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Ethnobotanical Perspectives on Edible Therapeutic Plants for Tribal Women's Disorders in Raigad, Maharashtra

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Abstract:,*Tribal communities maintain extensive traditional knowledge about the use of plants for food and medicine, especially for improving women's health and nutrition. The present study records and evaluates edible plants that are traditionally used by tribal women in the Raigad district of Maharashtra. Information was gathered through field surveys, semi-structured interviews, focus group discussions, and participatory rural appraisal methods. A total of 40 edible plant species representing 32 plant families were documented. These plants are commonly used to address menstrual problems, reproductive health concerns, anemia, pregnancy-related issues, postnatal recovery, and overall health maintenance. Important species reported by the informants include Moringa oleifera, Trigonella foenum-graecum, Aloe vera, Asparagus racemosus, Musa paradisiaca, Sesbania grandiflora, and Boerhavia diffusa, along with several wild leafy vegetables. The results emphasize the significant nutritional and therapeutic potential of locally available edible plants and highlight the importance of conserving traditional ethnobotanical knowledge. This research supports the fields of ethnopharmacology, women's healthcare, and the conservation of culturally valuable plant resources.*

Keywords:*Ethnobotany, Edible therapeutic plants, Tribal women's health, Women's disorders.*

I. INTRODUCTION

Women's health in tribal communities is strongly connected with traditional food practices and plant-based remedies that have developed through long-term experience, observation, and cultural knowledge transfer. In many indigenous societies, edible plants are valued not only as nutritional resources but also as natural remedies used to manage conditions related to women's health. These traditional practices are particularly significant in remote rural and forested regions where access to modern healthcare services remains limited.

The state of Maharashtra, especially the Raigad district, is inhabited by several tribal groups that rely extensively on forest ecosystems for food, livelihood, and healthcare needs. Communities such as Bhilla, Thakar, Kokana, Gavit, Kathkari, Kathodi, Mahadev Koli, and Dongar Koli reside in this region. Their economic activities largely depend on forest resources and wage labor in nearby settlements. In earlier times, hunting was an important component of their subsistence; however, the introduction of forest conservation policies restricted hunting practices. As a result, tribal populations adapted by utilizing other forest resources through their indigenous ecological knowledge. These resources mainly include plant species used as food, medicines, and materials for constructing huts, making household utensils, and fulfilling daily domestic requirements. Indigenous communities possess rich knowledge regarding medicinal plants, which continues to function as an important element of primary healthcare among tribal populations in India (Gupta et al., 2009).

Within these communities, women play a vital role in preserving and transmitting ethnobotanical knowledge and in maintaining family health. They are particularly knowledgeable about plants used to manage menstrual problems,

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reproductive health issues, pregnancy-related discomforts, lactation, and postnatal recovery. The consumption of locally available edible plants to treat conditions such as anemia, hormonal imbalance, fatigue, and general weakness demonstrates an integrated approach in which nutrition and medicine are closely linked.

However, this valuable traditional knowledge is gradually declining due to socio-economic transformation, urban influence, and reduced interest among younger generations. In addition, many ethnobotanical studies have concentrated on medicinal plants in general, while relatively limited research has focused specifically on edible therapeutic plants used for women-related health conditions. Therefore, systematic documentation of such knowledge is crucial not only for safeguarding cultural heritage but also for identifying nutritionally valuable and pharmacologically important plant species that may support sustainable and community-based women's healthcare systems.

II. METHODOLOGY

Study Area: The research was carried out in selected tribal villages of Raigad district, Maharashtra, India. The region is characterized by undulating hills, dense forest vegetation, and high plant diversity. Several tribal communities inhabit this area and depend largely on surrounding forest and agricultural resources for their daily food requirements and healthcare practices.

Data Collection: Ethnobotanical data were collected through multiple field visits conducted during different seasons to obtain comprehensive information. Various qualitative research methods were employed, including semi-structured interviews, informal discussions, focus group interactions, and participatory rural appraisal. Particular attention was given to tribal women, elderly members of the community, and traditional healers, as they hold valuable knowledge regarding edible plants used for therapeutic purposes.

