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Ethnobotanical Study of Galactagogue Medicinal Plants Used by Tribal Communities of Chhattisgarh and Madhya Pradesh, India

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Abstract

Traditional knowledge of medicinal plants has long supported maternal healthcare among tribal communities, where locally available plant resources are commonly used to improve lactation and promote the well-being of both mother and infant. Despite its continued relevance, this knowledge is gradually disappearing because of changing lifestyles, increasing dependence on modern healthcare, and the declining transfer of indigenous practices to younger generations. The present study documents the medicinal plants traditionally used as galactagogues by tribal communities of Chhattisgarh and Madhya Pradesh, India. Ethnobotanical information was collected during field surveys through semi-structured interviews and personal interactions with traditional healers, elderly women, and other knowledgeable informants. Plant specimens were identified using standard taxonomic literature and classified according to the Angiosperm Phylogeny Group IV (APG IV) system. The study recorded 47 medicinal plant species belonging to 27 families. Fabaceae was represented by the highest number of species (6), followed by Apocynaceae (4), while Apiaceae, Cucurbitaceae, Euphorbiaceae, and Poaceae contributed three species each. The recorded plants were prepared in different forms, including decoctions, powders, fresh juices, cooked vegetables, soups, and pastes, using leaves, seeds, roots, fruits, bark, rhizomes, tubers, flowers, and whole plants. The wide diversity of species documented in the present study reflects the richness of indigenous knowledge associated with maternal healthcare in central India. Preservation of this traditional knowledge is important not only for safeguarding cultural heritage but also for identifying plant species that may be explored further through phytochemical, pharmacological, and clinical studies for the development of safe and affordable herbal galactagogues.

Keywords: Ethnobotany; Galactagogue; Medicinal plants; Indigenous knowledge; Maternal healthcare; Tribal communities; Chhattisgarh; Madhya Pradesh.

Introduction

Breastfeeding is widely recognized as the most effective means of ensuring optimal nutrition, healthy growth, and immunological protection during early infancy. Besides its benefits for the newborn, successful lactation also contributes to maternal health by promoting postpartum recovery and strengthening the mother–infant relationship. However, many women experience inadequate milk production during the early months after childbirth due to nutritional deficiencies, physiological disorders, stress, hormonal imbalance, or illness. Although

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modern medicine offers several therapeutic options, traditional plant-based remedies continue to be widely used in many parts of the world, particularly in rural and tribal communities where they remain an important component of primary healthcare (Sharma et al., 2022). For centuries, indigenous communities have relied on medicinal plants to support pregnancy, childbirth, and lactation. This traditional knowledge has evolved through continuous observation and practical experience and has been transmitted orally from one generation to the next. In many tribal households, medicinal plants are still preferred because they are locally available, affordable, and deeply rooted in cultural traditions. Several plant species commonly used as food or medicine are believed to improve breast milk production while simultaneously enhancing maternal nutrition and recovery during the postpartum period (Rath et al., 2014; Parashar and Ray, 2020; Goel et al., 2025).

In recent years, interest in herbal galactagogues has increased because many medicinal plants contain bioactive constituents such as flavonoids, steroidal saponins, alkaloids, phytoestrogens, and essential oils that may influence lactation and maternal health. Scientific investigations on plants such as Asparagus racemosus, Trigonella foenum-graecum, Foeniculum vulgare, Moringa oleifera, and Cuminum cyminum have provided encouraging evidence supporting several traditional claims, although further pharmacological and clinical validation is still required (Zafri and Bagul, 2015; Sharma et al., 2022; Meshram et al., 2025; Goel et al., 2025). These observations demonstrate that traditional knowledge can provide valuable leads for future research on safe and effective herbal galactagogues. Ethnobotanical documentation plays an essential role in preserving indigenous knowledge before it is lost. Rapid urbanization, changing lifestyles, habitat degradation, and reduced dependence on traditional healing systems have accelerated the erosion of ethnomedicinal knowledge in many tribal communities. Systematic documentation therefore not only safeguards an important part of cultural heritage but also creates opportunities for identifying medicinal plants with therapeutic potential and promoting their sustainable utilization (Moerman et al., 1999; Albuquerque et al., 2019; Tardío and Pardo-de-Santayana, 2021).

Central India is well known for its rich floristic diversity and large tribal population. Chhattisgarh and Madhya Pradesh together represent an important ethnobotanical region where communities such as the Gond, Baiga, Halba, Kanwar, and Oraon have maintained a close association with forest resources for generations. Traditional medicinal plants continue to play a significant role in their healthcare practices, particularly in maternal and child health. Although several ethnobotanical surveys have been conducted in these states, information on medicinal plants specifically used as galactagogues remains scattered across different publications and is often confined to individual localities (Rath et al., 2014; Zafri and Bagul, 2015; Parashar and Ray, 2020).

