

Research Article

ETHNOMEDICINAL PLANTS USED BY THE KHASIA COMMUNITY PEOPLE IN MOULVIBAZAR DISTRICT OF BANGLADESH

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ABSTRACT

The paper describes the traditional knowledge related to ethnomedicinal knowledge and plant parts utilization for curing various ailments by the *Khasia* community of Moulvibazar district. Total 45 plants were identified belonging to 37 families used by the *Khasia* community to treat different ailments. These medicinal plants were mostly used for treatment of anemia, asthma, cough, cold, constipation, dysentery, diarrhea, eczema, fever, headache, heart disease, itches, injury, jaundice, menstrual problem, piles, skin diseases, stomach problem, sex problems, toothache, urinary problem, rheumatism and others. Leaves were mostly used (35%), rhizome (19%) and root (12%) along with bark, stem, flowers, fruit and gum/resign.

KEYWORDS: Ethnomedicinal, Medicinal plants, Khasia, Baidday's, Moulvibazar, Bangladesh.

INTRODUCTION

Medicinal plants play an important role in the primary healthcare systems for the majority of the rural people [1]. 2003). The indigenous people of different countries of the world, living amid nature, have first-hand knowledge on benefits provides by the plants including medicinal value. They used plants not for only the treatment of various ailments, but also used as preventive measures against different ailments [2]. A number of important modern pharmaceuticals have been derived from plants used by indigenous people [3] including antibiotics, anti-malarial drugs, cardiotonics, sympatho and para-sympathomimetics etc. The ethnomedicinal knowledge about the uses of medicinal plants can be a resource for the scientists to identify potential drugs and also may have high impact from a future bio-economic point of view [4]. Thus proper documentation of these knowledges overtime is crucial to protect them from extinction [5]

There are several reports of an ethnomedicinal survey conducted among the herbal practitioners in Bangladesh [6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, and 22]. However, there is no information on ethnomedicinal plant

uses by the *Khasia* community of Bangladesh. So, *Khasia* community is selected for the purposes.

The *Khasia*'s are an indigenous group of people living in the forested regions of Moulvibazar district, north-eastern part of Bangladesh. They have their own traditional medicinal practitioners, called *Baidday* who uses plants for therapeutic as well as preventive purposes. Since this uses has been going on for centuries, it was decided to document the uses of these plants for treatment of various diseases, as practiced by the *Khasia* tribal practitioner. Accordingly, a survey was carried out at different *Khasia* village (*Punji*) of Moulvibazar district of Bangladesh.

METHODOLOGY

The *Khasia* community people lives in the Sylhet, Moulvibazar and Habigonj districts of Sylhet division. Moulvibazar was selected for the study area as most of the *Khasia* people lives in this district. Within Moulvibazar district three *Khasia Punji* (small village) were selected purposively. The selected *Punji's* were Lawachara, Magurchara and Kalinji under Sreemongal and Kamolgonj Upazilla. An ethnobotanical survey was conducted during 2015-16 in the selected *Khasia* villages. The community

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people particularly Baidday's and Montri's (Head of the Khasia village) were briefed extensively about the purpose of the survey and told that information obtained from them may be disseminated in both national and international journals and conferences. Information were collected with the help of a semi-structured questionnaire followed by Martin [23] and Maundu [24]. In this method Baidday's were interviewed on guided field-walks through areas from where they collected their medicinal plant. Information collected on the mentioned local names, uses, and method of use, formulations, diseases for which the formulations were used and dosages. Information also collected on the season of collection, which plants parts used. Collected information were validated through eight group discussion. The collected voucher specimens were identified with the help of Forest Botany Division of Bangladesh Forest Research Institute.

The study reveals a rich diversity of medicinal plants used to treat various disease conditions by the *Khasia* people in Moulvibazar district. It was further revealed rich ethnomedicinal knowledge among the *Khasia* community people. The families like Asclapidaceae, Apocynaceae, Liliaceae, Lauraceae, Meliceae, Piperaceae and Verbenaceae, were the dominant in this study are consistently recorded in other ethnomedicinal studies.

RESULTS AND DISCUSSION

A total of 45 plants were identified by the *Baidday's* of *Khasia* community along with their medicinal uses. The plants were distributed into 37 families (Table 1).