Plant Documentation:During the survey, details such as local plant names, edible parts utilized, preparation methods, frequency of consumption, and specific women-related health conditions treated were carefully recorded. Plant specimens were collected with prior permission from local informants and were identified using standard botanical floras and taxonomic references. Voucher specimens were prepared and preserved for verification and future study.

Data Analysis: The recorded plant species were systematically analyzed and classified according to their botanical families, life forms, edible plant parts, and medicinal applications. Special focus was given to plants traditionally used for managing menstrual irregularities, anemia, reproductive health concerns, pregnancy-related conditions, postnatal care, and overall health support.

III. RESULT AND DISCUSSION

The ethnobotanical survey conducted among tribal communities in Raigad district documented 40 edible therapeutic plant species belonging to 32 botanical families that are traditionally used by tribal women to manage various women-related health conditions. The diversity of recorded species reflects the extensive plant-based knowledge maintained by indigenous women, who integrate locally available flora into their daily diet and healthcare practices.

The results of this study are consistent with earlier ethnobotanical investigations from different parts of India that report the widespread use of edible plants for women's health. The frequent citation of species such as Moringa oleifera, Asparagus racemosus, and Trigonella foenum-graecum corresponds with studies conducted in tribal regions of Maharashtra, Gujarat, and Madhya Pradesh, where these plants are recognized for their nutritional richness and benefits for reproductive health.However, the present study differs from many previous reports by emphasizing the dietary therapeutic role of plants, rather than their use solely as herbal medicines. The inclusion of wild leafy vegetables such as Amaranthus viridis, Chenopodium album, and Portulaca oleracea as regular dietary components for managing anemia and supporting postnatal recovery highlights a localized adaptation of traditional knowledge unique to the Raigad region. Unlike studies focusing mainly on herbal remedies, this investigation highlights the food–medicine continuum, where everyday food items serve preventive as well as therapeutic functions for women's disorders.Analysis of edible plant parts revealed that leaves were the most commonly used plant component, followed by seeds, fruits, rhizomes, tubers, and flowers. The predominance of leafy vegetables may be attributed to their ease of

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collection, minimal processing requirements, and high micronutrient content. Seeds and grains such as Sesamum indicum, Vigna mungo, Eleusine coracana, and Pennisetum glaucum are consumed to enhance energy levels, improve hemoglobin content, and support pregnancy and postnatal health. Similarly, rhizomes such as Curcuma longa and Zingiber officinale are commonly incorporated into daily diets due to their anti-inflammatory and digestive properties.

The documented plants are used to manage a wide range of women-related disorders including menstrual irregularities, anemia, reproductive health problems, pregnancy-associated discomforts, lactation support, postnatal recovery, and general weakness. Plants such as Moringa oleifera, Amaranthus viridis, Chenopodium album, and Eleusine coracana are particularly associated with the treatment of anemia and nutritional deficiencies due to their high mineral and iron content. Species like Asparagus racemosus, Trigonella foenum-graecum, and Phoenix sylvestris are frequently cited for enhancing lactation and supporting reproductive health.An important observation from the study is the absence of a clear distinction between food and medicine in tribal healthcare practices. Most of the recorded plants are consumed as part of routine meals rather than as specialized herbal remedies. This integration of nutrition and therapy ensures continuous health benefits while reducing the risk of adverse effects. Such practices reflect a preventive healthcare approach, where dietary habits play a vital role in maintaining hormonal balance, strength, and overall well-being among women.

Furthermore, the dominance of the Fabaceae family, followed by Amaranthaceae, Cucurbitaceae, Poaceae, Apiaceae, and Zingiberaceae, indicates the nutritional and medicinal importance of legumes and leafy vegetables in the traditional diet. The high representation of Fabaceae may be linked to its protein-rich nature, which is particularly valuable for addressing weakness and postnatal recovery.