The present study was therefore undertaken to document the medicinal plants traditionally used as galactagogues by tribal communities of Chhattisgarh and Madhya Pradesh. The study records the diversity of medicinal plant species, the plant parts used, methods of preparation, and traditional modes of administration. It is expected that the findings will contribute to the preservation of indigenous ethnobotanical knowledge and provide useful baseline information for future phytochemical, pharmacological, and clinical investigations of traditionally used galactagogue plants.

MATERIALS AND METHODS

The present ethnobotanical investigation was carried out to document the traditional knowledge associated with medicinal plants used as galactagogues by tribal communities of Chhattisgarh and Madhya Pradesh, India.

Field surveys were conducted between January 2022 and January 2026 in selected tribal-dominated regions. The study focused on recording indigenous knowledge related to medicinal plants used for improving lactation, including the plant species, plant parts utilized, methods of preparation, and traditional modes of administration. The study was designed to document this knowledge directly from local communities while ensuring the authenticity of the information through repeated field visits and cross-verification.

Study Area

Chhattisgarh

The survey in Chhattisgarh covered the districts of **Balod, Kabirdham, Rajnandgaon, Kanker, and Kondagaon** (Fig. 1), which together represent an important forested region of central India. These districts receive an average annual rainfall ranging from approximately 860 to 1,490 mm, supporting tropical dry and moist deciduous forests with rich medicinal plant diversity. The landscape is shaped by important natural features such as the Maikal Hills, Bastar Plateau, and river systems including the **Shivnath, Tandula, Mahanadi, Doodh, Sondhur, and Narangi** rivers. Forests of this region, together with protected areas such as the Bhoramdeo Wildlife Sanctuary, provide favourable habitats for numerous medicinal plant species. The area is predominantly inhabited by tribal communities including the Gond**, Baiga, Halba, Kanwar, Maria, and other indigenous groups**, who continue to depend on forest resources for food, healthcare, and livelihood. Traditional herbal remedies remain an important part of maternal and child healthcare, making this region particularly suitable for ethnobotanical documentation.

Madhya Pradesh

In Madhya Pradesh, the study was conducted in the districts of **Balaghat, Mandla, Dindori, Anuppur, and Shahdol (Fig. 2).** These adjoining districts form part of the central Indian highlands and are characterized by extensive forest cover, undulating terrain, and high plant diversity. The average annual rainfall ranges from approximately 1,130 to 1,450 mm, providing favourable ecological conditions for the growth of diverse medicinal flora. Prominent geographical features include the **Maikal Hills, the Amarkantak Plateau**, the **Wainganga and Narmada river systems, and the Kanha Tiger Reserve**, all of which contribute to the rich biodiversity of the region. The area is inhabited mainly by tribal communities such as the **Baiga, Gond, Kol, Panika, and Agaria**, who have preserved a long tradition of using medicinal plants for primary healthcare. Owing to the ecological continuity between the selected districts of Madhya Pradesh and the adjoining districts of Chhattisgarh, many medicinal plant species occur throughout the study area and continue to be used in traditional maternal healthcare practices.

