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Research Article

Ethnomedicinal insights from the Himalayas: Plants used for gastrointestinal disorders in Sarkaghat tehsil of district Mandi, Himachal Pradesh

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A B S T R A C T

The objective of the present study was to document and systematically inventory ethnomedicinal plants traditionally used for the treatment of gastrointestinal disorders in Sarkaghat tehsil of district Mandi, Himachal Pradesh, with the aim of preserving rapidly declining traditional knowledge among local healers. The study was designed as a field-based ethnobotanical investigation using both qualitative and quantitative approaches. Ethnomedicinal information was collected from 100 informants aged 35–70 years through structured questionnaires, personal interviews and participatory observations involving traditional healers and knowledgeable elders. Data on vernacular names, plant parts used, modes of preparation and dosage formulations were documented, and quantitative ethnobotanical indices such as Use Value (UV), Relative Frequency of Citation (RFC) and Fidelity Level (FL) were employed to assess the cultural significance and prominence of recorded plant species. The main outcomes measured included diversity of medicinal plants, patterns of use, preparation methods and quantitative indices reflecting species importance. A total of 27 plant species belonging to 21 families were documented for the treatment of gastrointestinal disorders such as diarrhoea, dysentery, constipation, bloating, gas and abdominal pain. Leaves were the most frequently utilized plant part, followed by fruits, seeds, roots and bark. Decoction was the dominant mode of preparation (33.3%), followed by juice (22.2%), powder (14.8%), raw consumption (11.1%), infusion (3.7%) and food-based preparations (7.4%). The UV ranged from 1.0 to 3.0, with *Aloe vera* exhibiting the highest value, while RFC values ranged from 0.38 to 0.90. FL values varied from 68.4% to 97.7%, with the highest values recorded for *Curcuma longa*, *Ocimum tenuiflorum*, *Terminalia chebula* and *Emblica officinalis*. In conclusion, the study highlights the rich ethnomedicinal heritage of Sarkaghat tehsil and underscores the urgent need for phytochemical and pharmacological validation of culturally significant plant species to facilitate their integration into evidence-based healthcare systems.

Keywords: Ethnomedicine, Gastrointestinal disorders, Medicinal plants, Sarkaghat, Himachal Pradesh, Traditional knowledge, Himalayas

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INTRODUCTION

Gastrointestinal disorders (GIDs) include diarrhoea, dysentery, gastritis, peptic ulcers, constipation and other functional bowel issues which remains to be a major cause of sickness in mountains and rural regions because of the limited access for medical healthcare [15].Medicinal plants are the basis for healthcare in several Himalayan regions where medicines derived from the local flora are widely used for treating various digestive disorders and considered essential to local cultural and healthcare practices[16,6,7,9]. The Himalayan region is well known for its rich biodiversity and ancient traditional medicinal practices among different tribes. Ethnomedicinal knowledge in this region has grown through several generations, influenced by the close relationship between indigenous peoples and their natural environment. Himachal Pradesh, located in the Western Himalayas, is particularly rich in medicinal plants and traditional medicinal practices [8]. Studies from the Himalayan and sub-Himalayan regions emphasize the significance of traditional knowledge in the management of digestive disorders. Surveys of ethnomedicinal plants in southern Assam recorded around 49 species utilized by indigenous tribes for digestive system disorders[1].All over India and neighbouring regions, an extensive variety of medicinal plants has been used to relieve

digestive problems, heal ulcers, reduce diarrhoea, infections or inflammation of the digestive system[5].The Sarkaghat tehsil, located in Mandi district of Himachal Pradesh, is part of rich biocultural environment. Recent floristic and ethnobotanical studies conducted in the Sarkaghat forest range and adjacent areas have identified numerous vascular plant species and comprehensive accounts of their traditional uses associated with human health. Despite the substantial ethnobotanical research carried out in the Himalayan region, a significant portion of local ethnomedicinal knowledge remains poorly documented particularly at the level of specific valleys, tehsils or villages. Modernization, evolving lifestyles, and migrationendanger the preservation of traditional knowledge.Hence systematic documentation of plants utilized for gastrointestinal illnesses is crucial for maintaining indigenous knowledge and for identifying potential species for phytochemical and pharmacological investigation.

Materials and Methods

Study Area

Sarkaghat tehsil is located in Mandi district of Himachal Pradesh, around 60 kilometers away from the district headquarter (Mandi). It is situated at an altitude of 911 meters (2,989 feet) and functions as a crucial crossroad linking several areas within the state. The town is well linked by National Highway 70 which enables access to adjacent regions such as Jogindernagar, Palampur and Kullu (Fig.1).Sarkaghat has a humid subtropical climate marked by sweltering summers and frigid arid winters. Temperature often fluctuates between 40°F and 92°F (4°C to 33°C), with few extremes below 35°F (1.6°C) or beyond 99°F (37.2°C). The monsoon season delivers significant precipitation which fosters the region'sflora. Sarkaghat is also known for its abundant biodiversity which encompasses a varied collection of angiosperms,gymnosperms and pteridophytes highlighting the ecological importance of the region.

