RESEARCH ARTICLE

Point pattern analysis and consensus of agreements on traditional knowledge of medicinal plants used by traditional healers of Tripura

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Abstract

Every plant species created by nature has more or less medicinal properties. Medicinal plants have been used in Indian culture since the dawn of human civilization. Plants are found to be directly and indirectly involving in treatment of human ailments and improve socioeconomic status. Traditional healers of Northeast India have gained a special reputation in treating various terminal diseases. This research was carried out in Tripura state to preserve the traditional medicinal knowledge of the plants. Traditional healers were chosen through field survey, and ethnomedicinal data were collected using semi-structured, and open-ended interviews. Information on traditional practitioners age, place of practice, experience, learning methods, diseases treated, diagnostic approaches, as well as the storage and usage of plants, were systematically gathered during the field interviews. A total of one hundred respondents have provided data, the majority of whom were from the Scheduled Tribe category and had a middle socioeconomic background. The results of the Pearson's Correlation test indicate a significant association between caste, age, and gender with ethnobotanical knowledge at 0.05 level. Traditional healers utilize 248 plant species belonging to 56 genera and 37 families which treat 75 types of ailments. Analysis of ethnobotanical indices such as UR, UV, FC, RFC, and FL (%) values indicate that *Tinospora cordifolia, Piper nigrum*, *Zingiber officinale* and *Antidesma roxburghii* were found to be most potential plant species against certain specific ailments according to practitioner knowledge. The fact that hepatobiliary disease has the highest ICF value (0.37) suggests that these conditions are prevalent in the research area and that the species has traditionally been utilized to treat them. Phytoconstituents and pharmacological activities are unquestionably required to validate the ethnic uses of potential plants. Everyone should participate in the preservation of floral diversity since plants are essential for the production of new drugs for preventing a variety of complicated disorders.

Keywords: Medicinal Plants; Traditional Healers; Tripura; Phytoconstituents; Preservation; Floral diversity

1. Introduction

Plant species that are used to treat a variety of ailments are the most significant and extensive source of traditional medicine (Ahmed et al., 2013). Approximately 50,000 species out of the 4, 22,000 flowering plants in the world are utilized medicinally (Govaerts, 2001; Schippmann et al., 2002). Approximately 2500 plant species in India are fragrant and medicinal, and 70% of the nation's population relies on traditional medicine (Purohit and Vyas, 2004; Shrestha et al., 2000; Choudhary, 1998; Gadgil and Rao, 1998). Originally, ethnobotany concentrates on the quantitative techniques like inventories of plants, their use and economic potentiality (American Diabetes Associations, 2011). The utilization of plants is quite well-known to the people living in rural areas. Rural residents prefer medicinal plants because they are more readily available and a more affordable form of treatment than expensive modern drugs (Baker and Baker, 1975). The fields of ethnobotany and ethnomedicine provide amazing insights and understandings into the applications of several plants, which are introduced and developed globally. There is convincing evidence that consuming these plants can help treat many clinical occurrences by lowering their risk (Baker et al., 1975). There is an exceptional diversity of life all over the northeastern part of India. Its unique geographic location and forests that span from tropical to alpine regions account for its exceptional floristic diversity, and it is recognized as one of the twelve "genetic epicentres" that have an impact on the evolution of plants worldwide. Additionally, the region is home to a large number of indigenous and endangered flora (Hazarika et al., 2012). Tripura is the smallest state in North East India, which is rich in medicinal and aromatic plants due to its tropical geography, high rainfall and fertile soil (Chakraborty et al., 2012). 19 tribal communities, including Manipuri and Bengalis have been living in Tripura for a long time. People of all ethnic groups living in rural areas of the state have a long-standing intrinsic relationship with environmental resources, especially herbal medicines that enrich their socio-economic and cultural lives as well as forests also help to provide them with food, fodder, fuel, timber, shelter and medicinal plants (Hazarika et al., 2012; Majumder and Datta, 2007; Imlikumba, 2021; Majumder et al., 2014). However, there are many research papers on quantitative ethnobotanical studies in Tripura (Patari and Uddin, 2016; Reang et al., 2022; Reang et al., 2023), but they are limited to specific areas and specific community. The present research examined the traditional usage of medicinal plants by gathering information from respondents of various communities in each district of the state of Tripura.

2. Materials and methods

2.1. Study area

The mountainous small state of Tripura is located in the southern part of North East India, with an area of 10,491 km² and belonging to biogeographic zone 9B. Geographically, state falls within geographical coordinates of 22°56′ to 24°32′ N and 90°09′ to 92°20′ E, and surveys were conducted in each district. A quarter of the state is connected to Assam and Mizoram, but bordering Bangladesh on three sides (Figure 1). The state is 183.5 km in length from north to south and 112.7 km at its widest point from east to west. The highest peak is 975.36 meters above sea level. Every year, there is typically a significant level of humidity. In the summer, relative humidity ranges from 50 to 74 percent, but during the monsoon, it exceeds 85 percent. The average temperature is 17.8 °C (64.1 °F) in January, the coldest month, and 28.9 °C (84.0 °F) in August, the hottest month. Rainfall varies from 1922 mm to 2855 mm on average every year, increasing from the southwest to the northeast. (https://tripuratourism.gov.in/geography; https://www.climatestotravel.com/climate/india/agartala).

2.2. Ethnomedicinal survey and selection of participants

The research work was carried out between July 2022 and October 2023 under the initiative of the Regional Ayurvedic Research Centre, Agartala and with the full support of the Tripura Forest Department. Specifically, this work was done under a project of the National Medicinal Plants Board. Data were collected from 100 traditional healers who were specialized in the cure of various diseases and enthusiastic about disclosing their practical healing knowledge. In particular, van Mitra, forest rangers, and locals in each location have been helpful in locating them and in motivating researchers to take them to inaccessible and distant areas. Interview were conducted with healers from almost every community. The healers were first made aware of the research project, and when they agreed to participate, their details were entered into a data sheet and a consent form bearing their signature was signed. The GPS location of the healers was recorded with a GPS Etrex-touch-25 (Model No-171-00735-OL). The survey was composed of open-ended questions recorded in English. During the interview, the healer's age, place of practice, practice learned, length of time he has been treating various diseases and methods of diagnosis, storage and use of plants etc. all the details were collected. Project staff had discussed the completed questionnaires with healers in the local language. After the interview, plant samples which provided by the healers were collected for proper identification and preservation (Figure 2). For proper identification of Plant specimens, *The Tripura State Flora* and the *Flora of Assam* were consulted (Deb, 1981, 1983; Kanjilal et al., 1934, 1940). The voucher specimen was submitted to the Regional Ayurvedic Research Centre of Agartala (Figure 3-A, B, C, D, E, F) for future references.

2.3. Data analysis

For data analysis, Microsoft Office Excel 2007 was utilized.

2.4. Quantitative Indices

2.4.1. Use Report (UR)

UR determines how many uses of a species have been reported overall by all informants within each use category for that species. Every UR represents the total number of uses for each use category of a species that informants have mentioned (Prance et al., 1987; Whitney, 2021).

2.4.2. Use value (UV)

It establishes the relative significance of various plant species applications.
UV= ∑ U/n
Where, UV= use value of individual species, U= the number of applications for that species were recorded and n =the total number of informersinterviewed (Borah et al., 2020).

2.4.3. Frequency of Citation (FC)

The calculation process of frequency of citation= the total number of respondents who convey the use of each species (Prance et al., 1987; Whitney, 2021).

2.4.4. Relative Frequency of Citation (RFC)

The frequency with which informants declared and used each species during the survey is known as the RFC (Tardio and Pardo-de-Santayana, 2008; Whitney, 2021).

RFC= FC/n
Where, FC= frequency of citation and n =the total number of informers interviewed.

2.4.5. Fidelity Level (FL)

Using the FL index, the percentage of informants who claimed to use a certain plant for the same major reason was calculated.
FL= Ip/Iu X100

Where, Ip = number of respondents who mention using a species to treat the same major disease. Iu=the total quantity of informants who employed the plant for a different purpose (Friedman et al., 1986; Alexiades, 1996; Andrade-Cetto and Heinrich, 2011).