Sl. No	Scientific Name	Vernacular Name	<i>Khasia</i> Name	Family	Habit	Plant parts used	Uses/Indication	
1	Abroma augusta L.	Ulatkambal	Tulhadar	Sterculiaceae	Shrub	Stem	Gas formation and indigestion	
2	<i>Acampe papillosa</i> Lindl.	Mar	Mar	Orchidaceae	Herb	Root	Rheumatism and sciatica	
3	Adiantum philippense L.	Goyalelata	Crakeria	Adiantaceae	Fern	Leaf, root and stem	Stomachproblemandburningsensation	
4	Allium tuberosum Rottler ex Spreng.	Banga- gandina	Bon-pias	Liliaceae	Herb	Rhizome	Skin disease and pain	
5	Alstonia scholaris L	Shhaitian	Therosi	Apocynaceae	Tree	Leaf, bark and latex	Chronic diarrhea and malarial fever	
6	<i>Azadirachta indica</i> A. Juss.	Neem	Tamaka	Meliaceae	Tree	Leaf and bark.	Skin disease, fever and pyorrhea	
7	Bombax ceiba L.	Shimul	Tuluh	Bombacaceae	Tree	Root	Sexual weakness and dysentery	
8	Calotropis procera R. Br.	Akand	Cele-bao	Asclepiadaceae	Shrub	Leaf, latex and flower	Toothache and pain, constipation and asthma	
9	<i>Calotrpis gigantea</i> (L.) R.Br.	Boro-akonda	Chilibou	Asclepiadaceae	Shrub	Leaf	Pain and wound	
10	<i>Centella asiatica</i> (L.) Urban	Thankuni	Cracro	Apiaceae	Creeper	Leaf	Blood dysentery and sexual diseases	
11	Clerodendrum viscosum Vent	Bhat	Cradum	Verbenaceae	Shrub	Leaf and root	Chest complaint, tumors, treat impotency	
12	Curculigo orchioides Gaertn.	Talmul	Le-liang- khudak	Hypoxidaceae	Herb	Root	Insect bite	
13	Desmodium gangeticum L.	Shalpani	Madani	Fabaceae	Shrub	Stem and leaf	Stomach pain and menstrual pain.	
14	Dioscorea alata L.	Mete alu	Crapung	Dioscoreaceae	Twiner	Tuber	Body pain and stomach pain.	
15	Drimia indica (Roxb.) Jessop	Gorasun	Cra-nia	Liliaceae	Herb	Tuber	Ascites, asthma, rheumatism and skin diseases	

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16	<i>Elaeocarpus</i> <i>floribundus</i> Blume.	Jalpai	Bel-foi	Elaeocarpaceae	Tree	Leaf	Diarrhea
17	<i>Ficus semicordata</i> Buch Ham. <i>ex</i> Smith	Dumur	Shoshco	Moraceae	Tree	Root and fruit	Leprosy and ear diseases
18	Hemidesmus indicus L.	Anantamul	Crasara	Asclepiadaceae	Creeper	Root and stem	Cough asthma, skin diseases and pain.
19	Ichnocarpus frutescens (L.) R.Br.	Shyamlata	Crathera	Apocynaceae	Creeper	Leaves	Injury
20	<i>Ipomoea mauritiana</i> Jacq	Bhuikumra	Cralohid	Convolvulaceae	Twiner	Tuber	Body injury and sexual disease's
21	Justicia gendarussa Burm.	Jagatmadan	Berabaha	Acanthaceae Shru		Leaf	Fever, rheumatism,
22	Kalanchoe pinnata (Lam.) Pers.	Pathorkuchi	Sha	Crassulaceae	Herb	Leaf	Stomach pain and wound
23	Leucas aspera (Roth) Spreng	Shetadrone	Young pra	Lamiaceae	Lamiaceae Herb		Cold, cough, Stomach pain and toothache
24	<i>Litsea glutinosa</i> (Lour.) Roxb.	Menda	Ra-rang gra	Lauraceae	Tree	Bark and leaf	Boils, carbuncles and dysentery
25	<i>Ludwigia</i> hyssopifoa (G.Don) Exell.	Long gach	Pagla gash	Onagraceae	Herb	Leaf and fresh stem	Sores in foot
26	<i>Microcos</i> paniculata L.	Assar	Pristi	Tiliaceae	Tree	Bark	Stomach pain, blood dysentery and diarrhea
27	<i>Mikania cordata</i> (Burm. f.) Rob.	Assam lata	Japani-lot	Asteraceae	Climber	Leaf	Body injure, gastric ulcer and dysentery
28	Mimosa pudica L.	Lajjabati	Budialahari	Mimosaceae	Shrub	Leaf	Piles, urine tract stone and skin diseases
29	<i>Oroxylum indicum</i> (L.) Vent.	Khana/Kanai dinga	Tuliliang	Bignoniaceae	Tree	Bark	Jaundice and wound by insect bite
30	Pandanus amaryllifolius Roxb	Polaopata	Cra-plang	Pandanaceae	Herb	Leaf	Body pain
31	Phyllanthus emblica L.	Amloki	Aola	Euphorbiaceae	orbiaceae Tree Fr		Anemia and dyspepsia
32	Piper nigrum L.	Golmarich	Merit	Piperaceae	Climber	Fruit	Cold and cough
33	Polygonum lapathiflium L.	Biskatali	Hajra	Polygonaceae	Herb	Leaf juice	Jaundice and liver problems
34	Psidium guajava L.	Peyara	Supriam	Myrtaceae	Tree	Leaf, flower	Dysentery, wounds, and asthma
35	Scoparia dulcis L.	Bandhane	Slibkhar	Scrophulariacea e	Herb	D Leaf Urinary prol anemia, g ulcer, weakne	
36	Swietenia mahogany (L.) Jacq.	Mahogini	Sowa	Meliaceae	Tree	Bark	Indigestion