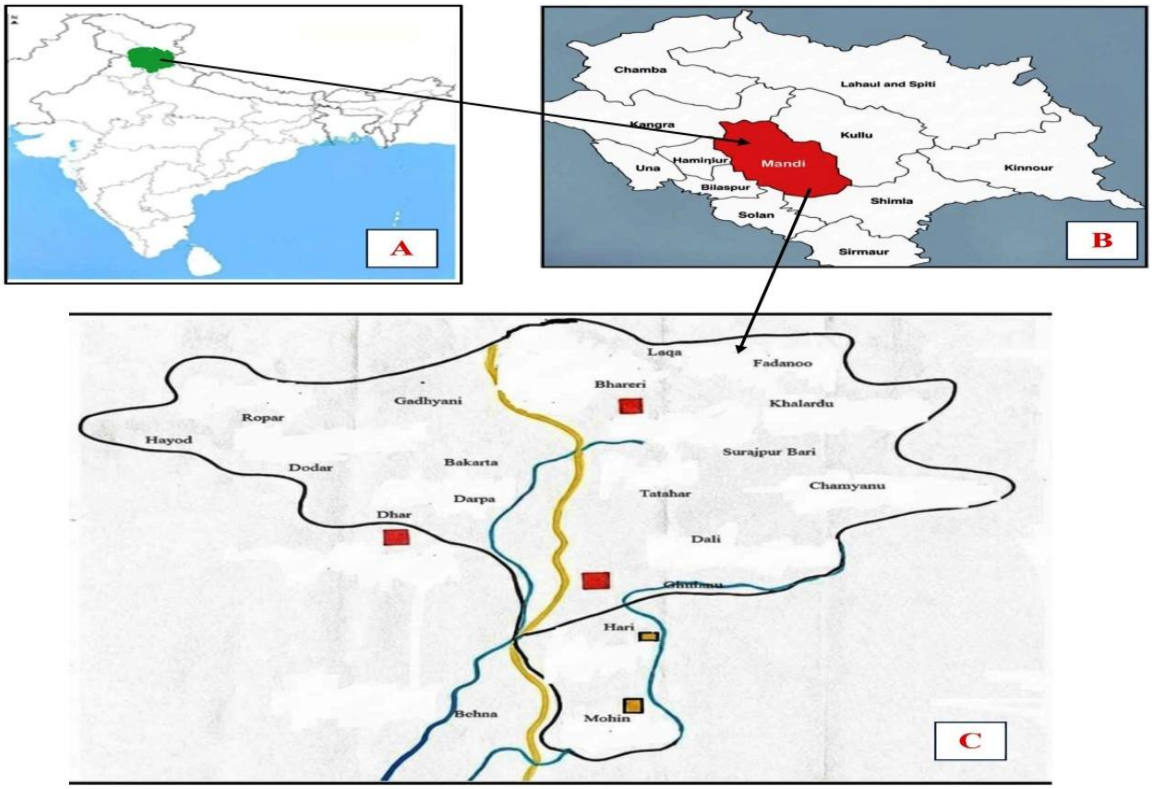

Figure1: Geographical location of the study area showing (A) Himachal Pradesh within India (B) Mandi district within Himachal Pradesh and (C) Sarkaghat tehsil within Mandi district

Data collection

The current study was carried out in Sarkaghat tehsil of Himachal Pradesh through several field trips to collect extensive data on the medicinal and traditional uses of indigenous plants. Approximately 100 persons from various age demographics were contacted to acquire trustworthy data. Interviews were performed with community elders and traditional healers, locally referred to as “gurs” or “vaidya”, throughout different villages. All discussions and queries were performed in the native Pahari/Hindi dialect to reduce bias, maintain simplicity of understanding and facilitate comfortable communication between interviewers and respondents. This method not only promoted active engagement but also facilitated the precise documentation of indigenous botanical knowledge in the area.However, the valuable information provided by younger community members also contributed in specific situations. The majority of respondents were farmers with minimal or no formal educationaged between 35 and 70 years. A definitive list of medicinal plants was developed based on the information gathered during interviews.

All collected plant specimens wereidentified byadopting standard taxonomic procedures. Preliminary identification

wascarried out through field observations based on morphological characteristics such as leaf shape, inflorescence structure, stem habitand other diagnostic features. For confirmation, plant specieswere compared with authenticated specimenshoused in the herbarium section of department of Bio-Sciences, Himachal Pradesh University, Shimla.Further verification was performed using regional and national floras including 'Flora of British India', 'Flora of Himachal Pradesh' and other relevant monographs. The scientific names of collected plant species were cross-checked with updated nomenclature available in the online resources like The Plant List, POWO (Plants of the World Online), etc. to ensure current taxonomic validity.All confirmed specimens were finally assigned voucher numbers and deposited in the herbarium of Bio-Sciences department, H.P.U., Shimla for future reference.

Quantitative Analysis

Use Value

The Use Value (UV) has been calculated using the methodology established by Phillips and Gentry [12-13] to assess the relative significance of each plant species according to the frequency of uses reported by informants.

$$UV = \sum Ui / N$$

Where Ui signifies the quantity of use-reports referenced by each informant for a certain species, and N signifies the aggregate number of informants questioned. A high UV rating signifies that a plant species is well-recognized and commonly utilized in the studied region, indicating its cultural relevance and perhaps therapeutic usefulness [14,11].