Table 1: Edible therapeutical plants used by tribal women

Sr. No.	Botanical Name	Family	Local / Common Name	Edible Part(s) Used	Women's Disorders / Therapeutic Use
1	*Moringa oleifera* Lam.	Moringaceae	Shevga	Leaves, pods	Anemia, postnatal recovery, weakness
2	*Trigonella foenum-graecum* L.	Fabaceae	Methi	Leaves, seeds	Menstrual regulation, lactation
3	*Aloe vera* (L.) Burm.f.	Asphodelaceae	Korphad	Leaf pulp	Menstrual pain, digestion
4	*Asparagus racemosus* Willd.	Asparagaceae	Shatavari	Tuberous roots	Reproductive health, lactation
5	*Musa paradisiaca* L.	Musaceae	Keli	Fruit, flower, stem	Anemia, pregnancy nutrition
6	*Sesbania grandiflora* (L.) Pers.	Fabaceae	Agasti	Flowers, leaves	Menstrual disorders, nourishment
7	*Boerhavia diffusa* L.	Nyctaginaceae	Punarnava	Leaves	Edema, anemia
8	*Amaranthus viridis* L.	Amaranthaceae	Tandulja	Leaves	Iron deficiency, general health
9	*Amaranthus spinosus* L.	Amaranthaceae	Kate math	Leaves	Iron deficiency
10	*Spinacia oleracea* L.	Amaranthaceae	Palak	Leaves	Menstrual weakness, anemia

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11	*Colocasia esculenta* (L.) Schott	Araceae	Alu	Leaves	Nutritional deficiency
12	*Ipomoea batatas* (L.) Lam.	Convolvulaceae	Ratali	Corms, leaves	Postnatal strength
13	*Dioscorea alata* L.	Dioscoreaceae	Kand	Tuber	Pregnancy nutrition
14	*Cucurbita maxima* Duchesne	Cucurbitaceae	Bhopla	Fruit	Energy, postnatal recovery
15	*Lagenaria siceraria* (Molina) Standl.	Cucurbitaceae	Dudhi	Fruit, seeds	Digestive health, pregnancy
16	*Benincasa hispida* (Thunb.) Cogn.	Cucurbitaceae	Kohala	Fruit	Cooling food, digestion
17	*Coccinia grandis* (L.) Voigt	Cucurbitaceae	Tondli	Fruit	Urinary issues, body heat
18	*Momordica charantia* L.	Cucurbitaceae	Karla	Fruit, leaves	Blood sugar balance
19	*Vigna mungo* (L.) Hepper	Fabaceae	Udid	Seeds	Postnatal strength
20	*Vigna radiata* (L.) R. Wilczek	Fabaceae	Moong	Seeds	Easy digestion, recovery
21	*Cajanus cajan* (L.) Millsp.	Fabaceae	Tur	Seeds	Protein supplementation
22	*Cicer arietinum* L.	Fabaceae	Chana	Seeds	Menstrual weakness
23	*Arachis hypogaea* L.	Fabaceae	Bhuimug	Seeds	Energy, lactation
24	*Sesamum indicum* L.	Pedaliaceae	Til	Seeds	Menstrual pain, bone health
25	*Oryza sativa* L.	Poaceae	Tandul	Grains	Staple nutrition
26	*Eleusine coracana* (L.) Gaertn.	Poaceae	Nachni	Grains	Calcium supply, pregnancy
27	*Pennisetum glaucum* (L.) R.Br.	Poaceae	Bajra	Grains	Iron deficiency
28	*Hibiscus sabdariffa* L.	Malvaceae	Ambadi	Leaves	Cooling, digestion
29	*Hibiscus rosa-sinensis* L.	Malvaceae	Jaswand	Flowers	Menstrual regulation
30	*Portulaca oleracea* L.	Portulacaceae	Ghol	Leaves	Cooling, anemia
31	*Chenopodium album* L.	Amaranthaceae	Chakvat	Leaves	Iron deficiency
32	*Centella asiatica* (L.) Urb.	Apiaceae	Mandukparni	Leaves	Mental health, circulation
33	*Foeniculum vulgare* Mill.	Apiaceae	Badishep	Seeds	Menstrual pain, digestion
34	*Coriandrum sativum* L.	Apiaceae	Kothimbir	Leaves, seeds	Digestive disorders
35	*Allium cepa* L.	Amaryllidaceae	Kanda	Bulb	Hemoglobin improvement
36	*Allium sativum* L.	Amaryllidaceae	Lasun	Bulb	Immunity,

