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**MEDICAL ANTHROPOLOGY AND ETHNOMEDICINE: A
CROSS CULTURAL STUDY OF NORTH EAST INDIAN
TRIBES**

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monimugdhabhuyan@yahoo.com**Abstract**

Medical Anthropology is the study of human health and disease, health care system and bio-cultural adaptation. Ethno-medicinal analysis is one of the orientations of medical anthropology. Ethno-medicine examines and translates health related knowledge and theories that people inherit and learn by living in a culture. Each society has a particular medical culture or 'ethno-medicine' which forms the culture medical common sense or logic. World Health Organisation (WHO) estimated that now a days as many as 80% of the world's population depends on traditional medicine for their primary health care needs (Azaizeh et al. 2003). The present paper tries to highlight the indigenous knowledge pertaining to different medicinal plant species used by different population of North East India by reviewing 30 research papers. An attempt has been made to see the common medicinal plant species used by different communities of North East India.

Key words: Medical Anthropology, Ethno-medicine, North East India

INTRODUCTION

Medical Anthropology is the study of human health and disease, health care system and bio-cultural adaptation. It draws upon the four field of anthropology to analyse and compare the health of regional population and of ethnic and cultural enclaves, both prehistoric and contemporary. Since the mid 1960s, medical anthropology has developed three major orientations. Medical anthropology views population as biological as well as cultural units and studies interactions among health and human evolution.

Ethno-medicinal analysis focuses on cultural system of healing and the cognitive parameters of illness. Applied medical anthropology deals with intervention, prevention and policy issues and analyses the socio economic forces and powers differentials that influences access to care. In this triad, cultural anthropology is most closely allied with ethno-medicine. In the formative years, some anthropologist followed identifying the field as 'ethno-medicine' while other preferred 'anthropology of health'. Ethno-medicine plays an important role in the medical aspect of the ethnic tribes residing in India. The knowledge of plants has come orally from generation and wild plant have been consumed as food and also have been part and parcel of ethnic tribes in their day to day life. World Health Organisation (WHO) estimated that now a days as many as 80% of the world's population depends on traditional medicine for their primary health care needs (Azaizeh et al. 2003).

Around 16000 species of higher plants are found in India and out of these 7500 species have been reported to be used by different ethnic communities for medicinal and health care purpose (Arora,1987). According to another report (Pushpagandan, 1995) over 2000 species of ethno-medicine and folk medicine are newly identified as drug yielding plants and also about 7500 plants are used in traditional health practices in mostly rural and tribal dominating villages in India.

North East (NE) region (located between 87⁰ 32' E to 97⁰52'E latitude and 21⁰ 34' and 29⁰ 50' N latitude) known for its genetic resources world over, is the Bio-geographical Gateway to India and finds place in part of two biodiversity hotspots in India (Mittermier et.al,2003). It is also one of the world's most threatened area and the recent estimates indicate it would not be long when all this will disappear in the next 15-20 years. Out of the estimated 800 species consumed as food plants in India, about 300 species are found in Eastern Himalaya alone (Singh and Arora,1978). N.E

India politically consists of Arunachal Pradesh, Assam, Manipur, Mizoram, Meghalaya, Nagaland, Sikkim and Tripura. The region has diverse ecotypes ranging from humid evergreen forest to temperate and alpine vegetation.

According to 2001 census, the region witnesses 130 major indigenous communities and is house to a number of archaic societies like Abor, Khasi, Mishing, Rabha, Naga, Apatani etc. (Ramakrishna 1992; Dutta & Dutta,2005; Kala,2005). The traditional communities of North East living here for thousands of years have built a precious knowledge base about the use of the rich bio resources of the region. This region has a strong heritage of herbal remedies and is very much an integral part of indigenous culture of North East India. Each tribal group has a particular medical culture or 'ethno-medicine' which forms the culture medical common sense or logic. The usage of 2416 plants of ethno-medicinal purpose in the country has already been documented, out of which about 1963 plants species found its uses among different ethnic groups inhabits in the NE region of the country alone (Sajem & Gosai,2006).