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37	Tamarindus indica L.	Tetul	Saken-chili	Caesalpinaceae	Tree	Fruit and leaf	Body pain , gastric, dysentery and dyspepsia
38	<i>Tectaria decurrens</i> Copel	Fern	Daynna	Tectariaceae	Fern	Leaf	Insect bite
39	<i>Terminalia arjuna</i> (Roxb.) W.& A.	Arjun	Arjune	Combretaceae	Tree	Bark	Dysentery, asthma, heart diseases, menstrual problems and leucorrhoea
40	<i>Tinospora cordifolia (</i> Willd) Hook. f.	Gulancho	Jermay	Menispermacea e	Climber	Stem	Acidity, jaundice chronic dysentery and diarrhea.
41	Zingiber montanum (Koenig)	Wild-ada	Chiangpra	Zingiberaceae	Herb	Rhizome	Cough, indigestion and weakness
42	Piper betel L.	Paan	Pratah	Piperaceae	Climber	Leaf and root	Cough, indigestion and gonorrhea
43	<i>Gmelina arborea</i> Roxb.	Gamar	Sagamay	Verbenaceae	Tree	Root and leaf	Fever, constipation, anemia and dysentery
44	Aquilaria malaccensis Lamk.	Agar	Agru	Thymelaceae	Tree	Resin	Chronic diarrhea, asthma and rheumatism
45	Cinnamomum tamala Nees.	Tejpata	Isli-pariang	Lauraceae	Tree	Leaf and bark	Cough, piles, skin diseases, heart diseases and gonorrhea

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Most of the plants recorded during the study found to possess multi uses. The plants used to cure different ailments by the *Khasia's* were tree 36% (16 species) followed by herb 24% (11 species), creeper 20% (9 species) shrub 16% (7 species), and fern 4% (2 species) (Figure 1).





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Plant parts like leaf, stem, root, rhizome, bark, fruit, flower and gum/resin were used for treatment of different diseases. Leaves constituted the major plant part used (35%), followed by rhizome (19%), root (12%) and bark (11%). Other plant parts used included stem (10%), fruit (5%), flower (4%) and resin/gum (4%). The results are shown in Figure 2.



Figure 2: Percentage of use of plant parts by the *Khasia* people.

About 26.5% plants were used to treat stomach problem followed by different type of pains (24%), dysentery (17.5%), cough (13%), asthma (13%), sexual diseases (13%), skin diseases (13%) and diarrhea (11%).

Fever, diarrhea, skin diseases, rheumatism, insect bite, tooth ache, injury and jaundice are the other major complaints treated by *Baidday's*. The most common disorder skin diseases and rheumatism treated with 6 medicinal plants (13%). However, the *Baidday's* used 12 plants for the treatment of stomach problem, 11 plants for pain and 8 plants for dysentery which suggests this is a common disorder among the *Khasia* people of Moulvibazar district.

Diseases	Tree	Herb	Shrub	Creeper	Fern	Total	Frequency of use (%)
Anemia	2					2	4.5
Asthma	3	1	1	1		6	13
Boils	1					1	2
Cold ailments		1		1		2	4.5
Constipation	1		1			2	4.5
Cough	1	2		3		6	13
Diarrhea	4			1		5	11
Dysentery	5			3		8	17.5
Ear ache	1					1	2
Fever	3	1	1			5	11
Heart diseases	2					2	4.5
Indigestion	3	1	1	1		6	13
Injury				3		3	6.5
Insect bite	1	1			1	3	6.5
Jaundice	1	1		1		3	6.5
Leprosy	1					1	2
Menstrual problem	1		1			2	4.5
Pain	2	5	2	2		11	24
Piles	1		1			2	4.5
Rheumatism	1	2	1			4	9
Sexual diseases	2		1	3		6	13
Skin ailments	2	2	1	1		6	13
Stomach problem	2	4	2	3	1	12	26.5
Tooth ache	1	1	1			3	6.5
Tumor			1			1	2
Urinary problem		1	1			2	4.5
Weakness		2				2	4.5

Table 2: Types and frequency of different ethnomedicinal plants used by the Khasia people.

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CONCLUSION

It is important that modern scientific studies to be done on these medicinal plants, so that the plants may be used as remedies in a more rational scientific manner. The result of this study revealed a rich diversity of medicinal plants used to treat various disease condition and ethnomedicinal knowledge, among the *Khasia* people. Through proper scientific investigation may yield novel compound to treat both old and emerging diseases. The study should be extended other parts of the country to discover an unknown potential use of any medicinal plants that have not been noticed earlier, but is being used for the centuries to treat many difficult diseases.

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