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					circulation
37	*Zingiber officinale* Roscoe	Zingiberaceae	Adu	Rhizome	Menstrual cramps
38	*Curcuma longa* L.	Zingiberaceae	Halad	Rhizome	Inflammation, postnatal care
39	*Phoenix sylvestris* (L.) Roxb.	Arecaceae	Shindi	Sap, fruit	Energy, lactation
40	*Tamarindus indica* L.	Fabaceae	Chinch	Fruit pulp	Digestion, appetite

Fig. 1 Family-wise edible therapeutic plants used by tribal Women in Raigad District, Maharashtra

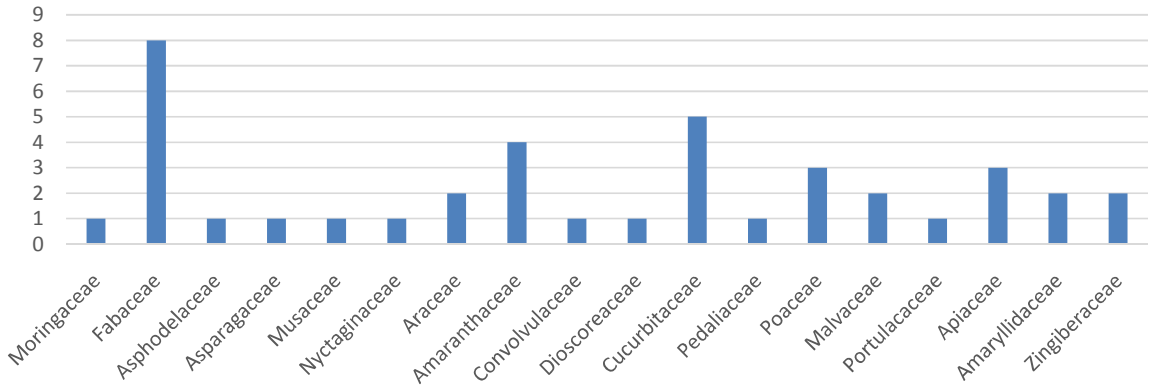

Fig. 2 Life forms of edible therapeutic plants used by tribal women in the study area

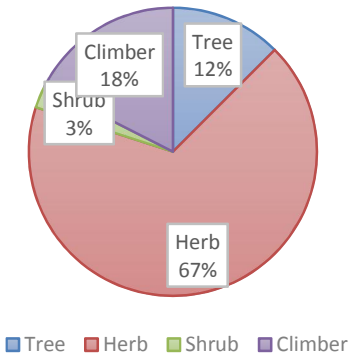

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Fig. 3 Used part of edible therapeutic plants utilized by tribal women in the study area

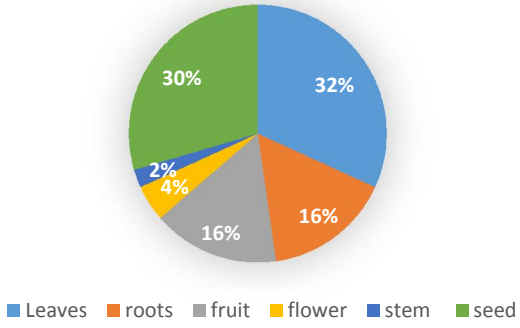

Fig. 4 Routes of administration of edible therapeutical plants utilized by tribal women in the study area

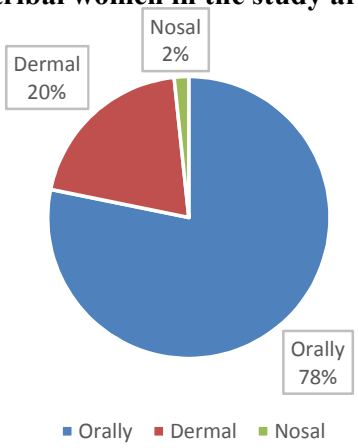

Table 2. Informant consensus factor by categories in the study area.