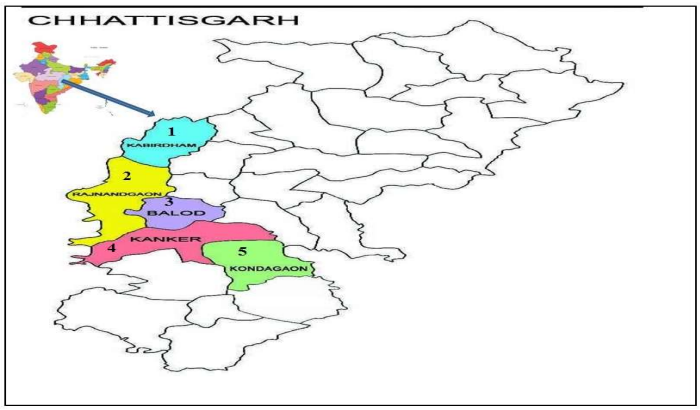


Fig 1: Map of Chhattisgarh state showing present study area

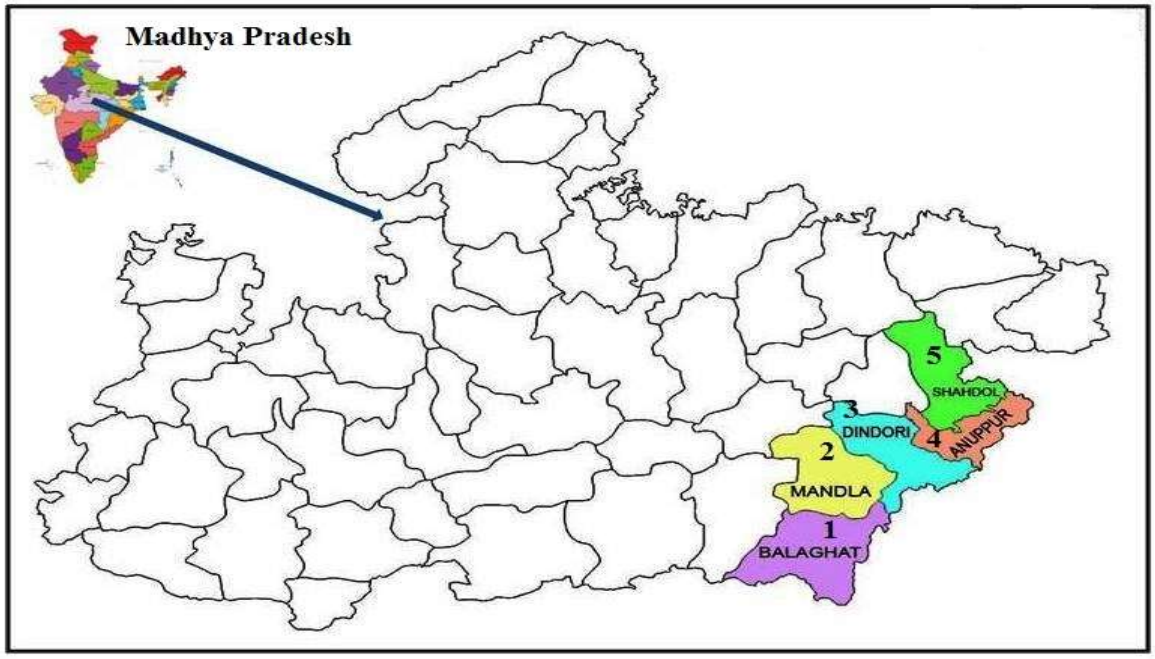


Fig 2: Map of Madhya Pradesh state showing present study area

Ethnobotanical Data Collection

Field surveys were carried out in selected villages with the assistance of local community members. Information on medicinal plants was collected through semi-structured questionnaires, personal interviews, informal discussions, and direct field observations. Traditional healers, elderly women, village elders, and other knowledgeable informants were consulted after obtaining their prior informed consent. Information regarding local names, plant parts used, methods of preparation, dosage, mode of administration, and traditional uses as galactagogues was carefully recorded during each visit. To improve the reliability of the data, information obtained from one informant was cross-checked with other knowledgeable individuals from the same or neighbouring villages whenever possible.

Plant Collection and Identification

Medicinal plant specimens reported during the survey were collected from their natural habitats with the assistance of local informants. Voucher specimens were identified using regional floras and standard taxonomic literature. Botanical nomenclature was verified, and the accepted scientific names and family classification were updated according to the Angiosperm Phylogeny Group IV (APG IV) classification system.

Result and Discussion

The ethnobotanical survey conducted in the selected tribal regions of Chhattisgarh and Madhya Pradesh documented a rich diversity of medicinal plants traditionally used as galactagogues. Information collected from traditional healers, elderly women, and other knowledgeable informants revealed the continued use of several plant species for improving lactation and supporting maternal health. A total of 47 medicinal plant species belonging to 27 families were recorded during the investigation. The documented species, together with their botanical names, families, plant parts used, and traditional modes of use, are presented in Table 1.

Table 1. Ethnobotanical inventory of medicinal plants traditionally used as galactagogues by tribal communities of Chhattisgarh and Madhya Pradesh.

Sl.No	Botanical name	Common name	Family (APG IV)	Plant for used	Traditional use
1.	*Acacia nilotica* (L.) Delile	Babool	Fabaceae	Young shoot, bark,pods, gum	The aqueous extract is used as a galactagogue and is reported to promote lactation by enhancing prolactin secretion. (Ouedraogo et al. 2004, Rather et al. 2015, Zafri et al. 2015, Sharma et al. 2022).
2.	*Allium sativum* L.	Garlic	Amaryllidaceae	Bulbs	Garlic is widely consumed as a traditional galactagogue and has been reported to enhance breast milk production by stimulating prolactin secretion. (Rath et al. 2014, Bekoe et al. 2018, Sharma et al. 2022,Goel et al. 2025)
3.	*Alstonia scholaris* (L.) R.Br.	Saptaparni	Apocynaceae	Stem bark	The plant is traditionally used to promote lactation and is believed to support breast milk production in nursing mothers. (Rath et al. 2014)
4.	*Alternanthera sessilis (*L.) R.Br. ex DC.	Bala	Amaranthaceae	Whole plant	The leaves are commonly consumed as a soup or vegetable and are traditionally believed to improve the quantity of breast milk in lactating mothers (Rath et al. 2014, Parashar et al. 2020)
5.	*Amaranthus spinosus* L.	Spiny amaranth	Amaranthaceae	Whole plant	The plant is traditionally used to support lactation and has been reported to enhance prolactin secretion and breast milk production. Parashar et al. 2020)
6.	*Asparagus racemosus Willd.*	Shatavari	Asparagaceae	Roots	It is traditionally used to promote lactation by supporting hormonal regulation and enhancing milk secretion. (Sabnis et al. 1969, Zafri et al. 2015,Parashar et al. 2020, Sharma et al. 2022,Goel et al.2025)
7.	*Bauhinia variegata* L.	Kachnar	Fabaceae	Buds	The leaves are traditionally used to support lactation and are believed to enhance prolactin secretion due to the presence of phytoestrogenic compounds (Parashar et al. 2020)
8.	*Calotropis procera* (Aiton) Dryand.	Madar	Apocynaceae	Latex	The latex is traditionally applied externally around the breast (avoiding the nipple) to promote lactation. Caution: The latex is irritant and should be used only according to traditional practices. (Rath et al. 2014)

