriander seeds. To relieve all of the discomfort experienced by pregnant women, the decoction is filtered and taken twice daily for two days. Additionally, it raises the blood's haemoglobin level.
24	*Murrya koeinigii* (L.) Spreng.	Rutaceae	Mitha neem	Tree	Dog bites can be treated using a paste made from

					powdered leaves.
25	*Musa paradisiaca L.*	Musaceae	Kela	Tree	crushing of pseudostem As a kidney stone treatment, the produced extract is administered orally.
26	*Ocimum tenuiflorum L.*	Lamiaceae	Tulsi	Herb	To treat leg pain and edema in pregnant women, leaves and seeds are ground with black pepper and given orally.
27	*Phyllanthus emblica L.*	Euphorbiaceae	Anwla	Tree	Cumin seeds, Murryakoeinigii leaves, and Hibiscus rosa-sinensis flowers are all cooked with coconut oil. And lastly, the Phyllanthus emblica fruits

					that have been crushed.. This oil is used as hair oil it used to control hair fall problems. Fruits are palatable. It has a lot of vitamin C. To treat diabetes, the fruit extract is administered orally on an empty stomach.
28	*Phyllanthus niruri L.*	Euphorbiaceae	Bhumi Amla	Herb	Jaundice is treated by boiling a small number of leaves with water and consuming the resulting decoction on an empty stomach.
29	*Piper betal L.*	Piperaceae	Paan	Climber	To treat headaches, flower stem, cardamom

					seed, and clove are finely powdered and combined into a paste.
30	*Psidium guajava L.*	Myrtaceae	Amrud, Bihi	Tree	The leaves are thoroughly crushed, and the extract can be applied topically to relieve ear pain.
31	*Punica granatum*L.	Lythraceae	Anar	Tree	To treat stomach pain, the fresh juice extracted from the matured fruit is given orally.
32	*Solanum trilobatum L.*	Solanaceae	Alarka	Herb	To treat a cold, combine the dried powdered leaf with water and consume it orally on an empty stomach.
33	*Solanum xanthocarpum L.*	Solanaceae	Bhatkataiya	Herb	Well-ground leaves or fruit

					are formed into a paste. To stop skin problems, the paste is externally applied to the skin.
34	*Syzygium cumini* (L.) Skeets.	Myrtaceae	Jamun	Tree	Stem bark is filtered after soaking in water for a week. It is used to treat stomach issues if taken orally on an empty stomach.
35	*Tridax procumbens L.*	Asteraceae	Tridhara	Herb	For rapid healing, a paste made of leaves and roots is put externally over the wounds.
36	*Vitex negundo* L.	Verbinaceae	Neelpuspa	Tree	The leaves are mashed into a paste and applied to the head as a headache remedy.

Fig. 1 *Vitex nengundo*
Fig. 2 *Syzygium cumini L.*
Fig. 3. *Achyranthus aspera*
Fig 4. *Punica granatum*
Fig.5 *Cardiospermum halicacabum*
Fig.6 *Amaranthus viridih*
Fig. 7 *Ixora coccinea*
Fig. 8 *Psidium guajava*
Fig.9 *Momordica charantia*
Fig. 10 *Murrya koenigii*
Fig. 11 *Tridax procumbens*
Fig. 12 *Phyllanthus niruri*

RESULTS AND DISCUSSION

According to the present study, elders and traditional healers in Bagicha block used 36 plant species spread over 32 genera and 24 families to cure a variety of illnesses. They include climbers, trees, shrubs, and herbs. They frequently develop in a range of environments and are occasionally widely dispersed over the globe. Some of them are growing particularly close to the residences of medical healers.

A little over 39 percent of all medicinal plants are herbs, followed by 25 percent for trees, 19 percent for shrubs, and 17 percent for climbers. Plant parts used in medicine include leaves,

leaves and stems, fruit, flowers, rhizomes, roots and leaves, latex, stems, roots, seeds, and even the complete plant.