Fidelity Level (FL)

The Fidelity Level (FL) value is calculated using the method defined by Friedman et al. [4] to show that how specifically a plant is used for a particular ailment among the people who know that plant.

$$FL = (N_p/N \times 100)$$

where Np represents the number of informants referring the plant for a specific ailment and N is the overall number of informants mentioning the species for any ailment. A high FL score signifies a frequent utilization of the plant species for treating a certain category of ailment by the informants in the study area.

The Relative Frequency of Citation (RFC)

The Relative Frequency of Citation (RFC) was calculated following the method described by Tardío and Pardo-de-Santayana [17] to assess the local importance and popularity of each plant species among the informants.

$$RFC = FC/N$$

where FC represents the number of informants who mentioned a particular plant species, and N is the total number of informants participating in the study. The RFC value ranges from 0 to 1, with higher values indicating that a species is more widely recognized and commonly used by the local population. This index provides insight into the cultural prominence and relative significance of medicinal plants within the community.

Results and Discussion

Demographic Profile of Informants

The information regarding medicinal uses of plants was collected from 100 informants including traditional healers, elders as well as knowledgeable people across different villages in Sarkaghat tehsil of district Mandi (Himachal Pradesh). The informants were aged between 35 to 70 years, with the largest proportion (34%) in the 51–60 years age group, followed by 28% in the 61–70 years. Individuals aged 41–50 years constituted 22% and those aged 35–40 years were 16% (Table 1).

Table 1: Demographic profile of informants (Age and Education)

Age Group (Years)	Number of Informants	Percentage (%)
35–40	18	18%
41–50	26	26%
51–60	28	28%
61–70	28	28%
Educational Qualification	**Number of Informants**	**Percentage (%)**
Illiterate	22	22%
Primary	28	28%
Middle	18	18%
Secondary	14	14%
Higher Secondary	10	10%
Graduate and Above	8	8%

It has been found that a significant percentage of respondents were either illiterate or possessed just primary-level education demonstrating that traditional knowledge system persists independently of formal schooling. The existence of informants with secondary, upper secondary and graduate-level education indicates a progressive incorporation of ethnomedicinal knowledge across several educational sectors. These findings highlight an associated pattern; the dominance of ethnomedicinal knowledge among older, less formally educated persons and a gradual development of interest among more educated people. This highlights the immediate need for documentation and community-based transmission of ethnomedicinal knowledge to ensure its preservation for future generations.

Diversity of Species

In the present study, 27 plant species belonging to 21 families have been recorded to be traditionally utilized for the treatment of gastrointestinal disorders (Table 2). The family Apiaceae is most predominant comprising three species (*Centella asiatica*, *Foeniculum vulgare* and *Trachyspermum ammi*). Rutaceae, Menispermaceae, Lamiaceae and Combretaceae each contributed two species, whereas all other families are represented by a single species (Fig.2). These plants are integral to local healthcare practices, effectively treating conditions such as diarrhea, dysentery, constipation, bloating, flatulence and stomach pain.

Table 2: Ethnomedicinal plants traditionally used for the treatment of gastrointestinal disorders in Sarkaghattehsil of district Mandi (Himachal Pradesh)

Scientific name	Family	Local name	Habit	Part/s used	Folk Uses
Aegle marmelos (L.) Corrêa	Rutaceae	Bil/Bil patri	Tree	Fruit, Leaves	Dried pulp has been crushed and mixed with water or honey to make a paste taken daily orally 1–2 times to relieve from dysentery and diarrhoea till relief. Leaf juice mixed with black salt and ginger is used to relieve stomach pain and nausea.
Aloe vera (L.)Burm.f.	Asphodelaceae	Dwarya	Herb	Leaf pulp	Fresh leaf gel mixed with lemon, ginger and mint leaves is taken orally which regulates bowel movements, relieves bloating as well as nausea and improves digestion.
*Asparagus racemosus*Willd.	Asparagaceae	Shatavari, Sansarpaya	Shrub	Leaves, Roots	Decoction of leaves and roots is prescribed to treat stomach ulcer and diarrhea.
Berberis lycium Royle	Berberidaceae	Kashmalya	Shrub	Bark, Root	Decoction of bark is used for curing diarrhoea. Roots are boiled in water and taken orally to relieve flatulence and blotting.
Bergera koenigii L.	Rutaceae	Kadhi patta	Shrub	Leaves	Leaves are crushed, mixed with curd and black pepper to prepare decoction locally called as 'kadu' which is ingested with rice to deal with chronic dysentery and intestinal infections. Leaf juice with ginger and honey is taken in small doses twice daily to mitigate nausea and vomiting.
*Cannabis sativa*L.	Cannabaceae	Bhang	Herb	Leaves, Seeds	Decoction of seeds is used to treat constipation, flatulence and mild diarrhoea in domestic animals. Leaf juice with ginger or lemon is given to cure nausea and digestion.
Cassia fistula L.	Fabaceae	Alhi	Tree	Fruit	Fruit pulp is used to cure indigestion and stomach pain. Fruits are also given to cattle for better digestion.
Centella asiatica (L.) Urb.	Apiaceae	Brahmi	Herb	Leaves	Fresh leaf juice mixed with honey and warmwater is effective for the treatment of constipation and gastritis. Decoction of leaves is taken after meal to alleviate bloating and nausea.
Cissampelos pareira L.	Menispermaceae	Patindu	Climber	Roots	Leaves mixed with Harad (*Terminalia chebula*), Bhera (*Terminalia bellirica*) and Amla (*Phyllanthus emblica*) are given to livestock for the treatment of dysentery, stomach infection and indigestion-related ailments.
Curcuma longa L.	Zingiberaceae	Haldi	Herb	Rhizome	Decoction is made by boiling rhizome with 'ajwain' (*Trachyspermum ammi*) seeds in water and consumed in the morning on an empty stomach to alleviate gastrointestinal pain and to improve digestion.
Ficus palmata Forssk.	Moraceae	Fagura, Khasara	Tree	Fruit, Leaves	Ripe fruits are edible and are considered good for constipation. Decoction of leaves mixed with jaggery is given to cure diarrhoea and constipation.
Foeniculum vulgare Mill.	Apiaceae	Sonf	Herb	Seeds	Seeds are chewed raw or taken as a decoction after meal to stimulate appetite and to improve digestion. Traditionally,'khichdi' is prepared by mixing fennel seeds, rice and 'moong dal' which isconsumed by diseased person to cure dysentery and stomach infection.
*Justicia adhatoda*L.	Acanthaceae	Kali basuti	Shrub	Leaves	Leaves alongwith cumin seeds and rock salt are mixed in wheat dough and given to livestock for curing stomach pain and acid reflux.
Mentha longifolia (L.) Huds.	Lamiaceae	Pudina	Herb	Leaves	Fresh juice is made by grinding leaves and onion together which is then consumed to alleviate bloating and vomiting. Leavesare used to prepare 'chutney'which helps in preventing acidity, enhancing appetite and relieving flatulence.
*Myrica esculenta*Buch. - Ham. ex D. Don	Myricaceae	Kafal	Tree	Fruit	Ripe fruits are eaten fresh to relieve constipation and irregular bowel movements. Decoction of leaves is taken orally 1–2 times daily to lessen diarrhoea and mild dysentery.
Ocimum tenuiflorum L.	Lamiaceae	Tulsi	Herb	Leaves	Powdered leaves mixed with ginger (*Zingiber officinale*), black pepper (*Piper nigrum*), ajwain(*Trachyspermum ammi*) and jeera (*Cuminum*