9.	*Carica papaya* L.	Papaya	Caricaceae	Fruits and leaves	The fruit and leaves are traditionally consumed as natural galactagogues and are believed to promote breast milk production. (Rath et al. 2014)
10.	*Chlorophytum borivilianum* Santapau & R.R.Fern.	Safed Musli	Asparagaceae	Tuberous roots	The tuberous roots are valued as a nutritious tonic and are traditionally used to improve the quantity and quality of breast milk. (Parashar et al. 2020, Sharma et al. 2022)
11.	*Citrullus vulgsis* (Thunb.) Matsum. & Nakai	Watermelon (Tarbooj)	Cucurbitaceae	Fruits	The seeds are traditionally consumed to improve maternal nutrition and support lactation. Sharma et al. 2022)
12.	*Coriandrum sativum* L.	Coriander (Dhania)	Apiaceae	Seeds	Coriander seeds are traditionally used as a galactagogue and are believed to support breast milk production. (Rath et al. 2014, Sharma et al. 2022)
13.	*Cryptolepis buchananii* R. Br. Ex. Roem. & Schult.	Shyamlata	Apocynaceae	Leaves	The powdered leaves is traditionally mixed with *Euphorbia thymifolia* or related species (depending on local practice) and administered to nursing mothers to promote lactation. (Rath et al. 2014)
14.	*Cuminum cyminum* L.	Cumin (Jeera)	Apiaceae	Seeds	Cumin seeds are a rich source of iron and essential oils and are traditionally consumed to promote lactation and improve maternal nutrition. (Rath et al. 2014, Sharma et al. 2022, Goel et al.2025)
15.	*Curculigo orchioides* Gaertn.	Kali Musli	Hypoxidaceae	Tubers	The roots are traditionally used as a rejuvenating tonic and galactagogue to improve the quantity and quality of breast milk. (Rath et al. 2014, Sharma et al. 2022)
16.	*Curcuma longa* L.	Turmeric	Zingiberaceae	Rhizome	Turmeric possesses anti-inflammatory properties and is traditionally used to relieve breast discomfort and support healthy lactation. (Rath et al. 2014, Sharma et al. 2022)
17.	*Cymbopogon citratus* (DC.) Stapf	Lemongrass	Poaceae	Leaves, bulb	Lemongrass is traditionally consumed as a herbal infusion and is believed to support lactation and maternal well-being. (Sharma et al. 2022)
18.	*Cyperus rotundus* L.	Nut Grass (Nagarmotha)	Cyperaceae	Tubers	The tubers are traditionally used in herbal medicine to support lactation and improve postpartum recovery. (Rath et al. 2014, Sharma et al. 2022)
19.	*Desmodium triflorum* (L.) DC.	Motha	Fabaceae	Leaves	The leaves are traditionally used to improve the flow and quality of