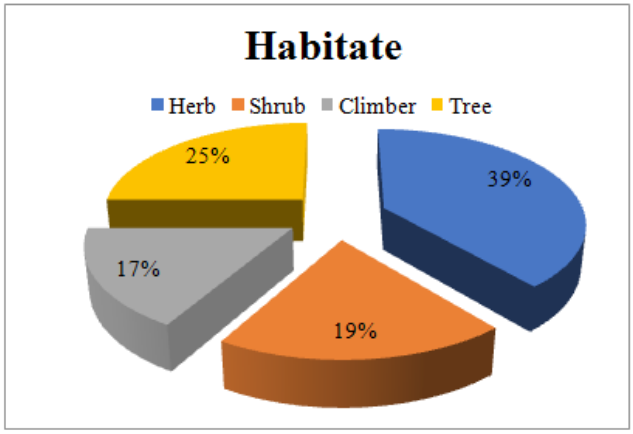

Figure 2. Graph shows number of plants used for therapeutic purposes with respect to their habit

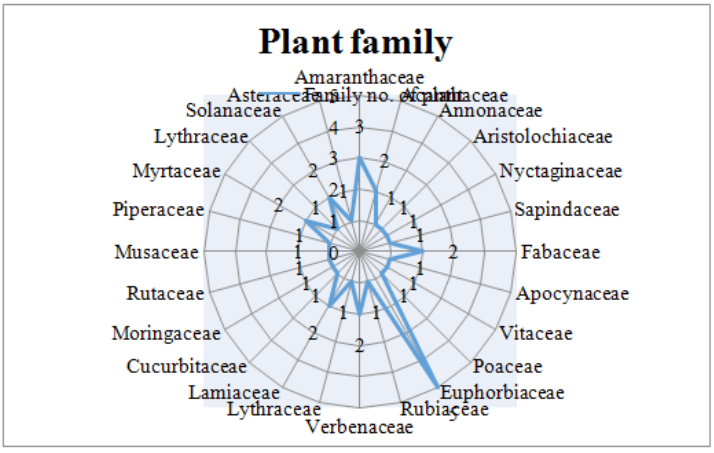

Figure 3. Family distribution of plants used as medicinal purpose

The one family with the most members are Euphorbiaceous, each with five species. The Amaranthaceous, which includes three species, next families Acanthaceae, Fabaceae, Verbenaceae, Lamiaceae, Myrtaceae, and Solanaceae each have two individuals. The Acanthaceae, Apocynaceae, Lythraceae, Cucurbitaceae, Piperaceae, Rutaceae, Nyctaginaceae, Liliaceae, Musaceae, Sapindaceae, Meliaceae, Asteraceae, Malvaceae, Poaceae, Moringaceae, and Aristalochiaceae all have a single member.

Various plant parts, including bark, seed, fruit, latex, flowers, whole plants, and roots, are used to make herbal medicines to cure a variety of illnesses. Different ailments were treated using the stem alone from four plants, the root along from two plants, the leaves from 22 plant, three plant's bark, one plant's seed, three plant's fruit, five plant's latex, five plant's flowers, five whole plants, four plant's leaves, and three plant's stems. These herbs are used by conventional healers to treat illness. By genus and species name, the first-hand information on the medicinal plant parts used by the locals was arranged as follows (Table1).

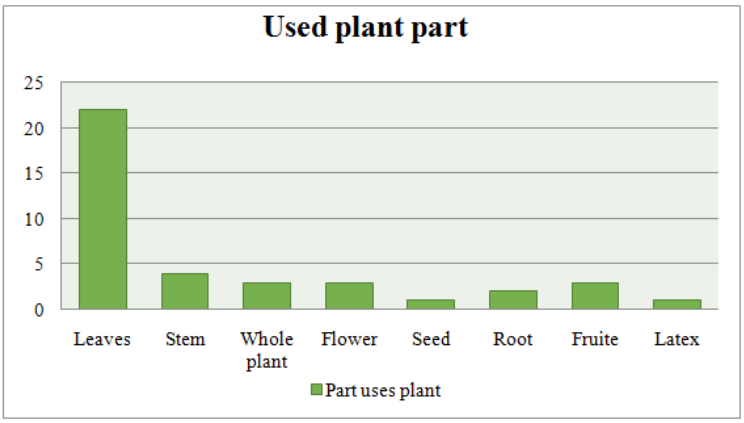

Figure 4. Plant components used to cure illnesses.