					cyminum)are taken orally to enhance digestion and relieve stomach ulcer.
Phyllanthus emblica L.	Phyllanthaceae	Amla	Tree	Fruit, Flower buds	Dried powdered flower buds are given to treat piles and dysentery. Fruit is one of the constituents of 'triphala' which is taken daily to improve digestion.
Plantago ovata Forssk.	Plantaginaceae	Isabgol	Herb	Seeds	Locally, a mixture ('ghol') is prepared by combining husk with curd and roasted cumin powder which is consumed for the treatment of diarrhoea or indigestion
Pyrus pashia Buch. -Ham. ex D. Don	Rosaceae	Kainth	Tree	Fruit	Ripened fruits are eaten once or twice in a day to cure diarrhoea, dysentery, constipation, loss of appetite and also for improving digestion.
Rhododendron arboreum Sm.	Ericaceae	Burah	Tree	Flowers	Decoction of fresh or dried flowers is taken early in the morning to improve digestion and to cure acidity. Jam prepared from flowers is consumed to improve bowel movements.
Rumex hastatus D.Don	Polygonaceae	Khatimithi/Aami	Herb	Leaves	Decoction of fresh leaves or vegetable ('saag') prepared from leaves help to get relief from constipation, indigestion and stomach ache.
Terminalia bellirica (Gaertn.) Roxb.	Combretaceae	Bhera	Tree	Fruit, Bark	Decoction of fruits and bark mixed with honey is prescribed to treat stomach pain and infections. Fruit powder is also a major constituent of 'triphala' which help to enhance digestion.
Terminalia chebula Retz.	Combretaceae	Harad	Tree	Fruit	Dried fruit is roasted, powdered, combined with a pinch of rock salt and taken before bedtime with lukewarm water to relieve constipation and to improve digestion. Traditional 'triphala' powder is made with powdered fruits of 'harad' (*Terminalia chebula),* 'amla' (*Phyllanthus emblica*) and 'bhera' (*Terminalia bellarica*) which is used as a gentle laxative and digestive cleanser.
Tinospora cordifolia (Willd.) Miers	Menispermaceae	Gloe, Guljaya	Woody climber	Stem	Stem is soaked in water overnight and the infusion is consumed in the morning on an empty stomach to reduce gastrointestinal distress and constipation. Decoction of stem along with jeera, ajwain and 2–3 black pepper seeds is taken twice daily after meal to relieve stomach infection.
Trachyspermum ammi (L.) Sprague	Apiaceae	Methi	Herb	Seeds	Roasted or powdered seeds are taken with lukewarm water or buttermilk to get relief from dysentery. Seeds are soaked overnight in water and taken orally early in the morning on an empty stomach to reduce flatulence.