					breast milk in nursing mothers. (Rath et al. 2014)
20.	*Euphorbia hirta* L.	Dudhi	Euphorbiaceae	Leaves	*Euphorbia hirta* is widely recognized in traditional medicine as a galactagogue and is reported to support milk secretion in lactating mothers. (Rath et al. 2014, Parashar et al. 2020)
21.	*Ficus hispida* L.f.		Moraceae	Fruits	Ripe fruits are traditionally used as tonic and lactagogue and given to promote lactation. (Rath et al. 2014, Parashar et al. 2020)
22.	*Ficus racemosa* L.	Cluster Fig (Gular)	Moraceae	Stem, bark	The powdered stem bark is traditionally administered to lactating mothers to promote breast milk secretion. (Rath et al. 2014)
23.	*Foeniculum vulgare* Mill.	Fennel (Saunf)	Apiaceae	Fresh leaves, Seeds	Fennel seeds are one of the most widely used traditional galactagogues and are believed to promote breast milk production because of their phytoestrogenic constituents. (Rath et al. 2014, Sharma et al. 2022, Goel et al. 2025)
24.	*Glycyrrhiza glabra* L.	Licorice (Mulethi)	Fabaceae	Roots	The roots contain glycyrrhizin and phytoestrogenic compounds and are traditionally used to support lactation and postpartum recovery (Sharma et al. 2022)
25.	*Gossypium herbaceum* L.	Cotton (Kapas)	Malvaceae	Seeds, seed oil	The seeds and seed oil are traditionally used to support lactation and are reported to promote breast milk production. (Parashar et al. 2020)
26.	*Hemidesmus indicus* (L.) R.Br.	Anantmool	Asclepiadaceae	Roots	Decoction of the dried roots mixed with equal amount of goat's milk is given once a day for one month for enhanced lactation. (Rath et al. 2014, Parashar et al. 2020)
27.	*Holarrhena* pubescens (L.) Wall. ex A.DC.	Kurchi	Apocynaceae	Leaf paste	Leaf paste is traditionally applied externally to the breasts to promote lactation in nursing mothers. (Rath et al. 2014)
28.	*Hordeum vulgare* L.	Barley	Poaceae	Grains	Traditional use: Barley is rich in β-glucans and essential nutrients and is traditionally consumed to support lactation and maternal health. (Sharma et al. 2022)
29.	*Ipomoea batatas* (L.) Lam.	Sweet Potato (Shakarkand)	Convolvulaceae	Leaves,	Sweet potato is a nutritious food rich in vitamins and minerals and is traditionally consumed to support breast milk production. (Meshram et al. 2025)

30.	*Jatropha curcas* L.	Physic nut (Ratanjot)	Euphorbiaceae	Leaves	The leaves are traditionally used in folk medicine to promote lactation. Caution: The seeds and latex are toxic and should not be consumed. (Rath et al. 2014)
31.	*Lagenaria siceraria* (Molina) Standl.	Bottle Gourd (Lauki)	Cucurbitaceae	Fruits	Bottle gourd is traditionally consumed as a vegetable or juice to maintain hydration and support breast milk production. (Rath et al. 2014, Sharma et al. 2022)
32.	*Madhuca longifolia* (J.Koenig ex L.) J.F.Macbr.	Mahua	Sapotaceae	flowers and seeds	The flowers and seeds are traditionally used to support lactation and improve breast milk production in nursing mothers. (Rath et al. 2014)
33.	*Momordica charantia* L.	Bitter Gourd (Karela)	Cucurbitaceae	Fruits and leaves	The fruits and leaves are rich in vitamins and minerals and are traditionally consumed to support maternal nutrition and healthy lactation. (Rath et al. 2014)
34.	*Moringa oleifera* Lam.	Drumstick (Moringa)	Moringaceae	Leaves , Fruits	*Moringa oleifera* is one of the most extensively studied natural galactagogues and is traditionally used to enhance breast milk production and improve maternal nutrition. (Parashar et al. 2020)
35.	*Musa* × *paradisiaca* L.	Banana (Kela)	Musaceae	Flowers, Fruits	Bananas are rich in potassium, vitamins, and dietary fibre and are traditionally recommended to support maternal nutrition during pregnancy and lactation. (Parashar et al. 2020)
36.	*Nigella sativa* L.	Black Cumin (Kalonji)	Ranunculaceae	Seeds	Nigella sativa is traditionally used as a galactagogue and is believed to support healthy breast milk production in nursing mothers. (Rath et al. 2014, Sharma et al. 2022)
37.	*Papaver somniferum* L.	Opium	Papaveraceae	Seeds	In traditional medicine, the seeds are occasionally used in small quantities as a nutritive food during lactation. Caution: Use of other plant parts is restricted because of the presence of opiate alkaloids. Sharma et al. 2022)
38.	*Piper longum* L.	Long Pepper (Pippali)	Piperaceae	Seeds	The fruits are traditionally used to improve digestion and are believed to support lactation in postpartum women. (Sharma et al. 2022)
39.	*Piper nigrum* L.	Black Pepper (Kali Mirch)	Piperaceae	Seeds	Black pepper contains piperine and is traditionally used to improve digestion and enhance the bioavailability of nutrients, thereby