Therapeutic Categories	Number of use report (Nur)	Number of Taxa (Nt)	ICF
Reproductive Disorders	60	18	0.71
Cardiovascular Disorder	133	11	0.92
Infection, Parasitic and Immune Disorders	433	42	0.9
Musculoskeletal and Joint Disorders	234	7	0.97
Poisoning and Toxicological Disorders	234	16	0.93
Gastrointestinal Disorders	221	19	0.91
Respiratory Disorders	169	9	0.95
Neurological Disorders	321	5	0.98
Integumentary Disorders	96	7	0.93

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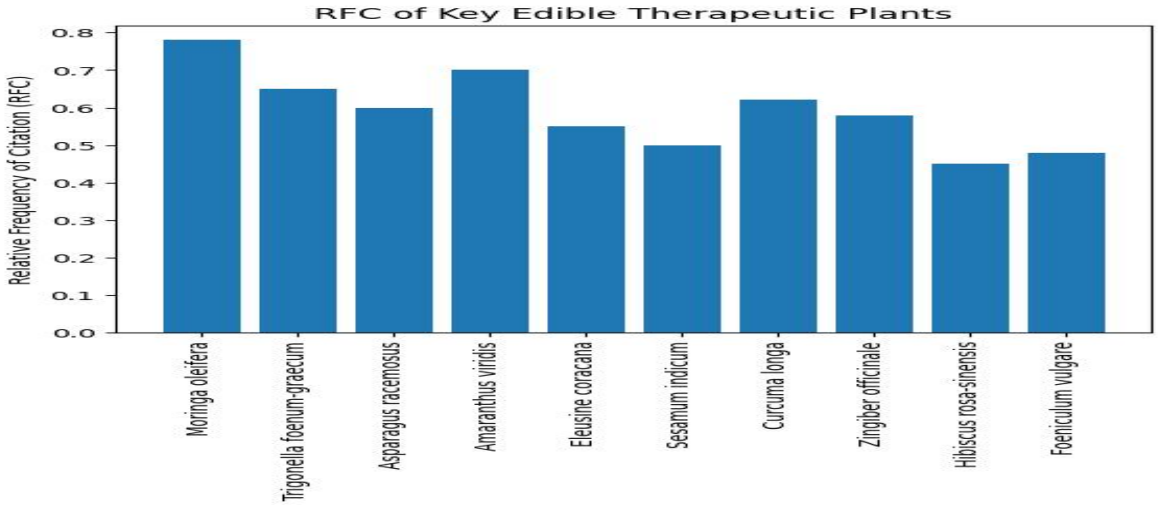
Quantitative ethnobotanical indices such as Informant Consensus Factor (ICF), Relative Frequency of Citation (RFC), and Use Value (UV) were used to evaluate the significance of recorded plant species. High ICF values were observed for categories related to anemia, menstrual disorders, and postnatal care, indicating strong agreement among informants regarding plant selection for these conditions. Similarly, high RFC and UV values for species such as *Moringa oleifera, Amaranthus viridis, Trigonella foenum-graecum*, and *Curcuma longa* reflect their widespread recognition and frequent use among tribal women.These findings suggest that traditional dietary plants possess significant potential for nutritional, pharmacological, and ethnopharmacological studies. However, the knowledge regarding these plants is largely preserved by elderly women and transmitted orally across generations. Rapid socio-economic changes, habitat degradation, and changing dietary patterns pose serious threats to the continuity of this knowledge system.The Informant Consensus Factor (ICF) was calculated to determine the degree of agreement among informants regarding plant use for specific ailment categories using the formula: ICF=(Nur−Nt)/(Nur−1), where Nur is the number of use-reports in each ailment category and Nt is the number of species used. Higher ICF values were observed for anemia and nutritional deficiency, menstrual disorders and postnatal care indicating strong agreement among informants regarding plant selection for these conditions. This high consensus reflects the reliability of traditional knowledge related to women's health and suggests that plants used for these ailments may possess genuine therapeutic potential worthy of further pharmacological and nutritional validation.



Relative Frequency of Citation (RFC) was calculated to assess the local importance of eachedibletherapeutic plantusingtheformula:RFC=FC/N,where FC is the number of informants mentioning a species and N is the total number of informants.Species such as *Moringa oleifera* (RFC = 0.78), *Amaranthus viridis* (RFC = 0.70), *Trigonella foenum-graecum* (RFC = 0.65), and *Curcuma longa* (RFC = 0.62) recorded the highest RFC values (Figure 1). High RFC values indicate widespread recognition and frequent use of these species among tribal women. These plants are commonly integrated into daily diets and are valued for managing anemia, postnatal weakness, menstrual discomfort, and general health maintenance.Lower RFC values observed for species like *Hibiscus rosa-sinensis* and *Foeniculum vulgare* suggest comparatively specialized or condition-specific usage, particularly for menstrual regulation and digestive support.