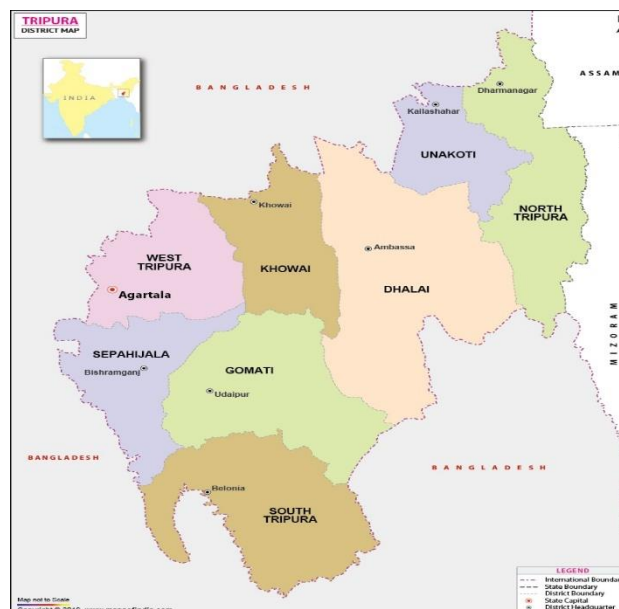### 2.4.6. Informant consensus factor (ICF)

Figure 1. Study site surveyed in Tripura; Source: file:///G:/Final-Annual%20Report/tripura-district.htm and www.mapsofindia.com

The FIC, which is the various illness categories, was computed to assess the homogeneity or consistency of the informant's knowledge regarding a certain treatment for a given sickness (Trotter and Logan, 1986; Uddin and Hassan, 2014).

Fic =Nur-Nt/Nur-1
Where, Nur= the quantity of use cases for every category. Nt= Species count for each category.

3. Results

3.1. Demographic features of informants

For the purpose of this research work, 100 informants who have extensive knowledge about ethnic medicinal use of any plant species were interviewed; out of these informants, 88% were female, and 12% were male. Among the informants, 59% belonged to the Scheduled Tribe (ST), 37% belonged to the Forward caste (Fc) and 4 % belonged to Minority (M) community. We spoke with informants ranging in age from thirty to ninety, while older respondents were found to be more knowledgeable about ethnomedicinal plant utilization than younger ones. A Maximum number of practitioners had a primary level of education (29%), 27% had a Madhyamik level, 18% had class Middle level, 12% were Illiterate, 10 % were graduate, and 4 % had a higher secondary level of education. In addition to their customary healing methods, the majority of these informant practices jhum cultivation, while a smaller percentage of healers were found to be connected to government service sector, trade, and retail positions. It was also observed that the majority of the informants from the Unakoti districts shared a great deal of information. Table 1 provides a detailed breakdown of the demographic data of the informant. Pearson's Correlation test shows that gender, age and caste have a strong relationship with ethnobotanical knowledge, but there is no correlation between educational level and ethnobotanical knowledge (at 0.05 level) (Table 2).

3.2. Diversity of medicinal plants

The present study brings to the light the existence of the traditional practice of folk remedies for treating different ailments through medicinal plants by the traditional healers of Tripura. The present study identified and documented 248 plants used by folklorists and elucidated traditional treatment methods for 75 types of diseases (Table 3). These plant species belonged to 197 genera and 70 families and the most commonly used families were Fabaceae and Asteraceae (Figure 4). Among these, 206 (83.06% of the total) are dicotyledonous angiosperms, 37 (14.91%) are monocotyledonous angiosperms, and 5 (2.01%) are pteridophytes. Habitually the recorded medicinal plants fall under 7 groups- Trees (90 species; 36.29%), Herbs (82 species, 33.06%), Shrubs (39 species; 15.72%), Climbers (22 species; 8.87%), Grasses (6 species; 2.41%), fern (5

Figure 2. Data collection from healers interviewed from study site

species; 2.01%) and creepers (4 species; 1.61%) (Figure 5). Out of 248 species of medicinal plants, 135 are wild, 35 are cultivated, and 81 are both cultivated and wild.

3.3. Mode of utilization of plant parts

In the study involving 248 plant species, various parts were utilized for medicinal purposes. Leaves were the most commonly used plant parts, with 131 species employing them medicinally, followed by root bark (45), stem bark (30), fruit (21), whole plant (17), rhizome (12), seed (7), flower (4), and flower bud, bulb, mesocarp, endosperm and strobilus of 2, 2, 2, 1, 1 respectively. According to this observation, traumatic disorder (21.24%), gastrointestinal disorders (17.09%), hepatobiliary Disease (14.69%), urogenital disorders (12.14%), skin disease (8.78%), respiratory disease (4.79%), maternal disease (3.35%), nephrological disorder (3.03%), endocrinological disease (2.71%), musculoskeletal disorder (2.55%), fever (2.55%), dental disease (1.75%), ophthalmological disease (1.11%),infectious disease (1.11%), vascular disorder (0.95%), parasite infections (0.63%), neurological disorder (0.47%), systemic disease (0.47%), ENT disease (0.31%) and lipid disorder (0.15%) conditions were the often treated ailments (Figure 6). The description of the specific ailments that this plant species cure was documented here; from the study, it was found that oral and topical administration of ethnomedicine was the most popular form of treatment technique.

The combinations and methods of administering the medicinal plants differ according to the conditions that need to be addressed.

3.4. Quantitative analyses of ethno-medicinal plants and disease category

By statistical analysis the scientific name, family name, UR, UV, FC, RFC report of each plant was described in Table 3.

Use Report (UR)
The use report value of documented medicinal plants ranges from 11 to 1. The highest UR value was found in *Piper niagrum* (11), followed by *Zingiber officinale* (10), however, use report 1 was observed in many plants because the particular plant is used to treat only one disease.

Use value (UV)
UV for the recorded medicinal plants ranged from 0.11 to 0.01. *Piper niagrum* had the highest UV (0.11), followed by *Zingiber officinale* (0.10). Many plant species also showed use values of 0.01 because their UR was 1.

Frequency of Citation (FC)
The FC value of the recorded medicinal plants wasobserved to be ranging between 16 to 1. The maximum CI value was obtained for
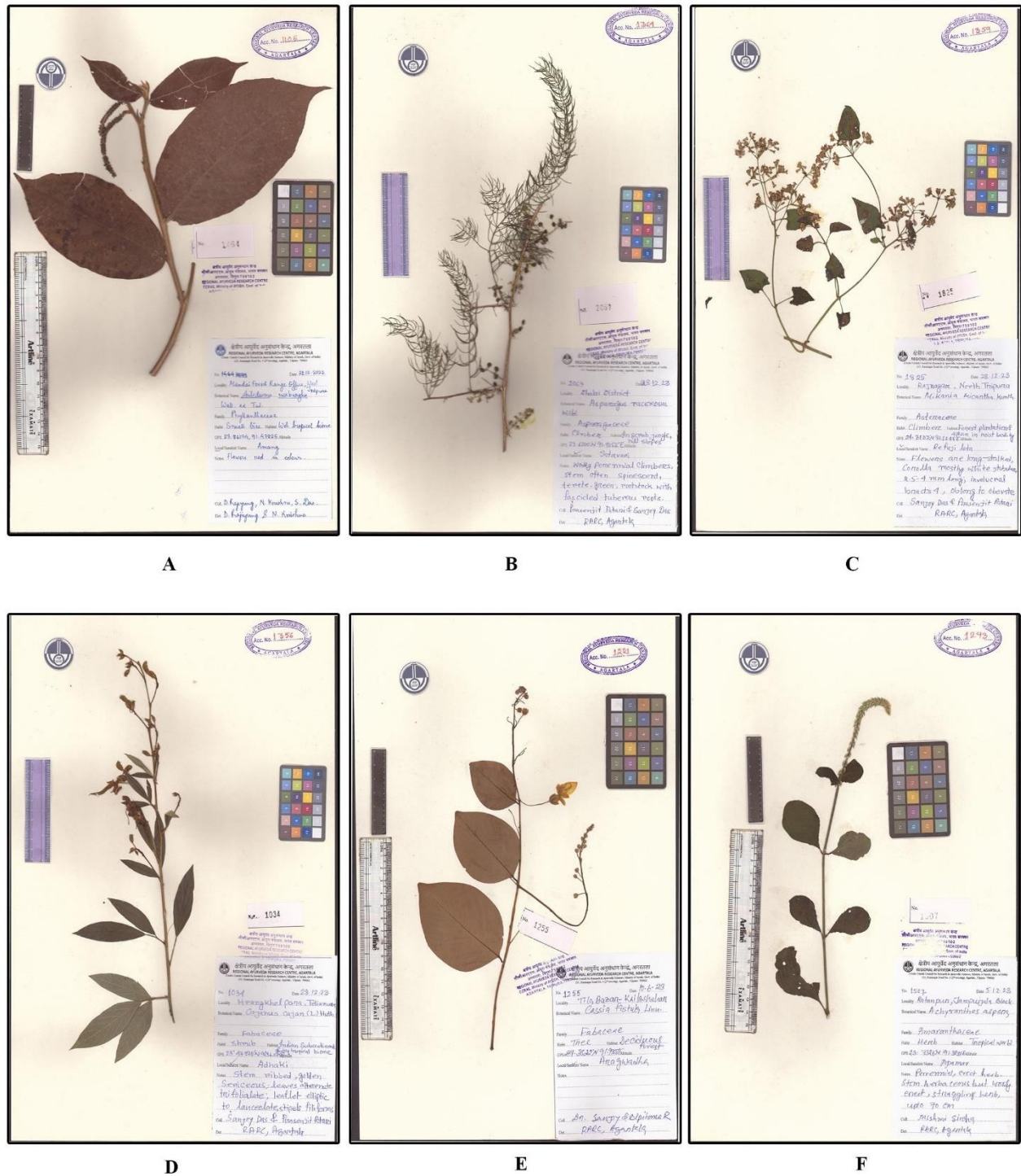
Figure 3. Herbarium of voucher Specimen – **A.** *Antidesma roxburghii* Wall. ex Tul., **B.** *Asparagus racemosus* Willd., **C.** *Mikania micantha* kunth., **D.** *Cajanus cajan* (L.) Millsp., **E.** *Cassia fistula* L., **F.** *Achyranthes aspera* L.