					supporting maternal health during lactation (Sharma et al. 2022)
40.	*Ricinus communis* L.	Castor (Arand)	Euphorbiaceae	Leaves	Castor leaves are traditionally applied externally to the breasts to promote lactation. The plant has also been reported to possess galactagogue properties in traditional medicine. (Rath et al. 2014)
41.	*Saccharum spontaneum* L.	Kans	Poaceae	Roots	The roots are traditionally used in indigenous medicine to improve breast milk production and support postpartum recovery Sharma et al. 2022
42.	*Senna tora* (L.) Roxb. (formerly *Cassia tora* L.)	Tora	Fabaceae	leaves	The leaves and seeds are traditionally used as herbal galactagogues to support milk production in lactating mothers. (Rath et al. 2014, Parashar et al. 2020)
43.	*Sesamum* orientale L.	Sesame (Til)	Pedaliaceae	Seeds	Sesame seeds are rich in calcium, iron, healthy fats, and phytoestrogens and are traditionally consumed to support breast milk production and maternal nutrition. (Rath et al. 2014 Parashar et al. 2020)
44.	*Trigonella foenum-graecum* L.	Fenugreek (Methi)	Fabaceae	Seeds	Fenugreek is one of the most widely recognized herbal galactagogues. The seeds are rich in iron, proteins, and bioactive compounds and are traditionally used to enhance breast milk production. (Rath et al. 2014, Parashar et al. 2020, (Sharma et al. 2022,Meshram et al. 2025)
45.	*Vitex negundo* L.	Nirgundi	Lamiaceae	Leaves	The leaves are traditionally used to promote milk secretion and support postpartum recovery in nursing mothers. (Rath et al. 2014, Sharma et al. 2022)
46.	*Withania somnifera* (L.) Dunal	Ashwagandha	Solanaceae	Roots, leaves	Ashwagandha is a well-known adaptogenic herb traditionally used to improve maternal health, restore vitality, and support healthy lactation. (Rath et al. 2014, Sharma et al. 2022)
47.	*Zingiber officinale* Roscoe	Ginger	Zingiberaceae	Rhizome	Ginger is traditionally consumed during the postpartum period and is believed to promote lactation while supporting digestion and maternal recovery Sharma et al. 2022)

The documented medicinal plants belonged to a wide range of taxonomic groups, indicating considerable floristic diversity within the study area. Their family-wise distribution is presented in Table 2, which shows the dominance of certain plant families in traditional galactagogue practices.

Table 2. Family-wise distribution of medicinal plant species used as traditional galactagogues

Family	No of plants included
Fabaceae	6
Apocynaceae	4
Apiaceae	3
Cucurbitaceae	3
Euphorbiaceae	3
Poaceae	3
Amaranthaceae	2
Asparagaceae	2
Piperaceae	2
Zingiberaceae	2
Moraceae	2
Amaryllidaceae	1
Asclepiadaceae	1
Caricaceae	1
Convolvulaceae	1
Cyperaceae	1
Hypoxidaceae	1
Lamiaceae	1
Malvaceae	1
Moringaceae	1
Musaceae	1
Papaveraceae	1
Pedaliaceae	1
Ranunculaceae	1
Sapotaceae	1
Solanaceae	1
Total	**47**

The survey revealed that Fabaceae was the most dominant family with six species, followed by Apocynaceae with four species, whereas Apiaceae, Cucurbitaceae, Euphorbiaceae, and Poaceae were each represented by three species. The remaining families contributed one or two species each. The predominance of Fabaceae may be attributed to its wide distribution, ecological adaptability, and the abundance of nutritionally and medicinally important species within the family. Several members of Fabaceae are rich in proteins, flavonoids, isoflavones, minerals, and other bioactive constituents that have traditionally been associated with maternal nutrition and lactation support. Similar observations regarding the frequent occurrence of Fabaceae

species in traditional galactagogue practices have been reported from different regions of India by Rath et al. (2014), Parashar and Ray (2020), and Sharma et al. (2022).

The diversity of plant families recorded in the present study demonstrates that indigenous communities do not depend on a single medicinal plant or taxonomic group for improving lactation. Instead, they utilize a wide range of locally available species according to seasonal availability, accessibility, cultural preference, and traditional experience. Comparable patterns of diverse medicinal plant use have also been documented in ethnobotanical investigations from Madhya Pradesh and Odisha (Rath et al., 2014; Zafri and Bagul, 2015; Parashar and Ray, 2020), indicating that many traditional galactagogue practices are widely shared across central India.

An interesting observation of the present study is the frequent use of food plants as galactagogues. Species such as *Moringa oleifera, Trigonella foenum-graecum, Foeniculum vulgare, Cuminum cyminum, Lagenaria siceraria, Carica papaya, Musa × paradisiaca*, *Ipomoea batatas*, and *Momordica charantia* are consumed regularly as vegetables, spices, or dietary supplements while also being regarded as effective traditional galactagogues. This suggests that indigenous communities recognize the close relationship between nutrition and successful lactation. Earlier investigations have similarly reported that many edible plants provide essential vitamins, minerals, proteins, dietary fibre, and phytochemicals that support postpartum recovery and breast milk production (Parashar and Ray, 2020; Sharma et al., 2022; Meshram et al., 2025; Goel et al., 2025).