The current study discovered that 36 medicinal plants have Plant components used to cure illnesses, swelling, earaches, ringworm, hair problems, cuts, wounds, stomach pain, skin problems, swelling, kidney stones, coughs and colds, asthma, headaches, eye conditions, animal bites, fevers, jaundice, leg pain, joint pai, and stomach diseases. Finding novel sources for medicines and nutraceuticals is increasingly being done using traditional knowledge based on plants. Traditional usage of plants has diminished as a result of species scarcity brought on by human activities and excessive animal grazing. Because of this, focusing on the conservation of these plants has become crucial and needed.

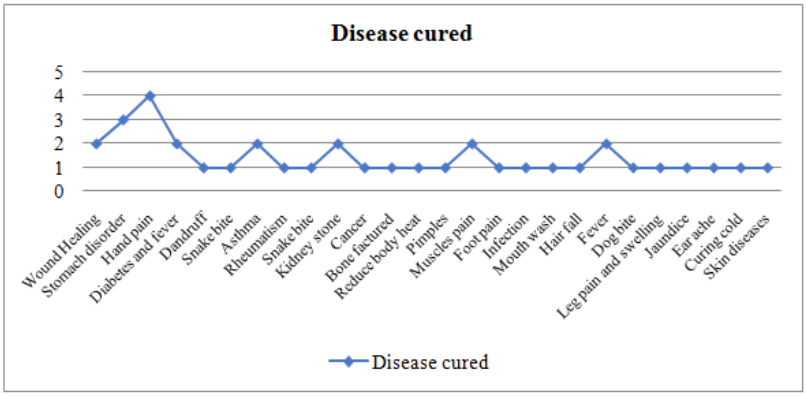

Figure 5. Diagram of ailments treated by nearby medicinal plants

Applications for internal use outweighed those for external use (59.67%) by 40.32%. The most popular methods for external use were direct paste application or oil application, and they often addressed issues including skin conditions, cuts and wounds, poison ivy stings, rheumatisms, body aches, swellings, and headaches. According to certain international professionals (Lee *et al*., 2008 and Gamble, 1915), the bulk of the drugs were taken orally.

Traditional healers are skilled at using a variety of plants. They use their hands, nose, hearing, and eyes to identify illnesses. Because they reside in rural locations without access to sophisticated scientific equipment for treatment, this technique of diagnosis is intriguing. However, they use medicinal herbs to treat illnesses. Tribal healers typically prescribe herbal concoctions that either combine numerous plant parts or are based on a single plant component. The ethno medicinal studies unmistakably showed that It is best to begin investigating a plant's effectiveness based on its use in folk medicine. instead of attempting to find the active ingredients and pharmacological effects of plants through huge collections of plants from natural sources, were initially tested in rudimentary form in traditional and folk healing practices. (Fabricant and Farnsworth *et al.,* 2001).

CONCLUSION

The recent analysis provided proof that In this culture, medicinal plants were still essential to the healthcare system. Due to younger generations of traditional healers' lack of interest and propensity to go to cities in search of affluent careers, this priceless storehouse of knowledge is likely to disappear in the near future. Therefore, the current study could contribute to preserving regional ethno-medical practises. There is still a lot to learn from studying the herbals that are widespread there, as evidenced by the fresh claims that were re-recorded from the research

region. These plants may contain compounds, making it necessary to look for potential new treatments for a number of disorders.

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