Tinospora cordifolia (16)*,* followed by *Piper nigrum* (14), *Zingiber officinale* (12), *Antidesma roxburghii* (12). However, the FC value was found to be 1 for many plants because only one informant was found for that particular plant, who informed that this particular plant was used to cure a particular disease.

Relative Frequency of Citation (RFC)
RFC for the recorded medicinal plants ranged from 0.16 to 0.01. *Tinospora cordifolia* had the highest RFC (0.16), followed by *Piper nigrum* (0.14), *Zingiber officinale* (0.12), *Antidesma roxburghii* (0.12). Many plant species also showed relative frequency of citation of 0.01 due to their FC was 1.

Fidelity Level (FL)
The FL% of each ethnomedicinal plant species and related specific ailmentare displayed in Table 3.12 healers claimed that, leaf of *Antidesma roxburghii* plant was used for bone fracture healing, FL

value of this plant was 100% according to this particular disease, 5 respondents reported that, stem and leaf of *Cissus quadrangularis* plant was used for bone fracture healing, FL value of this plant was 100%, In the same way, the leaves of *Euphorbia royleana* are useful in treating bronchitis, which informer's number was 4 (FL=100%). However, in case of many plants with 100% FL value to cure a specific disease, but their informant number was only 1.

Informant consensus factor (ICF)
The ICF value of each disease category is highlighted in Table 4. The reported ailments were grouped into 20 categories based on the information gatheredfrom the interviews. From data analysis it was noticed that ICF values varied from 0 to 0.37 with an average value of 0.11. The highest ICF (0.37) scored for the Hepatobiliary Disease and least ICF (0) scored for Parasite infections, Lipid Disorder, ENT Disease, Ophthalmological Disease, Infectious
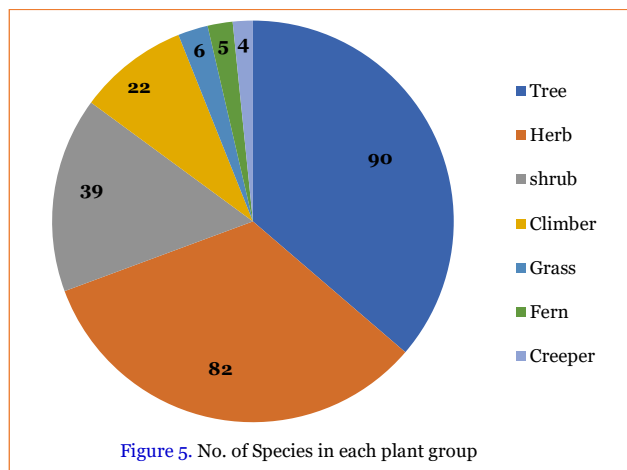
Figure 5. No. of Species in each plant group

Figure 4. Recorded families and their respective species

disease, Neurological Disorder, Musculoskeletal Disorder, Fever, Dental disease and Systemic disease.

4. Discussion

People of various communities around the world have mastered the use of various plants since the dawn of time to meet their basic needs, even when they travelled nomadically, sharing the medicinal knowledge of plants with all the people around them (Idu, 2009; Pandey and Tripathi, 2017). Indian Ayurvedic scriptures outline a distinct system of herbal medicine, which mainly deals with the treatment of human and animal ailments using herbal medicines. Although the popularity of herbal medicines took a huge hit after the introduction of allopathic medicines, but herbal medicines are now being used hugely by people due to their cost-effective, eco-friendly qualities and proper treatment (Raman et al., 2009). Basically, the people of various communities of Tripura have a rich repository of traditional knowledge about the use of medicinal plants. The process of making their medicine shows that they have kept the knowledge of their ancestors alive even in the present day (Das et al., 2021).

Demographic characteristics of traditional healers shows that the female healers are less in number than male healers. Earlier research studies have highlighted a gender disparity in engagement with ethnomedical practices, indicating a lower participation rate among women compared to men (Upadhya et al., 2012; Das et al., 2021). The study found that the rural Scheduled Tribes population of Tripura are more involved in this work than other monotheistic communities, as their daily livelihood and socio-economic development depend heavily on forest resources. Similar findings have been reported by Patari and Uddin (2016) and Das et al (2021). According to the age distribution, a larger percentage of older informants were engaged in this activity, which is consistent with studies conducted in Ethiopia, Meghalaya, Benin, Togo, and Tripura (Reang et al., 2022; Langshiang et al., 2020; Toafode et al., 2022; Giday et al., 2010; Kola et al., 2020). In addition to their healing practice, majority of the healers are involved in other livelihoods such as agriculture, rubber plantations, various trades and jhum cultivation. Age and ethnobotanical knowledge were found to be significantly correlated by statistical analysis, indicating that informants belonging to senior age group had a greater understanding of ethnomedicinal plant applications than younger age group informants (Reang et al., 2023).

Present study has revealed that the traditional healers of Tripura frequently use plants of Fabaceae and Asteraceae family for curing various ailments. People from different communities of the country and abroad use the plants of these 2 families to prepare traditional medicine because of their active medicinal properties (Patari and Uddin, 2016; Bekalo and Woodmatas, 2009; Biswas et al., 2010; Das et al., 2022; Mosaddegh et al., 2016; Khan et al., 2014). The current study finds that across different plant habits, tree species (36.29%) have been found more effective at resolving several ailments. This discovery is corroborated through the reports from Northern Bengal that emphasizes how common it is to use tree species in ethnomedicine (Raj et al., 2018). The data analysis shows leaves to be frequently harvested plant parts (Ugulu and Baslar, 2010; Debnath et al., 2014).

Our findings shows that *Tinospora cordifolia, Piper nigrum, Zingiber officinale* and *Antidesma roxburghii* have demonstrated the 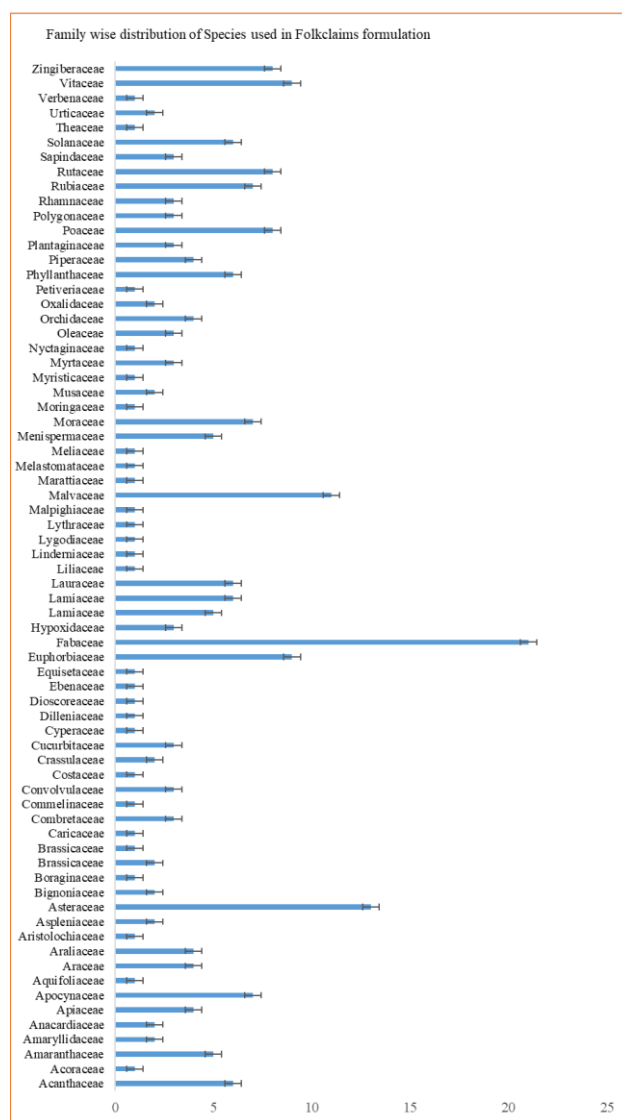highest UR, UV, FC, and RFC values. Several research papers have suggested that these plants have considerable ethnobotanical importance (Sandhya et al., 2023; Goyal, 2017; Reang et al., 2023), which indicates that these plants are important sources for ethnomedicine used for treatment of variety of illnesses. Elevated values of UR, UV, FC, and RFC suggested that these plant species hold cultural significance for the local communities (Cordero et al., 2023). Depending on the informers, the highest fidelity level was recorded for *Antidesma roxburghii* for curing Bone fracture (100%), *Cissus quadrangularis* for curing Bone fracture (100%), *Euphorbia royleana* for curing Bronchitis (100%). This indicates the potency of these plants to treat certain specific illnesses (Ugulu, 2011; Ayyanara and Ignacimuthu, 2011).