Different plant parts were employed in traditional preparations, including leaves, seeds, roots, fruits, bark, rhizomes, tubers, flowers, latex, gums, and whole plants. Among these, leaves and seeds were the most frequently utilized plant parts, followed by roots and fruits. The preference for leaves may be associated with their easy availability, rapid regeneration after harvesting, and high concentration of biologically active metabolites. Likewise, seeds of plants such as *Foeniculum vulgare, Cuminum cyminum, Nigella sativa, Sesamum orientale, and Trigonella foenum-graecum* are valued not only for their nutritional properties but also for their phytoestrogenic constituents, which have traditionally been associated with enhanced milk secretion (Sharma et al., 2022; Goel et al., 2025). The use of edible seeds and leafy vegetables also minimizes destructive harvesting and supports sustainable utilization of medicinal plant resources.

Traditional methods of preparation recorded during the survey included decoctions, powders, fresh juices, herbal soups, cooked vegetables, pastes, and direct consumption of fresh plant materials. In several cases, medicinal preparations were administered with milk, ghee, or other locally available food materials to improve palatability and nutritional value. Such practices demonstrate that tribal healthcare systems emphasize both therapeutic efficacy and maternal nourishment. Similar methods of preparation have been documented in earlier ethnobotanical studies from central India and other regions, where medicinal plants are commonly combined with food ingredients during postpartum care (Rath et al., 2014; Zafri and Bagul, 2015; Parashar and Ray, 2020).

Several medicinal plants documented during the present investigation, including *Asparagus racemosus, Trigonella foenum-graecum, Foeniculum vulgare, Moringa oleifera, Cuminum cyminum*, and *Allium sativum*, have also attracted scientific interest because of their reported galactagogue activity. Experimental and clinical studies suggest that these plants contain steroidal saponins, flavonoids, alkaloids, phytoestrogens, essential oils, and other secondary metabolites that may influence prolactin secretion, improve maternal nutrition, or indirectly

support lactation (Sabnis et al., 1969; Ouedraogo et al., 2004; Zafri and Bagul, 2015; Sharma et al., 2022; Meshram et al., 2025; Goel et al., 2025). Although many traditional claims require further pharmacological and clinical validation, the agreement between indigenous knowledge and contemporary scientific observations highlights the importance of ethnobotanical studies in identifying promising medicinal species for future research.

The present investigation also emphasizes the urgent need to preserve indigenous ethnobotanical knowledge. During field surveys, it was observed that detailed information regarding medicinal plants was largely confined to elderly community members and traditional healers, whereas younger generations were often less familiar with these practices. Similar concerns regarding the gradual erosion of traditional knowledge have been reported by Moerman et al. (1999), Albuquerque et al. (2019), and Tardío and Pardo-de-Santayana (2021). Systematic documentation of this knowledge is therefore essential not only for safeguarding cultural heritage but also for promoting biodiversity conservation, sustainable utilization of medicinal plants, and future drug discovery.

One of the major strengths of the present investigation is that it brings together ethnobotanical information from ten tribal districts of two ecologically connected states in central India. Previous reports have generally been confined to individual districts or smaller geographical regions (Rath et al., 2014; Zafri and Bagul, 2015; Parashar and Ray, 2020). By documenting medicinal plants, traditional practices, and associated indigenous knowledge across a broader landscape, the present study provides a more comprehensive account of traditional galactagogue plants used in central India. The findings establish a valuable baseline for future phytochemical, pharmacological, toxicological, and clinical investigations aimed at developing safe, effective, and affordable plant-based galactagogues while contributing to the conservation of indigenous knowledge and medicinal plant diversity

Conclusion

The present study documents the traditional knowledge associated with medicinal plants used as galactagogues by tribal communities of Chhattisgarh and Madhya Pradesh, providing a comprehensive account of indigenous practices that continue to support maternal healthcare in central India. A total of 47 medicinal plant species belonging to 27 families were recorded, reflecting the rich floristic diversity of the study area and the close relationship between tribal communities and their surrounding natural resources. The continued use of both wild and cultivated plant species demonstrates that traditional healthcare practices remain closely linked with local food systems and cultural traditions.

Many of the documented species have been reported in earlier ethnobotanical and pharmacological studies, while several others remain inadequately investigated despite their continued use by local communities. This agreement between traditional knowledge and published scientific evidence highlights the value of indigenous healthcare practices as a source of information for future research on safe and effective plant-based galactagogues. At the same time, the study emphasizes that valuable ethnobotanical knowledge is becoming increasingly vulnerable because of changing lifestyles, reduced dependence on traditional medicine, and the gradual decline in intergenerational knowledge transfer.