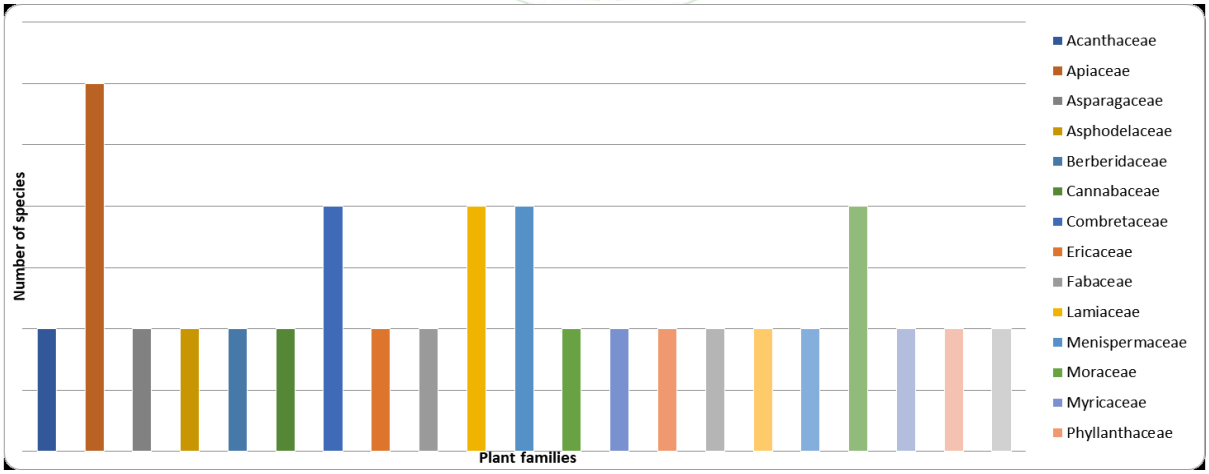

Figure2: Predominant families of the plants used for gastrointestinal disorders

Parts Used

The study reveals that different plant parts have been used for the treatment of gastrointestinal disorders indicating the community's deep ethnobotanical understanding (Fig. 3). Among the documented species, leaves are the most frequently used plant part, reflecting their continuous availability throughout the year. Fruits are the second most utilized part, widely employed for managing constipation, improving appetite, and restoring digestive balance, as seen in species like *Aegle marmelos*, *Phyllanthus emblica*, *Ficus palmata* and *Pyrus pashia*. Seeds from plants such as *Foeniculum vulgare*, *Plantago ovata* and *Trachyspermum ammi*are important for

reducing bloating, acidity and abdominal discomfort due to their carminative and bulk-forming properties.Roots and rhizomes, including those of *Asparagus racemosus* and *Curcuma longa*, are frequently used in decoctions for treating diarrhea, ulcers and gastrointestinal infections, highlighting their potent therapeutic potential. Bark, although less commonly used, played a key role in treating stomach infections and diarrhea, especially in species such as *Berberis lycium* and *Terminalia bellirica*. Flowers and flower buds contributes to remedies for acidity, bowel regulation and dysentery, as found in *Rhododendron arboreum* and *Phyllanthus emblica*. Stem represented by *Tinospora cordifolia*, is traditionally consumed for relieving constipation and detoxifying the digestive system.Overall, the use of diverse plant parts highlights the richness of indigenous knowledge, adaptability of local practices and the community's detailed understanding of plant-based treatments for maintaining and restoring gastrointestinal health.