ICF values vary from 0 to 1, with higher factor values indicating a higher rate of agreement among informants on the disease category. A value close to zero (0) denotes a low level of agreement or consensus among the informants about the use of specific plant species for the treatment of a given category of diseases, or that the plants are selected at random. Depending on the consensus of several communities, hepatobiliary disease was reported to have demonstrated the highest ICF (0.37). This reveals that these illnesses are prevalent in these communities and that it would be worthwhile to look for bioactive substances in the plant species that have historically been utilized to treat these illnesses. However, the lowest ICF number suggests that there is a deficiency in communication among individuals in several domains (Patari and Uddin, 2016; Uddin and Hassan, 2014).

5. Conclusion

The quantitative analysis of the ethnobotanical data revealed herbal treatment methods of traditional healers of Tripura with high degree of effectiveness. To conform to Western medical
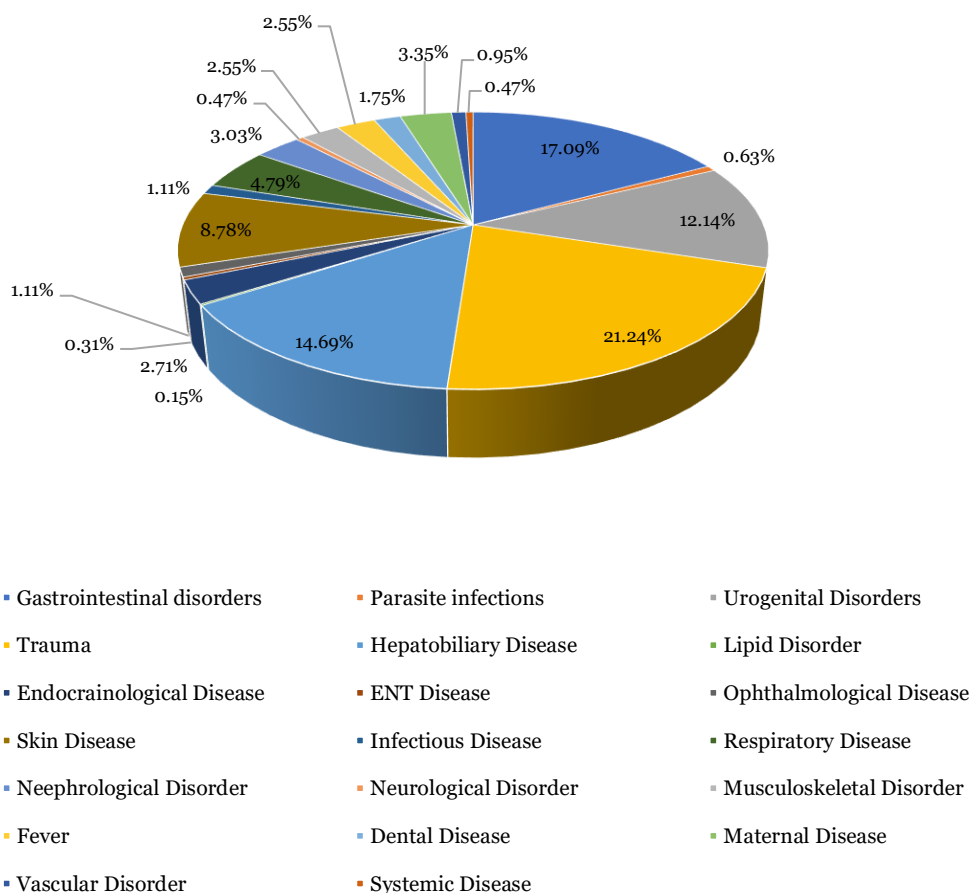
Figure 6. Disease category wise reprasentation of ailments

norms, it is crucial to standardize drug preparation, dosage, and administration procedures. Our results suggest that further research is necessary to confirm the therapeutic efficacy of the listed species. While our current method of recording traditional herbal treatments is not novel, a systematic examination of the data collected may be able to determine how frequently plants are used as herbal remedies.

Acknowledgment

Author Contributions

NH Sojeetra and RK Ravte designed the work; S Das and P Patari collected the field data, analyses the data and wrote the manuscript consultation with NH Sojeetra and RK Ravte.

Conflict of interest

The authors have no conflict of interest

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S. No.	Variable types	Categories	Number
		Table 1. Demographic features of the traditional healers	
1	Gender	Male	88
		Female	12
2	Caste	ST	59
		Fc	37
		M	4
3	Age-group	30-40	7
		41-50	18
		51-60	24
		61-70	26
		70>	25
4	Education	Illiterate	12
		Primary (Class-5)	29
		Middle (Class-8)	18
		Madhyamik	27
		Intermediate (Class-12)	4
		Graduate	10
5	Occupation	Jhum cultivator	46
		Fermer	23
		Shopkeepers and traders	22
		Govt. employee	7
6	Number of Informants	DhalaiDistrict	4
		Gomati District	6
		KhowaiDistrict	8
		North District	15
		SepahijalaDistrict	10
		South District	6
		UnakotiDistrict	29
		West District	22

Table 2. Correlation test to evaluate the relationship of the ethnobotanical knowledge with gender, age, caste and education (*Statistically significance value)

Correlation	Gender	Age	Caste	Education	Ethnobotanical knowledge
Gender	1				
Age	0.024*	1			
Caste	0.061*	0.027*	1		
Education	-0.121	0.345	0.159*	1	
Ethnobotanical knowledge	0.025*	0.999*	0.029*	-0.346	1