The information generated through this investigation provides a useful baseline for future phytochemical, pharmacological, toxicological, and clinical studies aimed at validating the therapeutic potential of traditionally

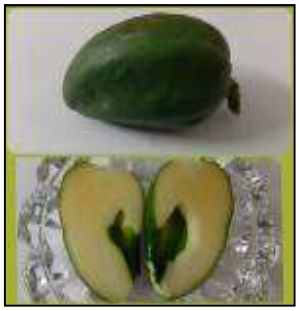
used galactagogue plants. Equally important, it underscores the need to document, preserve, and promote indigenous ethnobotanical knowledge while encouraging the sustainable conservation of medicinal plant resources. Such efforts will not only strengthen maternal healthcare through scientifically validated herbal resources but will also contribute to safeguarding the cultural and biological heritage of tribal communities for future generations.

By preserving this traditional knowledge and encouraging its scientific validation, the present study provides a meaningful link between indigenous wisdom and contemporary healthcare while supporting the conservation of medicinal plant diversity and the cultural heritage of tribal communities.

Photo plate 1:- Representation of medicinal plant species documented during the ethnobotanical survey in Chhattisgarh and Madhya Pradesh

			
1. *Acacia nilotica* (L.) Wild Ex Delile	Plant part used – Fresh and dried Leaves,pods,gum	2. *Allium sativum* L.	Plant part used- Leaves and Tubers
			
3. *Alstonia scholaris* (L.) R.Br.	Plant part used – Stem bark	4.. *Alternanthera sessilis* (L.) R.Br. ex DC	Plant part used – Whole plant
			

5.*Amaranthus spinosus* L.	Plant part used – Whole plant	6. *Asparagus racemosus* Willd.	Plant part used Roots

			
7. *Bauhinia variegata* L.	Plant part used – Buds	8. *Calotropis procera* (Aiton) Dryand.	Plant part used –Latex
			
9. *Carica papaya* L.	Plant part used –Leaves and fruits	10. *Chlorophytum borivilianum* Santapau & R.R.Fern	Plant part used –Tuberous roots
			
11. . *Citrullus vulgsis* (Thunb.) Matsum. & Nakai	Plant part used –Fruits	12. *Coriandrum sativum* L.	Plant part used – Seeds

			
13. *Cryptolepis buchananii* R. Br. Ex. Roem. & Schult.	Plant part used –Leaves	14. *Cuminum cyminum* L.	Plant part used – seeds
			
15. *Curculigo orchioides* Gaertn.	Plant part used –Tubers	16. *Curcuma longa* L.	Plant part used – Rhizome
			
17. *Cymbopogon citratus* (DC.) Stapf	Plant part used – Leaves, bulb	18. *Cyperus rotundus* L.	Plant part used – Rhizome

			
19. *Desmodium triflorum* (L.) DC.	Plant part used – Leaves	20. *Euphorbia hirta* L.	Plant part used – Leaves
			
21. *Ficus hispida* L.f.	Plant part used – Fruit	22. *Ficus racemosa* L.	Plant part used – Stem, bark
			

23. *Foeniculum vulgare* Mill.	Plant part used – Fresh leaves, Seeds		24. *Glycyrrhiza glabra* L.	Plant part used – Roots
				
25. *Gossypium herbaceum* L.	Plant part used – seed		26. *Hemidesmus indicus* (L.) R.Br.	Plant part used – Roots
				
27. *Holarrhena* pubescens (L.) Wall. ex A.DC.	Plant part used – Leaf paste		28. *Hordeum vulgare* L.	Plant part used – Grains
				
29. *Ipomoea batatas* (L.) Lam.	Plant part used – Leaves		30. *Jatropha curcas* L.	Plant part used – Leaves

			
31. *Lagenaria siceraria* (Molina) Standl.	Plant part used – Fruits	32. *Madhuca longifolia* (J.Koenig ex L.) J.F.Macbr.	Plant part used – flowers and seeds
			
33. *Momordica charantia* L.	Plant part used – Fruits and leaves	34. *Moringa oleifera* Lam.	Plant part used – Leaves , Fruits
			
35. *Musa* × *paradisiaca* L.	Plant part used – Flowers, Fruits	36. *Nigella sativa* L.	Plant part used – Seeds

			
37. *Papaver somniferum* L.	Plant part used – Seeds	38. *Piper longum* L.	Plant part used – Seeds
			
39. *Piper nigrum* L.	Plant part used – Seeds	40. *Ricinus communis* L.	Plant part used – Leaves
			
41. *Saccharum spontaneum* L.	Plant part used – Roots	42. *Senna tora* (L.) Roxb. (formerly *Cassia tora* L.)	Plant part used – leaves

			
43. *Sesamum* orientale L.	Plant part used – Seeds	44. *Trigonella foenum-graecum* L.	Plant part used – Seeds
			
45. *Vitex negundo* L.	Plant part used – Leaves	46. *Withania somnifera* (L.) Dunal	Plant part used – Roots, leaves
			
47. *Zingiber officinale* Roscoe	Plant part used – Rhizome		

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