A good number cross cultural studies on ethno-medicinal research has been carried out in India and North East India. Chakraborty et al. (2006) documented some of the ethno-medical uses for various diseases in Purulia dist, West Bengal. Khongsai et al. (2011) studied the common medicinal plants used by Apatani, Monpas, Sinpho and Tangsa tribes of Arunachal Pradesh. Gairola et al. (2014) did a cross cultural analysis of Jammu, Kashmir and Ladhak (India) by examining the common use of medicinal plants. The main goal of the present article is to examine the common use of ethno-medicinal plants by different tribal groups of North East India.

METHODOLOGY

To capture as many as relevant sources as possible, scientific literature on ethno-medicine field studies conducted in North East India were searched to identify primary studies. This effort provides 60 research papers available in the journals, edited book and other scientific data base. From which 40 relevant studies were selected for the reviews. This potential relevance was examined and 10 were excluded as irrevalant.

RESULT AND DISCUSSION

The people of North East India find their way of survival by using locally available medicinal plants. The local tribes are largely self contained, ritually

sanctioned way of life where they practice utilization of plants part for disease and sickness (Warner 1991).

Table 1. reflects the common medicinal plants used by different communities of North East India. 20 medicinal plants which were listed are *Amomum aromaticum Roxb* .common in 2 groups (Bodo Kachari and Apatani) , *Andrographis paniculata (Burm.f)* by 2 groups (Bodo Kachari and Apatani), *Argemone mexicana L.* in 2 groups (Bodo Kachari and Apatani), *Asparagus racemosus willd* in 3 groups (Bodo Kachari, Lushai and Jaintia), *Centella asiatica L.* used by 9 groups (Bodo Kachari, Jaintia, Apatani, Chutia, Mishng, Bodo, Rajbongshi and Rangias, Lushai) *Colotropis gigantean L.* by 2 (Bodo Kachari and Apatani), *Clerodendrum Viscosum vent* by 2 (Bodo Kachari and Jaintia), *Curcuma longa L.* by 4 groups (Bodo Kachari, Jaintia, Lushai, Adi-Miniyong) , *Hibicus rosa sinensis L.* (Bodo Kachari, Apatani, Mishng, tribes of Manipur), *Houttuynia cordata Thunb* by 6 groups (Bodo Kachari, Apatani, Mishng, Santal and Goreswar and tribes of Meghalaya), *Murraya Koenigii (L) Syn-Bergera koengii* by 3 groups (Bodo Kachari, Apatani, Mishng), *Musa paradisiaca L.* (Bodo Kachari, Apatani, tribes of Meghalaya and Manipur), *Oroxylum indicum (L) vent* by 8 groups (Bodo Kachari, Chutia, Apatani, Mishng, Naga, Nepali, Lepcha and Bhutia), *Oxalis corniculata L.*(Chutia, Apatani, tribes of Meghalaya), *Paedaria foetida L.* by 3 groups (Bodo Kachari, Apatani, Adi-Miniyong), *Plantago major L.* by 2 (Jaintia and Apatani), *Spilanthes paniculata D.C* by 2 groups (Jaintia and Apatani), *Terminalia chebula Retz.* by 6 groups (Bodo Kachari, Chutia, Apatani, Nepali, Lepcha and Bhutia), *Zanthoxylum oxyphyllum Edgew* by 2 groups (Bodo Kachari and Apatani), *Zingiber officinale Rosc.* by 2 groups (Bodo Kachari and Apatani).

The present attempts to highlight the most commonly used medicinal plant i.e. *Centella asiatica L.* Jeeva et al., (2005) states that *Centella asiatica (L)* against stomach disorder and brain tonic is common to different tribes and communities of India. This plant is followed by *Oroxylum indicum (L)* commonly used by 8 groups of NE India. In NE states of India, Asteraceae is the most dominant family of medicinal plant (Saklani, 1994). The study also reveals that 2 communities of NE India used plant species of Asteraceae family for different disease problem.

CONCLUSION

The potential of ethno medical research and needs for documentation of traditional knowledge pertaining to the medicinal plant utilization for the greater

benefit of mankind is carried out. The common medicinal plants used by different tribal groups of North East India were studied and around 20 plant species were listed where mostly herbs are used for medicine. The above listed common plant species also highlight its clinical value. This type of cross- cultural study has been an ongoing process in medical anthropology.