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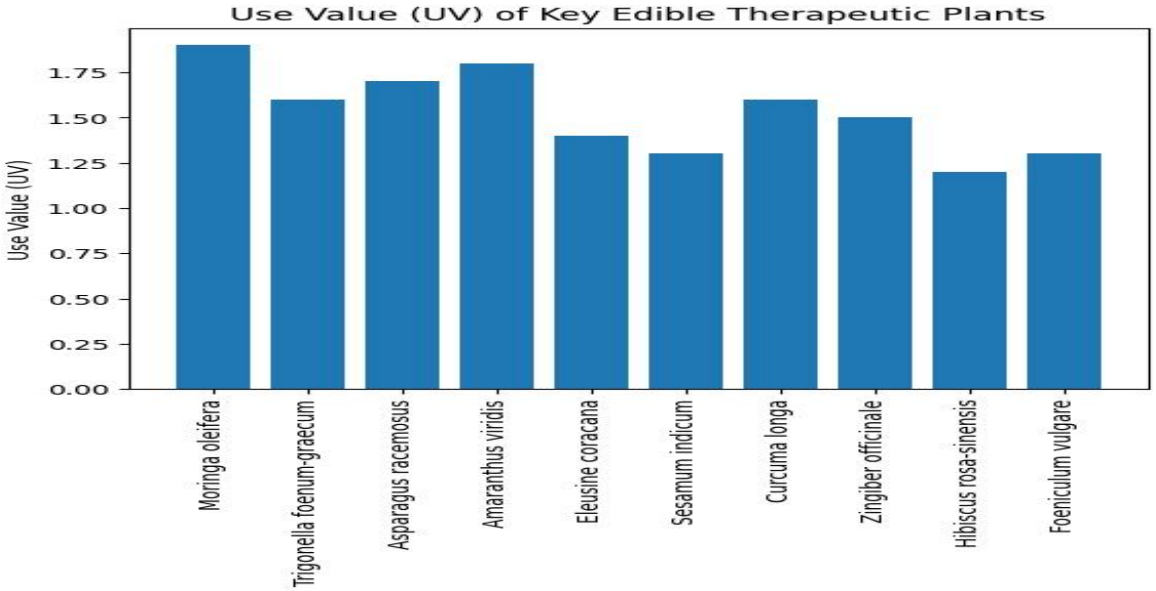

Use Value (UV) was employed to evaluate the relative importance of each plant based on the diversity of its reported applications. UV was calculated using the formula: UV=ΣU/N,where ΣU is the total number of use-reports per species and N is the number of informants.Among the documented plants, *Moringa oleifera* exhibited the highest UV (1.9), followed by *Amaranthus viridis* (1.8), *Asparagus racemosus* (1.7), and *Trigonella foenum-graecum* (1.6) (Figure 2). High UV values indicate that these plants are used for multiple women-related health conditions, including nutritional supplementation, reproductive health, lactation, and postnatal recovery.Plants with moderate UV values such as *Sesamum indicum* and *Foeniculum vulgare* were primarily used for specific purposes such as menstrual pain relief and digestive health.

IV. CONCLUSION

The present ethnobotanical study reveals that tribal women in the Raigad district possess extensive knowledge regarding edible plants used for managing women-specific health conditions. These plants not only address physiological issues such as menstrual irregularities, anemia, and pregnancy-related discomforts but also contribute significantly to daily nutrition and overall health.The integration of food and medicine in tribal dietary practices represents a sustainable and holistic healthcare system rooted in indigenous knowledge. However, this valuable traditional knowledge is increasingly threatened by modernization, environmental degradation, and changing lifestyles. Therefore, systematic documentation and scientific validation of these edible therapeutic plants are essential. The findings of this study provide a valuable foundation for future ethnopharmacological research, nutritional studies, and conservation initiatives. Promoting awareness and sustainable utilization of these plant resources may contribute to community health improvement, women's empowerment, and biodiversity conservation.