Botanical name	Family	UR	UV	FC	RFC	FL (%)
Abelmoschus esculentus Moench.	Malvaceae	1	0.01	1	0.01	Piles (100)
Achyranthes aspera L.	Amaranthaceae	7	0.07	10	0.1	Jaundice (30), Bone fracture (30), Insomnia (10), Leucorrhoea (10), Oligomenorrhea (10), Muscle rigidity (10)
Acmella paniculata (Wall ex. DC.) R.K. Jansen	Asteraceae	3	0.03	2	0.02	Worm Infestation (33.33), Abdominal Pain (33.33), Sebaceous cyst (33.33)
Acmella repens Rich. Ex Pers.	Asteraceae	1	0.01	1	0.01	Paralysis (100)
Acorus calamus L.	Acoraceae	1	0.01	1	0.01	Retention of Urine (100)
Acronychia pedunculata Miq.	Rutaceae	1	0.01	1	0.01	Jaundice (100)
Actinodaphne angustifolia Benth.	Lauraceae	1	0.01	1	0.01	Bone fracture (100)
Justicia adhatoda L.	Acanthaceae	5	0.05	5	0.05	Bronchitis (20), Wound (20), Jaundice (20), Cold (20), Measles (20)
Aegle marmelos (L.) Correa	Rutaceae	2	0.02	3	0.03	Flatulence (66.66), Diarrhoea (33.33)
Alangium chinense (Lour.) Harms.	Lauraceae	1	0.01	1	0.01	Wound (100)
Allium cepa L.	Amaryllidaceae	1	0.01	1	0.01	Malaria (100)
Allium sativum L.	Amaryllidaceae	8	0.08	9	0.09	Abdominal Pain (33.33), Cataract (8.33), Jaundice (16.66), Menorrhagia (8.33), Postpartum weakness (8.33), Toothache (8.33), Asthma (8.33), Bone fracture (8.33)
Allophylus villosus (Roxb.) Blume	Sapindaceae	2	0.02	3	0.03	Bone fracture (66.66), Pneumonia (33.33)
Aloe barbadensis Mill.	Liliaceae	1	0.01	1	0.01	Renal Calculi (100)
Alstonia scholaris (L.) R.Br.	Apocynaceae	5	0.05	8	0.08	Piles (10), Snakebite (10), Leucorrhoea (10), Jaundice (30), Abdominal pain (40)
Alternanthera brasiliana (L.) Kuntze	Amaranthaceae	2	0.02	3	0.03	Impetigo (33.33), Wound (66.66)
Amaranthus spinosus L.	Amaranthaceae	2	0.02	2	0.02	Jaundice (50), Urinary tract infection (50)
Andrographis paniculata (Burm.f.) Nees	Acanthaceae	8	0.08	9	0.09	Pedal Oedema (11.11), Warm infestation (11.11), Dysentery (11.11), Diabetes (11.11), Jaundice (11.11), Malaria (11.11), Abdominal Pain (11.11), Bronchitis (11.11), Jaundice (11.11)
Angiopteris evecta (Forst.) Hoffm.	Marattiaceae	1	0.01	1	0.01	Boil (100)
Anisomeles indica (L.) Kuntze	Lamiaceae	1	0.01	1	0.01	Abdominal pain (100)
Anthurium oxycarpum Poepp.	Araceae	1	0.01	1	0.01	Toothache (100)
Antidesma ghaesembilla Geartn.	Phyllanthaceae	1	0.01	1	0.01	Toothache (100)
Antidesma roxburghii Wall. ex Tul.	Phyllanthaceae	1	0.01	12	0.12	Bone fracture (100)
Aristolochia acuminata Lam.	Aristolochiaceae	1	0.01	2	0.02	Bone fracture (66.66), Abdominal pain (33.33)
Artemisia dracunculus L.	Asteraceae	2	0.02	2	0.02	Ring worm (50), Abdominal pain (50)
Artocarpus heterophyllus Lam.	Moraceae	1	0.01	1	0.01	Bone fracture (100)
*Artocarpus lacucha (*Roxb.) ex. Buch. -Ham.	Moraceae	1	0.01	1	0.01	Bone fracture (100)
Averrhoa carambola L.	Oxalidaceae	2	0.02	1	0.01	Bone fracture (50), Jaundice (50)
Ayapana triplinervis (Vahl) R.M.King & H.Rob.	Asteraceae	1	0.01	1	0.01	Retention of Urine (100)
Ayenia elegans Ridl.	Malvaceae	1	0.01	1	0.01	Boil (100)
Azadirachta indica A.Juss.	Meliaceae	3	0.03	3	0.03	Boil (33.33), Measles (33.33), Jaundice (33.33)

Table 3. list of Ethnomedicinal species along with family and ethnobotanical index analytics

Bacopa monnieri (L.) Wettst.	Plantaginaceae	2	0.02	2	0.02	Jaundice (50), Nootropics (50)
Bergera koenigii L.	Rutaceae	1	0.01	2	0.02	Flatulence (100)
Blumea balsamifera (L.) DC.	Asteraceae	2	0.02	2	0.02	Dog bites (50), Abdominal pain (50)
Blumea lanceolaria Druce.	Asteraceae	1	0.01	1	0.01	Jaundice (100)
Boehmeria nivea (L.) Gaudich	Urticaceae	1	0.01	1	0.01	Body ache (100)
Boerhaavia diffusa L.	Nyctaginaceae	1	0.01	1	0.01	Pedal Oedema (100)
Boesenbergia sp.	Zingiberaceae	1	0.01	1	0.01	Diarrhoea (100)
Bombax ceiba L.	Malvaceae	1	0.01	1	0.01	Body ache (100)
Bonnaya ciliata (Colsm.) Spreng.	Linderniaceae	1	0.01	1	0.01	Body ache (100)
Borassus flabellifer L.	Arecaceae	1	0.01	1	0.01	Uterine prolapse (100)
Brassica juncea (L.) Czern.	Brassicaceae	1	0.01	1	0.01	Body ache (100)
Brassica nigra W.D.J. Kuch.	Brassicaceae	2	0.02	2	0.02	Acute Otitis Media Syndrome (50), Muscle Rigidity (50)
Breynia androgyna (L.) Chakrab. & N.P.Balakr.	Phyllanthaceae	1	0.01	1	0.01	Hypertension (100)
Broyphyllum pinnatum L.	Crassulaceae	1	0.01	2	0.02	Renal Calculi (100)
Bunium persicum (Bioss.)	Apiaceae	1	0.01	1	0.01	Asthma (100)
Caesalpinia bonduc (L.) Roxb.	Fabaceae	1	0.01	1	0.01	Typhoid (100)
Caesalpinia pulcherrima (L.) Sw.	Fabaceae	1	0.01	1	0.01	Piles (100)
Cajanus cajan (L.) Millsp.	Fabaceae	2	0.02	6	0.06	Jaundice (83.33), cataract (16.66)
Calotropis procera (Aiton) Dryand	Apocynaceae	3	0.03	3	0.03	Joint pain (33.33), Chest pain due to trauma (33.33), Dysentery (33.33)
Capsicum fructescens L.	Solanaceae	2	0.02	2	0.02	Boil (50), Jaundice (50)
Cardiospermum halicacabum L.	sapindaceae	3	0.03	3	0.03	Paronychia (33.33), Tinea versicolor (33.33), Piles (33.33)
Carica papaya L.	Caricaceae	1	0.01	1	0.01	Burning Micturition (100)
Cassia angustifolia Vahl.	Fabaceae	1	0.01	1	0.01	Pedal Oedema (100)
Cassia fistula L.	Fabaceae	3	0.03	5	0.05	Wound (16.66), Bone fracture (66.66), Boil (16.66)
Cassia occidentalis L. (Link.)	Fabaceae	1	0.01	1	0.01	Pneumonia (100)
Catharanthus roseus (L.) G.Don	Apocynaceae	4	0.04	4	0.04	Jaundice (25), Piles (25), Insomnia (25), Diabetes (25)
Centella asiatica (L.) Urb.	Apiaceae	6	0.06	5	0.05	Jaundice (16.66), Flatulence (16.66), Dysentery (16.66), Warm infestation (16.66), Abdominal pain (16.66), Leucorrhoea (16.66)
Chromolaena odorata (L.) R.M.King & H.Rob	Asteraceae	2	0.02	3	0.03	Cut injury (66.66), Flatulence (33.33)
Cinchona ledgeriana Moens.	Rubiaceae	1	0.01	1	0.01	Malaria (100)
Cinnamomum tamala (Buch.-Ham.) T.Nees & C.H. Eberm	Lauraceae	1	0.01	1	0.01	Bone Fracture (100)
Cinnamomum verum J.Presl	Lauraceae	2	0.02	2	0.02	Jaundice (50), Burn (50)
Cissus assamica (M.A.Lawson) Craib	Vitaceae	1	0.01	1	0.01	Snake Bite (100)
Cissus quadrangularis L.	Vitaceae	1	0.01	5	0.05	Bone Fracture (100)
Cissus repens Lam.	Vitaceae	1	0.01	1	0.01	Bone fracture (100)
Citrus macroptera Montrouz.	Rutaceae	1	0.01	2	0.02	Renal Calculi (100)
Citrus maxima (Burm.) Merr.	Rutaceae	1	0.01	1	0.01	Dental Cavity (100)
Citrus medica L.	Rutaceae	4	0.04	4	0.04	Wound (16.66), Leucorrhoea (16.66), Jaundice (50), Dysentery (16.66), Piles (16.66)