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Table 1. Common medicinal plants used by different communities of North East India

Sl no.	Medicinal Plant	Family	Tribe/Community	Local Name of the Plant	Parts Used	Ethnomedicinal Preparation & Use	Sources
1.	<i>Anomum aromaticum</i> Roxb.	Zingiberaceae	Bodo Kachari	<i>Elaichi gidir</i>	Fruits	Paste of fruit is used in treatment of cough and pox	Basumatary et al. (2014)
			Apatani	.....	Leaf, seed	Fever, Abortion	Kala C.P, (2005)
2.	<i>Andrographis paniculata</i> (Burm.f)	Acanthaceae	Bodo Kachari	<i>Sirata</i>	Leaf	Dried leaves and stem soaked overnight in cold water, taken in empty stomach in the morning helps in relieving from malaria	Basumatary et al. (2014)
			Apatani	.....	Leaf	Dysentery	Kala C.P, (2005)
3.	<i>Argemone mexicana</i> L.	Papaveraceae	Bodo Kachari	<i>Siyalpad uri</i>	Leaf	Leaves are used in headache, malarial fever, leprosy, jaundice, etc.	Basumatary et al. (2014)
			Apatani	.....	Shoot	Skin diseases	Kala C.P, (2005)
4.	<i>Asparagus racemosus</i> willd	Liliaceae	Bodo Kachari	<i>Satamul</i>	Roots	Powdered roots are used for treating jaundice	Basumatary et al. (2014)
			Jaintia	<i>Lamardoh</i>	Leaf	Dried leaves are powdered and are taken orally to cure stomach ache and urinary disorders	Sajem et al. (2006)
			Lushai	<i>Uthinthang</i>	Leaf	Dried leaves are powdered and taken orally to cure stomach disorders	Sajem et al. (2010)

5.	<i>Centela asiatica L.</i>	Apiaceae	Bodo Kachari	<i>Manimuni fisha</i>	Whole plant	Paste is applied locally on the wound and taken to cure gastric. It is also taken as tonic	Basumatary et al. (2014)
			Jaintia	<i>Wangrake</i>	Whole plant	Decoction of leaves is used against conjunctivitis and other eye injury; crushed leaves are mixed in a cup of water with a tablespoon of salt and taken once daily for stomachic, indigestion and flatulence	Sajem et al. (2006)
			Apatani	<i>Ngyariko r</i>	Shoot	Constipation, gastricts, blood purification	Kala C.P, (2005)
			Chutia	<i>Bor-manimuni</i>	Whole plant	Infusion of leaf taken in dysentery, cholera and stomach ache. Plant eaten as raw or after cooking against worms	Borah et al. (2012)
			Mishing	<i>Manimuni</i>	Plant	Plant mixed with plants of <i>Hydrocotyle javanica</i> made into paste and used as sause and dried cake is prepared	Shankar et al. (2012)
			Bodo, Rajbongshi and Rangias	<i>Manimuni</i>	Leaf	Curry prepared from leaves is eaten to cure dysentery	Das et al. (2006)
			Lushai	<i>Hnahbial</i>	Plant	Whole plant parts are crushed and are used to cure leprosy, tuberculosis and asthma	Sajem et al. (2006)
6.	<i>Colotropis gigantean L.</i>	Asclepiadaceae	Bodo Kachari	<i>Agandobongphan</i>	Leaf	Leaves helps in curing swelling of lever	Basumatary et al. (2014)
			Apatani	.....	Root	Dog bite	Kala C.P, (2005)

7.	<i>Clerodendrum Viscosum vent</i>	Verbenaceae	Bodo Kachari	<i>Makhna bilai</i>	Leaf	Juice of the leaves is taken orally as tonic to relieve from dysentery	Basumatary et al. (2014)
			Jaintia	<i>Jhr-khtung</i>	Leaf	Leaves are taken raw or are mixed with vegetables for curing diabetes, high blood pressure and asthma	Sajem et al. (2006)
8.	<i>Curcuma longa L.</i>	Zingiberaceae	Bodo Kachari	<i>Haldai</i>	Rhizome	Juice of the rhizome is effective in stomach disorder and gastric problem and also used to cure bone fracture	Basumatary et al. (2014)
			Jaintia	<i>Chyrmitt</i>	Rhizome	Pills are made out of crushed rhizomes and each pill is taken orally before food to counteract dyspepsia	Sajem et al. (2006)
			Lushai	<i>Aieng</i>	Rhizome	Pill made out of crushed rhizomes is taken orally before food to counteract dyspepsia	Sajem et al. (2010)
			Adi-Miniyong	<i>Keloti</i>	Rhizome	Extract of Rhizome applied to wounds and cuts for clotting of blood and as an antiseptic	Baruah et al. (2013)
9.	<i>Hibicus rosa sinensis L.</i>	Malvaceae	Bodo Kachari	<i>Joba bibar</i>	Bark and flower bud	Crushed bark is used for treatment of Cholera. Flower buds consumed for relieving stomach pain	Basumatary et al. (2014)
			Apatani	.....	Flower	Reproductive disorders	Kala C.P, (2005)
			Mishing	<i>Gokhai aphun</i>	Flower	Flower mixed with Talmisri and taken orally with water	Shankar et al. (2012)
			Tribes of Manipur	<i>Juba, kusoom</i>	Flower	Its extracted sweat from the flower is used to cure soreness of tongue and ulcer in mouth	Yumnam et al, (2012)