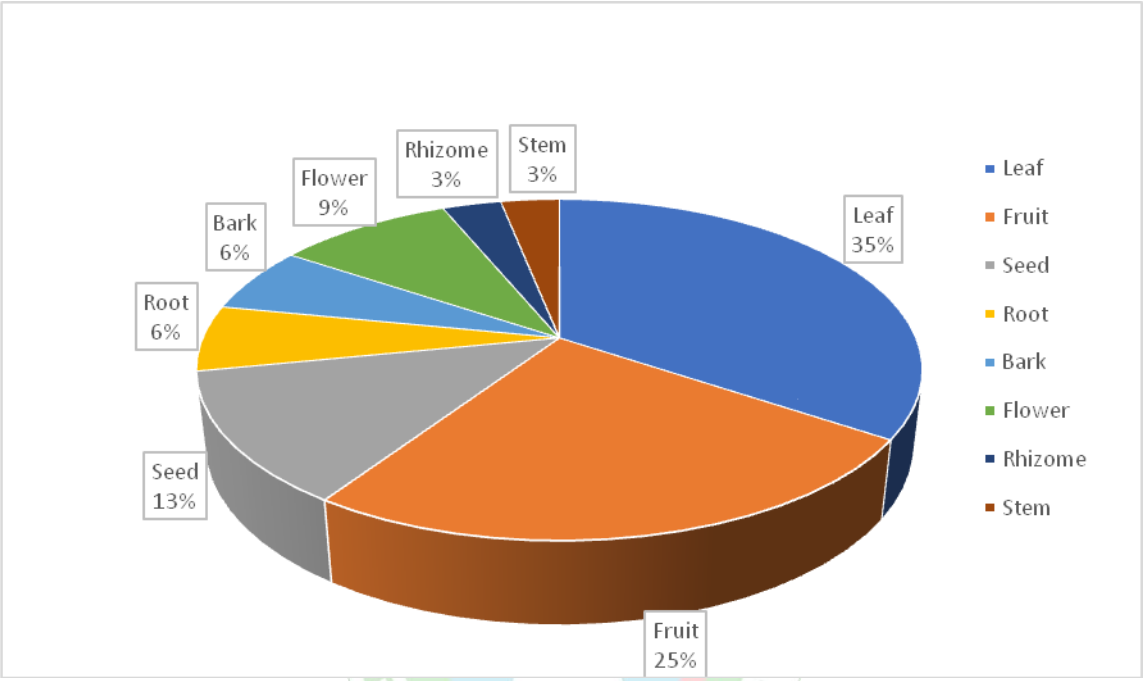

Figure 3: Different plant parts used for curing gastrointestinal disorders

Mode of Administration

The study highlights that the decoction is the most preferred mode of administration accounting for 33.3%followed by juice (22.2%) and powder (14.8%). Decoctions are commonly utilized for their efficacy in extracting medicinal compounds and their straightforward preparation process. Juice-based remedies are generally ingested fresh to alleviate nausea, bloating and acidity whereas powders or 'churnas' such as 'triphala' are utilized for the long-term regulation of bowel movements. A limited percentage of preparations included paste (7.4%), infusion (3.7%)or direct consumption of raw fruits and leaves (11.1%). The food-based medications (7.4%) include'chutneys' and herbal dishes which illustrates the incorporation of medicinal plants into everyday diets for preventive health purposes (Fig.4).

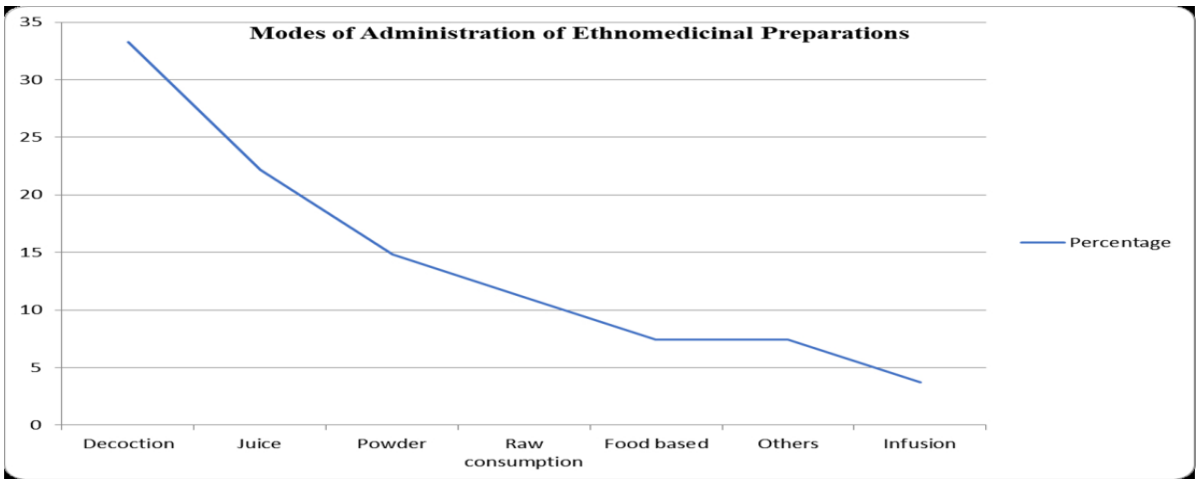

Figure 4: Method of use for different plant species

Quantitative Analysis

Quantitative analysis of the gathered information indicates that the Use Value Index (UV) ranges between 1.0 and 3.0, showing the significance and frequency of utilization of each species by local people. *Aloe vera* has the highest UV (3.0), followed by *Curcuma longa*, *Ocimum tenuiflorum* and *Phyllanthus emblica*(2.0 each) indicating their widespread use in treating gastrointestinal disorders such as indigestion, gastritis and constipation (Fig.5).

The Relative Frequency of Citation (RFC) values vary between 0.38 for *Justicia adhatoda* to 0.90 for *Curcuma longa*. High RFC results for *Curcuma longa* (0.90), *Phyllanthus emblica*(0.88), *Ocimum tenuiflorum*(0.89)and *Aegle marmelos* (0.85) indicate strong community acceptance with regard to their medicinal efficacy (Table 3).

Table 3: Quantitative indices (Use Value, Relative Frequency of Citation and Fidelity Level) of ethnomedicinal plants used for gastrointestinal disorders

Scientific Name	Family	Use Value (UV)	Relative Frequency of Citation (RFC)	Fidelity Level (FL)
Aegle marmelos	Rutaceae	2.0	0.85	94.1
Aloe vera	Asphodelaceae	3.0	0.82	91.5
Asparagus racemosus	Asparagaceae	2.0	0.60	83.3
Berberis lycium	Berberidacaeae	2.0	0.64	87.5
Bergera koenigii	Rutaceae	2.0	0.73	91.8
Cannabis sativa	Cannabaceae	2.0	0.58	77.6
Cassia fistula	Fabaceae	2.0	0.59	91.5
Centella asiatica	Apiaceae	2.0	0.62	93.5
Cissampelos pareira	Menispermaceae	1.0	0.57	91.2
Curcuma longa	Zingiberaceae	2.0	0.90	97.7
Ficus palmata	Moraceae	2.0	0.65	87.7
Foeniculum vulgare	Apiaceae	2.0	0.78	93.6
Justicia adhatoda	Acanthaceae	1.0	0.38	68.4
Mentha longifolia	Lamiaceae	2.0	0.84	94.0
Myrica esculenta	Myricaceae	2.0	0.58	87.9
Ocimum tenuiflorum	Lamiaceae	2.0	0.89	96.6
Phyllanthus emblica	Phyllanthaceae	2.0	0.88	95.4
Plantago ovata	Plantaginaceae	2.0	0.75	94.7
Pyrus pashia	Rosaceae	2.0	0.67	89.6
Rhododendron arboreum	Ericaceae	2.0	0.61	90.1
Rumex hastatus	Polygonaceae	2.0	0.63	93.6
Terminalia bellirica	Combretaceae	2.0	0.78	93.6
Terminalia chebula	Combretaceae	2.0	0.81	96.3
Tinospora cordifolia	Menispermaceae	2.0	0.77	88.3
Trachyspermum ammi	Apiaceae	2.0	0.79	94.9
Viola serpens	Violaceae	1.0	0.59	86.4
Withania somnifera	Solanaceae	2.0	0.66	92.4