Clerodendrum colebrookeanum Walp.	Lamiaceae	3	0.03	3	0.03	Hypertension (33.33), Wound (33.33), Diarrhoea (33.33)
Clerodendrum indicum Kuntze.	Lamiaceae	3	0.03	3	0.03	Pedal Oedema (33.33), Dental cavities (33.33), Muscle rigidity (33.33)
Clerodendrum infortunatum L.	Lamiaceae	8	0.08	8	0.08	Constipation (12.5), Jaundice (12.5), Bone fracture (25), Dental cavities (12.5), Flatulence (12.5), Dysentery (12.5), Measles (12.5)
Clerodendrum paniculatum L.	Lamiaceae	1	0.01	1	0.01	Jaundice (100)
Coccinia grandis (L.) Voigt	Cucurbitaceae	2	0.02	4	0.04	Jaundice (75), Diabetes (25)
Cocos nucifera L.	Arecaceae	1	0.01	1	0.01	Snake bite (100)
Colocasia esculenta (L.) Schott.	Araceae	1	0.01	1	0.01	White spot on Retina (100)
Commelina benghalensis L.	Commelinaceae	1	0.01	1	0.01	wound (100)
Costus igneus Nak.	Costaceae	1	0.01	1	0.01	Diabetes (100)
Cuminum cyminum L.	Apiaceae	1	0.01	1	0.01	Jaundice (100)
Curculigo capitulata (Lour.) Kuntze	Hypoxidaceae	1	0.01	1	0.01	Bone fracture (100)
Curculigo latifolia Dryand ex W.T.Aiton	Hypoxidaceae	1	0.01	1	0.01	Bone fracture (100)
Curcuma longa L.	Zingiberaceae	4	0.04	5	0.05	Bone fracture (16.66), Flatulence (16.66), Jaundice (50), Piles (16.66)
Curcuma amada Roxb.	Zingiberaceae	1	0.01	1	0.01	Bone Fracture (100)
Cuscuta reflexa Roxb.	Convolvulaceae	1	0.01	4	0.04	Jaundice (100)
Cyathula prostrata (L.) Blume	Amaranthaceae	2	0.02	2	0.02	Leucorrhoea (50), Cut injury (50)
Cyclea peltata (Lam.) Hook.f. & Thomson	Menispermaceae	2	0.02	2	0.02	Abdominal pain (50), Diarrhoea (50)
Cymbopogon citratus (DC.) Stapf.	Poaceae	1	0.01	1	0.01	Jaundice (100)
Cynodon dactylon (L.) Pers.	Poaceae	5	0.05	6	0.06	Retention of Urine (14.28), Menorrhagia (14.28), Dysmenorrhea (14.28), Leucorrhoea (42.85), Toothache (14.28)
Cyperus rotundus L.	Cyperaceae	4	0.04	4	0.04	Abdominal Pain (25), Jaundice (50), Pedal Oedema (25)
Datura metel L.	Solanaceae	1	0.01	1	0.01	Impetigo (100)
Datura stramonium L. Test	Solanaceae	1	0.01	1	0.01	Join pain (100)
Dendrobium cathcartii Hook.f.	Orchidaceae	1	0.01	1	0.01	Acute Otitis Media Syndrome (100)
Dillenia indica L.	Dilleniaceae	2	0.02	3	0.03	Bone fracture (66.66), Leucorrhoea (33.33)
Diospyros malabarica (Desr.) Kostal	Ebenaceae	1	0.01	1	0.01	Cut injury (100)
Diplazium dilatatum Blume	Aspleniaceae	1	0.01	1	0.01	Backache (100)
Diplazium esculentum (Retz.) Sw.	Aspleniaceae	2	0.02	2	0.02	Leucorrhoea (50), Cut injury (50)
Diplopterys cabrerana (Cuatrec.) B. Gates.	Malpighiaceae	2	0.02	2	0.02	Gangrene (50), Leucorrhoea (50)
Eclipta prostrata (L.) L.	Asteraceae	3	0.03	2	0.02	Oligomenorrhea (33.33), Paronychia (33.33), Anaemia (33.33)
Elettaria cardomomum L. (Maton.)	Zingiberaceae	2	0.02	2	0.02	Leucorrhoea (50), Jaundice (50)
Eleusine indica (L.) Gaertn.	Poaceae	2	0.02	2	0.02	Male Infertility (50), Cut injury (50)
Elwendia persica (Boiss.) Pimenov & Kljuykov	Apiaceae	1	0.01	1	0.01	Diarrhoea (100)
Enhydra fluctuans Lour.	Asteraceae	2	0.02	2	0.02	Syphilis (50), Jaundice (50)
Entada phaseoloides (L.) Merr.	Fabaceae	2	0.02	2	0.02	Bone Fracture (50), Typhoid (50)
Epipremnum aureum (Linden & André) G.S.Bunting	Araceae	2	0.02	2	0.02	Bone fracture (50), Body ache (50)
Equisetum ramosissimum Desf.	Equisetaceae	1	0.01	1	0.01	Bone fracture (100)

Eulophia graminea Lindl.	Orchidaceae	1	0.01	1	0.01	Boil (100)
Euphorbia hirta L.	Euphorbiaceae	1	0.01	2	0.02	Increases breast milk (100)
Euphorbia neriifolia L.	Euphorbiaceae	1	0.01	1	0.01	Fever (100)
Euphorbia royleana Boiss.	Euphorbiaceae	1	0.01	4	0.04	Bronchitis (100)
Euphorbia tirucalli L.	Euphorbiaceae	1	0.01	1	0.01	Cut injury (100)
Evolvulus nummularius (L.) L.	Convolvulaceae	1	0.01	1	0.01	Gangrene (100)
Fernandoa adenophylla (Wall. ex G.Don) Steenis	Bignoniaceae	1	0.01	2	0.02	Bone fracture (100)
Ficus benghalensis L.	Moraceae	1	0.01	1	0.01	Bone fracture (100)
Ficus hispida L.f.	Moraceae	5	0.05	5	0.05	Flatulence (16.66), Diabetes (33.33), Ring warm (16.66), Leucorrhoea (16.66), Bone fracture (16.66)
Ficus religiosa L.	Moraceae	3	0.03	3	0.03	Cut injury (50), Diarrhoea (50)
Glochidion lanceolarium (Roxb.) Voigt	Phyllanthaceae	1	0.01	1	0.01	Bone Fracture (100)
Gouania leptostachya DC.	Rhamnaceae	1	0.01	1	0.01	Cut injury (100)
Grona triflora (L.) H.Ohashi & K.Ohashi	Fabaceae	2	0.02	2	0.02	White spot on Retina (50), Syphilis (50)
Harpullia arborea (Blanco) Radlk.	Sapindaceae	1	0.01	1	0.01	Bone fracture (100)
Heliotropium indicum L.	Boraginaceae	1	0.01	1	0.01	Pedal Oedema (100)
Heptapleurum venulosum (Wight &Arn.) Seem.	Araliaceae	1	0.01	1	0.01	Abdominal pain (100)
Hibiscus rosa-sinensis L.	Malvaceae	6	0.06	5	0.05	Wound (16.66), Ulcerative Wound (16.66), Piles (16.66), Medical termination of Pregnancy (16.66), Renal Calculi (16.66), Vitiligo (16.66)
Hibiscus schizopetalus (Dyer) Hook.f.	Malvaceae	1	0.01	1	0.01	Wound (100)
Hodgsonia macrocarpa Cogn.	Cucurbitaceae	1	0.01	1	0.01	Muscle Rigidity (100)
Holarrhena pubescens Wall. & G.Don	Apocynaceae	1	0.01	1	0.01	Piles (100)
Hydrocotyle sibthorpioides Colenso	Araliaceae	1	0.01	1	0.01	Typhoid (100)
Hygrophila auriculata (Schumach.) Heine.	Acanthaceae	1	0.01	2	0.02	Anaemia (100)
Hypoxis aurea Lour.	Hypoxidaceae	1	0.01	1	0.01	Asthma (100)
Ilex coriacea (Pursh) Chapm.	Aquifoliaceae	1	0.01	1	0.01	Bone Fracture (100)
Imperata cylindrica (L.) Raeusch.	Poaceae	1	0.01	1	0.01	Coughing (100)
Indigofera tinctoria L.	Fabaceae	2	0.02	4	0.04	Hypertension (50), Hypotension (50)
Ipomoea aquatica Forssk.	Convolvulaceae	3	0.03	3	0.03	Paronychia (66.66), Jaundice (33.33)
Jasminum sambac (L.) Aiton.	Oleaceae	1	0.01	1	0.01	Bone Fracture (100)
Jatropha curcas L.	Euphorbiaceae	1	0.01	1	0.01	Ulcerative Wound (100)
Kaempferia galanga L.	Zingiberaceae	3	0.03	3	0.03	Constipation (33.33), Flatulence (33.33), Asthma (33.33)
Kalanchoe pinnata (Lam.) Pers.	Crassulaceae	2	0.02	3	0.03	Gall bladder stone (66.66), Piles (33.33)
Lantana camara L.	Verbenaceae	1	0.01	1	0.01	Hypercholesterolemia (100)
Lawsonia inermis L.	Lythraceae	1	0.01	1	0.01	Jaundice (100)
Leea aequata L.	Vitaceae	1	0.01	2	0.02	Bone Fracture (100)
Leea indica (Burm.f.) Merr.	Vitaceae	1	0.01	1	0.01	Bone Fracture (100)
Leucas aspera Link	Lamiaceae	5	0.05	5	0.05	Body ache (20), Burning sensation on foot (20), Bronchitis (20), Renal calculi (20), Cataract (20)