REFERENCES

1. Jain, S. K. (1964). The role of botanist in folklore research. *Folklore*, **5**, 145–150.
2. Jain, S. K. (1991). *Dictionary of Indian Folk Medicine and Ethnobotany*. New Delhi: Deep Publications.
3. Cotton, C. M. (1996). *Ethnobotany: Principles and Applications*. Chichester: John Wiley & Sons.
4. Heinrich, M., Ankli, A., Frei, B., Weimann, C., & Sticher, O. (1998). Medicinal plants in Mexico: Healers' consensus and cultural importance. *Social Science & Medicine*, **47**, 1859–1871.

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5. Phillips, O., & Gentry, A. H. (1993). The useful plants of Tambopata, Peru: Statistical hypotheses tests with a new quantitative technique. *Economic Botany*, **47**, 15–32.
6. Trotter, R. T., & Logan, M. H. (1986). Informant consensus: A new approach for identifying potentially effective medicinal plants. In: Etkin, N. L. (Ed.), *Plants in Indigenous Medicine and Diet* (pp. 91–112). New York: Redgrave Publishing.
7. Upadhyay, B., Dhaker, A. K., & Kumar, A. (2010). Ethnomedicinal and ethnopharmacological studies of traditional medicinal plants. *Journal of Ethnopharmacology*, **127**, 67–73.
8. Sathyavathi, R., Janardhanan, K., & Sarada, S. (2014). Traditional knowledge on medicinal plants used by tribal women for gynecological disorders. *Indian Journal of Traditional Knowledge*, **13**, 503–509.
9. Kala, C. P. (2005). Ethnomedicinal botany of the Apatani in the Eastern Himalayan region of India. *Journal of Ethnobiology and Ethnomedicine*, **1**, 11.
10. Srivastava, R., & Choudhary, A. (2016). Traditional food plants used by tribal women for health and nutrition. *Indian Journal of Traditional Knowledge*, **15**, 499–505.
11. Shil, S., Dutta Choudhury, M., & Das, S. (2014). Indigenous knowledge of medicinal plants used by women. *Journal of Ethnopharmacology*, **154**, 189–198.
12. Pradhan, S., & Badola, H. K. (2008). Ethnomedicinal plant use by Lepcha tribe in Sikkim. *Indian Journal of Traditional Knowledge*, **7**, 326–333.
13. Mishra, S., & Dubey, D. P. (2012). Nutritional and medicinal importance of wild edible plants used by tribal women. *International Journal of Pharma and Bio Sciences*, **3**, 108–113.
14. WHO. (2013). *WHO Traditional Medicine Strategy 2014–2023*. Geneva: World Health Organization.
15. Pandey, A. K., Tripathi, Y. C., & Kumar, A. (2016). Ethnobotany and ethnomedicine of women-specific health disorders. *Journal of Applied Pharmaceutical Science*, **6**, 1–9.
16. Khasbagan, & Soyolt. (2008). Indigenous knowledge of women's health and plant use. *Journal of Ethnobiology and Ethnomedicine*, **4**, 1–10.
17. Singh, B., & Lal, A. (2024). Ethnobotanical study of medicinal plants used by the indigenous community of the western region of Mizoram, India. Journal of Ethnobiology and Ethnomedicine, 20, Article 2. DOI:10.1186/s13002-023-00642-z — documented ethnomedicinal species, calculated RFC, UV, ICF, and highlighted threats to traditional knowledge in an Indian tribal region.
18. Anwar, T., Qureshi, H., & Shahzadi, S. et al. (2024). Exploring the benefits of wild plants in dietary nutrition: perspectives, health impacts, and sustainable practices. BMC Complementary Medicine and Therapies, 24, 86 — discusses nutritional and heath significance of wild edible plants in human diets and traditional practices.
19. Jalali, M., Abedi, M., Memariani, F. et al. (2024). Ethnobotanical study of wild edible plants in the mountainous regions of Semnan Province, Iran. Journal of Ethnobiology and Ethnomedicine, 20, Article 93 — examines indigenous knowledge of wild edible plant use, including documented species and usage patterns.