The Fidelity Level (FL)signifying the percentage of informants reporting a certain application for a plant, ranges from 68.4% to 97.7%. The maximum value was recorded for *Curcuma longa* (97.7%), *Ocimum tenuiflorum* (96.6%), *Terminalia chebula* (96.3%) and *Phyllanthus emblica*(95.4%). The high FL values indicate high informant acceptance and plant specificity for digestive remedies (Fig. 5).

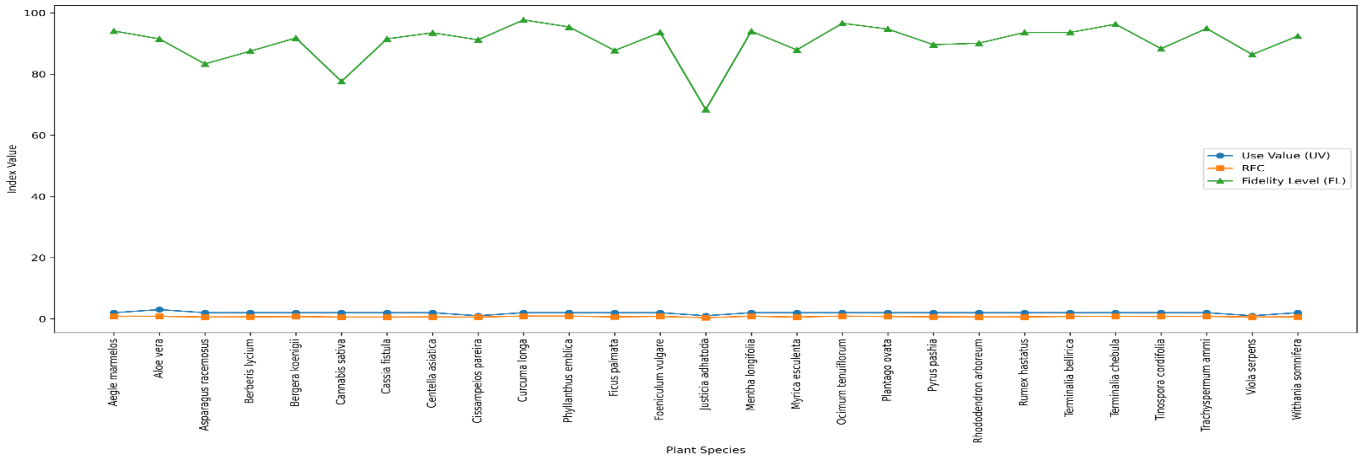

Figure 5: Quantitative ethnobotanical indices showing predominance of plants for gastrointestinal disorders

Species like *Justicia adhatoda* and *Cannabis sativa* has comparatively lower RFC and FL values indicating their restricted or specialized use for gastrointestinal disorders.These results reveal that plants such as *Curcuma longa*, *Ocimum tenuiflorum*, *Phyllanthus emblica* and *Aegle marmelos* hold significant cultural and therapeutic importance within the traditional healthcare system of Sarkaghat. The higher indices support their reliability and potential for further pharmacological validation and phytochemical investigation.

The importance of *Aegle marmelos*, *Asparagus racemosus* and *Terminalia chebula* in treating gastrointestinal disorders in Sarkaghat corresponds with findings from ethnobotanical research conducted in the western Himalayas and other parts of India. For instance, Dey and De (2012) documented uses of these species in West Bengal, highlighting their traditional role in managing digestive disorders. Likewise, Neamsuvan et al. (2016) reported the ethnomedicinal importance of *Zingiber officinale* and *Phyllanthus emblica* in Thailand for gastrointestinal health. Dadhwal et al.,2025 reinforced the widespread application of *Berberis lycium* for digestive disorders across diverse Indian ethnomedicinal systems. Such cross-regional consistency underlines the pharmacological potential of these plants and suggests an evolutionary selection of bioactive species for gastrointestinal health.

CONCLUSION

The current research records important ethnomedicinal information pertaining to the plants traditionally used for treating gastrointestinal disorders in Sarkaghat tehsil ofdistrict Mandi, Himachal Pradesh. The data shows that local people are dependent on many wild and cultivated plant species for managing common digestive disordersincluding diarrhoea, dysentery, stomach discomfort, constipationand acidity. This traditional knowledge reflects an in-depth understanding of local flora and its medicinal potential, gathered and transmitted over generations.