Litsea glutinosa (Lour.) C.B.Rob.	Lauraceae	3	0.03	10	0.1	Bone Fracture (70), Jaundice (20), Boil (10)
Litsea monopetala (Roxb.) Pers.	Lauraceae	1	0.01	1	0.01	Bone fracture (1000
Lygodium flexuosum (L.) Sw.	Lygodiaceae	1	0.01	1	0.01	Bone Fracture (100)
Macaranga denticulate Mull. Arg.	Euphorbiaceae	1	0.01	1	0.01	Post-partum Weakness (100)
Mallotus philippensis (Lam.) Mull. Arg.	Euphorbiaceae	1	0.01	1	0.01	Fever (100)
Mangifera indica L.	Anacardiaceae	6	0.06	6	0.06	Flatulence (16.66), Dysentery (16.66), Oligomenorrhea (16.66), Fistula (16.66), Diarrhoea (16.66), Jaundice (16.66)
Manihot esculenta Crantz.	Euphorbiaceae	1	0.01	1	0.01	Leucorrhoea (100)
Melastoma malabathricum L.	Melastomataceae	1	0.01	1	0.01	Bone Fracture (100)
Mentha piperita L.	Lamiaceae	1	0.01	1	0.01	Body ache (100)
Mentha spicata L.	Lamiaceae	1	0.01	1	0.01	Abdominal Pain (100)
Mesosphaerum suaveolens (L.) Kuntze	Lamiaceae	1	0.01	1	0.01	Pedal Oedema (100)
Microcos paniculata L.	Malvaceae	1	0.01	3	0.03	Bone fracture (100)
Micromelum integerrimum Roxb. Ex. DC.	Rutaceae	1	0.01	1	0.01	Bone fracture (100)
Mikania micantha kunth.	Asteraceae	2	0.02	3	0.03	Snakebite (33.33), Cut injury (66.66)
Mimosa pudica L.	Fabaceae	4	0.04	4	0.04	Paronychia (25), Insomnia (25), Dog bite (25), Leucorrhoea (25)
Morinda citrifolia L.	Rubiaceae	1	0.01	1	0.01	Diabetes (100)
Moringa oleifera Lam.	Moringaceae	3	0.03	3	0.03	Flatulence (33.33), Snake bite (33.33), Bone fracture (33.33)
Morus alba L.	Moraceae	2	0.02	2	0.02	Wound (50), Bone fracture (50)
Murraya koenigii (L.) Spreng	Rutaceae	1	0.01	1	0.01	Dysentery (100)
Musa acuminata Colla	Musaceae	3	0.03	3	0.03	Fever (33.33), Dysentery (33.33), Eczema (33.33)
Musa paradisica L.	Musaceae	1	0.01	1	0.01	Leucoderma (100)
Mussaenda frondosa L.	Rubiaceae	2	0.02	2	0.02	Toothache (50), Centipede Bite (50)
Myristica fragrans Houtt.	Myristicaceae	5	0.05	5	0.05	Leucorrhoea (20), Abdominal pain (20), Jaundice (40), Burn (20)
Nelsonia canescens (Lam.) Spreng	Acanthaceae	2	0.02	2	0.02	Bone fracture (50), Jaundice (50)
Nyctanthes arbor-tristis L.	Oleaceae	1	0.01	1	0.01	Malaria (100)
Ocimum temuiflorum L.	Lamiaceae	6	0.06	8	0.08	Bronchitis (44.44), Flatulence (11.11), Cut injury (11.11), Diabetes (11.11), Retention of urine (11.11), Bone fracture (11.11)
Oldenlandia corymbosa L.	Rubiaceae	1	0.01	1	0.01	White spot onretina (100)
Ophiorrhiza tingens C.B.Clarke ex C.E.C. Fisch.	Rubiaceae	1	0.01	1	0.01	Bone fracture (100)
Oroxylum indicum (L.) Kurz.	Bignoniaceae	4	0.04	9	0.09	Post-partum Weakness (11.11), Jaundice (66.66), Bone fracture (11.11), Abdominal pain (11.11)
Oryza sativa L.	Poaceae	1	0.01	1	0.01	Tuberculosis (100)
Ouret sanguinolenta (L.) Kuntze	Amarantaceae	2	0.02	2	0.02	Pedal Oedema (50), Cut injury (50)
Oxalis corniculata L.	Oxalidaceae	2	0.02	2	0.02	Boil (50), Renal Calculi (50)
Panicum brevifolium L.	Poaceae	1	0.01	1	0.01	Body ache (100)
Parkia javanica Lam. (Merr.)	Fabaceae	2	0.02	2	0.02	Postpartum weakness (50), Abdominal pain (50)
Peperomia pellucida (L.) Kunth	Piperaceae	4	0.04	4	0.04	Diabetes (25), Piles (25), Bone fracture (25), Jaundice (25)

Persicaria hydropiper (L.) Delarbre	Polygonaceae	1	0.01	1	0.01	Piles (100)
Persicaria perfoliata L.H. (Gross).	Polygonaceae	1	0.01	1	0.01	Bronchitis (100)
Petiveria alliacea L.	Petiveriaceae	3	0.03	3	0.03	Abdominal Pain (33.33), Postpartum weakness (33.33), Jaundice (33.33)
Phlogacanthus thyrsiformis (Roxb. ex Hardw.) Mabb.	Acanthaceae	2	0.02	2	0.02	Leucorrhoea (50), Malaria (50)
Phyllanthus emblica L.	Phyllanthaceae	3	0.03	4	0.04	Diabetes (25), Jaundice (50), Constipation (25)
Phyllanthus fraternus G.L. Webster.	Phyllanthaceae	2	0.02	2	0.02	Jaundice (50), Headache (50)
Physalis angulata L.	Solanaceae	2	0.02	2	0.02	Menorrhagia (50), Oligomenorrhea (50)
Piper betle L.	Piperaceae	3	0.03	3	0.03	Malaria (33.33), Wound (33.33), Gangrene (33.33)
Piper longum L.	Piperaceae	1	0.01	1	0.01	Jaundice (100)
Piper niagrum L.	Piperaceae	11	0.11	14	0.14	Burn (6.25), Asthma (6.25), Abdominal pain (25), Dog bite (6.25), Diarrhoea (6.25), Jaundice (12.5), Menorrhagia (6.25), Pneumonia (6.25), Paronychia (6.25)
Plumbago zeylanica L.	Plumbaginaceae	5	0.05	3	0.03	Post-Partum weakness (20), Abdominal pain (20), Warm infestation (20), Jaundice (20), Arthritis (20)
Plumeria rubra L.	Apocynaceae	1	0.01	1	0.01	Abdominal pain (100)
Polygonum chinense L.	Polygonaceae	1	0.01	1	0.01	Burn (100)
Pouzolzia zeylanica (L.) Benn.	Urticaceae	1	0.01	1	0.01	Cut injury (100)
Premna serratifolia L.	Lamiaceae	1	0.01	1	0.01	Lipoma (100)
Psidium guajava L.	Myrtaceae	8	0.08	8	0.08	Jaundice (12.5), Flatulence (25), Dysentery (12.5), Diarrhoea (12.5), Abdominal pain (12.5), Leucorrhoea (12.5), Urticaria (12.5)
Rauvolfia serpentine Benth. ex Kurz	Apocynaceae	3	0.03	3	0.03	Abdominal Pain (33.33), post-partumweakness (33.33), Fever with rigor (33.33)
Ricinus communis L.	Euphorbiaceae	2	0.02	3	0.03	Piles (66.66), Jaundice (33.33)
Schima wallichii DC. (Korth.)	Theaceae	1	0.01	1	0.01	Post-partum weakness (100)
Scoparia dulcis L.	Plantaginaceae	6	0.06	8	0.08	Wound (12.5), post-partum weakness (12.5), Toothache (12.5), Flatulence (25), Leucorrhoea (25), Jaundice (12.5)
Senegalia catechu (L.f.) P.J.H.Hurter & Mabb	Fabaceae	1	0.01	1	0.01	Wound (100)
Senegalia pennata (L.) Maslin	Fabaceae	1	0.01	1	0.01	Pneumonia (100)
Senna tora (L.) Roxb.	Fabaceae	1	0.01	1	0.01	Bone Fracture (100)
Sida acuta Burm.f.	Malvaceae	2	0.02	2	0.02	Cut injury (50), Sebaceous cyst (50)
Sida cordifolia L.	Asteraceae	1	0.01	1	0.01	Bone Fracture (100)
Sida rhombifolia subsp. alnifolia (L.)	Malvaceae	1	0.01	1	0.01	Piles (100)
Solanum villosum Mill.	Solanaceae	1	0.01	1	0.01	Typhoid (100)
Sorghum rotundulum (Hack.) S.	Poaceae	1	0.01	1	0.01	Asthma (100)
Spermacoce alata Aubl.	Rubiaceae	1	0.01	1	0.01	Post-partum weakness (100)
Spermacoce hispida L.	Rubiaceae	1	0.01	1	0.01	Gallbladder Stone (100)
Spondias mombin L.	Anacardiaceae	2	0.02	3	0.03	Postpartum weakness (66.66), Fistula (33.33)
Stephania hernandifolia Lour.	Menispermaceae	1	0.01	1	0.01	Bone fracture (100)
Stephania japonica (Thunb.) Miers	Menispermaceae	1	0.01	1	0.01	Abdominal pain (100)

Stephania pierrei Diels.	Menispermaceae	1	0.01	1	0.01	Cut injury (100)
Sterculia villosa Roxb.	Malvaceae	1	0.01	1	0.01	Jaundice (100)
Streblus asper Lour.	Moraceae	2	0.02	2	0.02	Toothache (50), Burning micturition (50)
Strombosia javanica Blume	Oliaceae	1	0.01	1	0.01	Toothache (100)
Synedrella nodiflora Gaertn.	Asteraceae	1	0.01	1	0.01	Oligomenorrhea (100)
Syzygium aromaticum (L.) Merr.	Myrtaceae	5	0.05	5	0.05	Leucorrhoea (20), Dog bite (20), Jaundice (20), Bone fracture (20), Burn (20), Fistula (20)
Syzygium cumini (L.) Skeels	Myrtaceae	1	0.01	1	0.01	Fistula (100)
Tabernaemontana divaricata R.Br.	Apocynaceae	3	0.03	3	0.03	Jaundice (33.33), Abdominal pain (33.33), Leucorrhoea (33.33)
Tacca chantrieri André	Dioscoreaceae	1	0.01	2	0.02	Bone fracture (100)
Tamarindus indica L.	Fabaceae	2	0.02	2	0.02	Jaundice (50), Sebaceous cyst (50)
Tegetes erecta L.	Asteraceae	1	0.01	1	0.01	Tuberculosis (100)
Terminalia arjuna (Roxb. ex DC.) Wight &Arn.	Combretaceae	3	0.03	4	0.04	Diabetes (33.33), Renal calculi (33.33), leucorrhoea (33.33)
Terminalia bellirica (Gaertn.) Roxb.	Combretaceae	3	0.03	5	0.05	Jaundice (66.66), Diabetes (16.66), Constipation (16.66)
Terminalia chebula Retz.	Combretaceae	4	0.04	6	0.06	Diabetes (16.66), Jaundice (33.33), Constipation (16.66), Renal calculi (16.66)
Tetrastigma leucostaphylum (Dennst.) Alston	Vitaceae	1	0.01	1	0.01	Wound (100)
Thespesia populnea Sol. ex Correa	Malvaceae	1	0.01	1	0.01	Post-partum (100)
Thunbergia grandiflora Roxb.	Acanthaceae	4	0.04	3	0.03	Stye (33.33), Cut injury (33.33), Menorrhagia (33.33)
Thysanolaena maxima Roxb.	Poaceae	1	0.01	1	0.01	Wound (100)
Tinospora cordifolia (Willd.) Miers ex Hook.f. & Thomson	Menispermaceae	9	0.09	16	0.16	Jaundice (31.25), Abdominal pain (50), Cut injury (6.25), Diabetes (12.5), Flatulence (6.25), Piles (6.25), Leucorrhoea (6.25)
Trichosanthes bracteata Voigt	Cucurbitaceae	1	0.01	1	0.01	Jaundice (100)
Trigonella foenum-graecum L.	Fabaceae	1	0.01	1	0.01	Abdominal Pain (100)
Uraria crinita (L.) Desv. ex DC.	Fabaceae	3	0.03	2	0.02	Insomnia (33.33), Retention of urine (33.33), Flatulence (33.33)
Urena lobata L.	Malvaceae	2	0.02	2	0.02	Bone Fracture (50), Flatulence (50)
Vachellia farnesiana (L.) Wight & Arn.	Fabaceae	1	0.01	1	0.01	Abdominal pain (100)
Vachellia nilotica (L.) P.J.H.Hurter & Mabb.	Fabaceae	1	0.01	2	0.02	Postpartum weakness (100)
Vanda tessellata (Roxb.) Hook. ex G Don.	Orchidaceae	1	0.01	1	0.01	Bone fracture (100)
Vanilla planifolia Andrews	Orchidaceae	3	0.03	4	0.04	Wound (25), Cut injury (25), Bone fracture (50)
Vicia lens (L.) Coss. & Germ.	Fabaceae	2	0.02	1	0.01	Boil (50), paronychia (50)
Vigna unguiculata (L.) Walp.	Fabaceae	1	0.01	1	0.01	Paronychia (100)
Vitex altissima L.f.	Lamiaceae	1	0.01	1	0.01	Sebaceous cyst (100)
Vitex negundo L.	Vitaceae	2	0.02	2	0.02	Jaundice (50), Measles (50)
Vitex parviflora Juss.	Vitaceae	1	0.01	1	0.01	Leucorrhoea (100)
Vitis tiliifolia Humb. & Bonpl. ex Schult.	Vitaceae	1	0.01	1	0.01	Bone fracture (100)
Withania somnifera (L.) Dunal	Solanaceae	1	0.01	1	0.01	Bronchitis (100)
Zantedeschia sp	Araceae	1	0.01	1	0.01	Bone fracture (100)
Zingiber montanum (J.Koing.) A. Dietr.	Zingiberaceae	2	0.02	2	0.02	Jaundice (50), Abdominal pain (50)

Zingiber officinale Roscoe	Zingiberaceae	10	0.1	12	0.12	Bone Fracture (16.66), Ulcerative wound (16.66), Constipation (8.33), Jaundice (8.33), Pneumonia (8.33), Gangrene (8.33), Snakebite (8.33), Burn (8.33), Flatulence (8.33), Asthma (8.33)
Zingiber zerumbet (L.) Sm.	Zingiberaceae	1	0.01	1	0.01	Asthma (100)
Ziziphus jujuba Mill.	Rhamnaceae	1	0.01	1	0.01	Ringworm (100)
Ziziphus mauritiana Lam.	Rhamnaceae	1	0.01	1	0.01	Jaundice (100)

Table 4. Consensus of agreement of respondents about the use of medicinal plants.

Disease Category	N_{taxa}	N_{ur}	ICF
Gastrointestinal disorders (Flatulence, Abdominal pain, Diarrhoea, Dysentery, Piles, Fistula, Constipation)	87	101	0.14
Parasite infections (Warm Infestation)	3	3	0
Urogenital Disorders (Leucorrhoea, Oligomenorrhea, Menorrhagia, Urinary Tract Infection, Uterine prolapse, Dysmenorrhea, Retention of Urine, Burning micturition, Syphilis, Male infertility, Medical Termination of Pregnancy)	49	51	0.04
Trauma (Bone Fracture, Cut injury, Dog Bite, Burn, Snake Bite, Centipede Bite, Chest pain due to trauma)	84	127	0.34
Hepatobiliary Disease (Jaundice, Gallbladder Stone)	58	92	0.37
Lipid Disorder (Hypercholesterolemia)	1	1	0
Endocrinological Disease (Diabetes)	13	16	0.2
ENT Disease (Acute Otitis Media Syndrome)	2	2	0
Ophthalmological Disease (Cataract, Stye, White spot in eye)	7	7	0
Skin Disease (Sebaceous cyst, Boil, Impetigo, Wound, Ringworm, Paronychia, Eczema, Urticaria, Ulcerative wound, Vitiligo, Tinea versicolor, Leucoderma, Gangrene)	50	51	0.02
Infectious Disease (Measles, Tuberculosis)	7	7	0
Respiratory Disease (Bronchitis, Asthma, Pneumonia, Cold)	23	28	0.18
Nephrological Disorder (Renal Calculi, Pedal Oedema, Burning sensation on foot)	16	18	0.11
Neurological Disorder (Insomnia, Nootropics)	5	5	0
Musculoskeletal Disorder (Muscle rigidity, Joint Pain, Arthritis, Backache, Body ache, Lipoma, Paralysis)	16	16	0
Fever (Malaria, Typhoid, Headache)	11	11	0
Dental Disease (Toothache, Dental Cavities)	11	11	0
Maternal Disease (Post-preterm weakness, Increases breast milk)	17	21	0.2
Vascular Disorder (Hypertension, Hypotension)	3	6	0.6
Systemic Disease (Anemia)	2	2	0

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