The majority of reported speciesincluding *Curcuma longa*, *Emblica officinalis*, *Ocimumtenuiflorum* and *Terminalia chebula* hold cultural significance and medicinal value indicating an abundance of acceptance regarding their medicinal value. The continued dependence on herbal treatments emphasizes the necessity of conserving plant diversity and traditional methods of healing.This research enriches the ethnobotanical database of the Himalayan region and provides the scientific basis for future phytochemical and pharmacological studies to verify the efficacy of these traditional remedies. Strengthening documentation and promoting for the sustainable utilization of medicinal plants may strengthen local healthcare systems while supporting biodiversity conservation and cultural preservation in the Himalayan region.

Ethical approval and consent to participate: All participants were informed about the purpose of this research and verbal consent was obtained from the participants before conducting the research.

Consent for publication: Not applicable

Availability of data and materials: The data collected and analysed is within this article and its supplementary files.

Competing interests: The authors declare that they have no conflict of interest.

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Author Contributions: Suresh Kumar, who is also the corresponding author, conceptualized and designed the work; Arti Devi executed it and wrote the research article.

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REFERENCES

1. Choudhury PR, Choudhury MD, Ningthoujam SS, Mitra A, Nath D, Talukdar AD. Plant utilization against digestive system disorder in southern Assam, India. *J Ethnopharmacol*. 2015; 175:192–197.
2. Dadhwal R, Sharma S, Banerjee R. Exploration of ethnomedicinal plants of western Himalayas used in the management of gastrointestinal disorders. *Phytochem Rev*. 2025;1–53.

3. Dey A, De JN. Ethnobotanical survey of Purulia district, West Bengal, India for medicinal plants used against gastrointestinal disorders. *J Ethnopharmacol*. 2012;143(1):68–80.
4. Friedman J, Yaniv Z, Dafni A, Palewitch D. A preliminary classification of the healing potential of medicinal plants, based on a rational analysis of an ethnopharmacological field survey among Bedouins in the Negev Desert, Israel. *J Ethnopharmacol*. 1986;16(2–3):275–287.
5. Goswami S, Karmakar S, Brahmachari K, Sarkar P, Sharma N, Ghosh M, Goswami D. Gastroprotective potential of Indian medicinal plants—A comprehensive review. *Mathews J Gastroenterol Hepatol*. 2024;9(1):1–37.
6. Joshi RK, Satyal P, Setzer WN. Himalayan aromatic medicinal plants: A review of their ethnopharmacology, volatile phytochemistry, and biological activities. *Medicines (Basel)*. 2016;3(1):6.
7. Kumar S, Priya B, Thakur K. Some traditional herbal remedies in Sunder Nagar tehsil of district Mandi (H.P.). *CPUH Res J*. 2018;3(2):155–159.
8. Kumar M, Radha Devi H, Prakash S, Rathore S, Thakur M, Mekhemar M. Ethnomedicinal plants used in the health care system: survey of the Mid Hills of Solan district, Himachal Pradesh, India. *Plants*. 2021;10(9):1842.
9. Kumar S, Divya, Thakur S, Verma M, Hajam YA, Kumar R, Dull SB, Rose PK, Muzaffar N, Gautam D. Nutraceutical and pharmacological benefits of some leguminous plants of North-Western Himalaya. *Legume Sci*. 2024;6(3):e236.
10. Kumar S, Priya B, Thakur K. Some traditional herbal remedies in Sunder Nagar tehsil of district Mandi (H.P.). *CPUH Res J*. 2018;3(2):155–159.
11. Musa MS, Abdelrasool FE, Elsheikh EA, Ahmed LAMN, Mahmoud ALE, Yagi SM. Ethnobotanical study of medicinal plants in the Blue Nile State, South-Eastern Sudan. *J Med Plants Res*. 2011;5(17):4287–4297.
12. Neamsuvan O, Phumchareon T, Bunphan W, Kaosaeng W. Plant materials for gastrointestinal diseases used in Chawang district, Nakhon Si Thammarat province, Thailand. *J Ethnopharmacol*. 2016; 194:179–187.
13. Phillips O, Gentry AH. The useful plants of Tambopata, Peru: I. Statistical hypotheses tests with a new quantitative technique. *Econ Bot*. 1993;47(1):15–32.
14. Phillips O, Gentry AH. The useful plants of Tambopata, Peru: II. Additional hypothesis testing in quantitative ethnobotany. *Econ Bot*. 1993;47(1):33–43.
15. Phillips O, Gentry AH, Reynel C, Wilkin P, Gálvez-Durand BC. Quantitative ethnobotany and Amazonian conservation. *Conserv Biol*. 1994;8(1):225–248.
16. Rokaya MB, Uprety Y, Poudel RC, Timsina B, Münzbergová Z, Asselin H, Sigdel SR. Traditional uses of medicinal plants in gastrointestinal disorders in Nepal. *J Ethnopharmacol*. 2014; 158:221–229.
17. Sood SK, Kumar S, Bassi SK, Rana JC. Ethnobotany of the heritage region of Shiwalik Himalaya. New Delhi: Anamika Publishers & Distributors; 2012.
18. Tardío J, Pardo-de-Santayana M. Cultural importance indices: A comparative analysis based on the useful wild plants of Southern Cantabria (Northern Spain). *Econ Bot*. 2008;62(1):24–39