10.	<i>Houttuynia cordata Thunb</i>	Saururaceae	Bodo Kachari	<i>Maisunduri</i>	Leaf	Fresh juice of the leaves is used to cure diarrhoea	Basumatary et al. (2014)
			Apatani	.....	Shoot	Freshness, good sleep, heart disorders	Kala C.P, (2005)
			Mishing	<i>Masundari</i>	Root	Root is pasted and given in skin disorders	Shankar et al. (2012)
			Santal and Goreswar	<i>Mochondori</i>	Leaf	Leaf curry is used to reduce bodyache	Das et al. (2006)
			Tribes of Meghalaya	.....	Root, leaf	Roots and leaves are eaten raw to treat amoebic dysentery	Lahoo et al. (2011)
11.	<i>Murraya Koenigii (L) SS</i>	Rutaceae	Bodo Kachari	<i>Nwrshing</i>	Leaf	Paste of leaves and juice is given to relieve high fever	Basumatary et al. (2014)
			Apatani	.....	Leaf	Stomach trouble	Kala C.P, (2005)
			Mishing	<i>Norsingh Gachh</i>	Leaf	Juice is extracted from leaf and taken orally with water	Shankar et al. (2012)
12.	<i>Musa paradisiaca L.</i>	Musaceae	Bodo Kachari	<i>Athia thalit</i>	Stem	Paste of underground Stem is applied on the forehead to reduce temperature and relieves from intense fever.	Basumatary et al. (2014)
			Tribes of Meghalaya	.....	Whole plant	Plant juice or crushed raw fruit mixed with curd is taken orally 2-3 times daily to treat diarrhoea and dysentery	Lahoo et al. (2011)

13.	<i>Oroxylum indicum (L) vent</i>	Bignoniaceae	Apatani	.....	Fruit	Indigestion	Kala C.P, (2005)
			Tribes of Manipur	<i>Laphu</i>	Fruit, Stem, Roots	Unripe fruits are eaten to cure dysentery and diarrhoea. Roots and stems are cooked and eaten as tonic. Raw stems are mixed with common salt, chilli and dry fish or they are cooked as an item of curry for clearance of stomach	Yumnam et al, (2012)
			Bodo Kachari	<i>Kharang khandai</i>	Bark, seed	Bark and seeds are used in snake bite	Basumatary et al. (2014)
			Chutia	<i>Bhat-ghila</i>	Stem, Bark	Infusion of stem bark taken orally in diarrhoea and dysentery	Borah et al. (2012)
			Apatani	.....	Seed	Purgative, headache	Kala C.P, (2005)
			Mishing	<i>Bhatgila</i>	Stem	Powdered bark is taken for 5-6 days to cure malaria	Shankar et al. (2012)
			Naga	<i>Tsungrem Noklangnok</i>	Bark, Leaf, Pods	Decoction is drank for high bold pressure, diabetes and malaria	Jamir et al. (2012)
			Nepali, Lepcha and Bhutia	<i>Totola</i>	Flower, Seed,	Flowers are burned to make gel of remaining ash, which then applied to treat burns. Seeds are used for pneumonia, fever and throat complications.	Idrisi et al. (2010)

14.	<i>Oxalis corniculata L.</i>	Oxalidaceae	Chutia	<i>Tengesi</i>		Plant paste filtered and used	Borah S.M, et al. (2012)
			Apatani	.....	Shoot	Appetizer, headache	Kala C.P, (2005)
			Tribes of Meghalaya	.....	Whole plant	Whole plant is ground into paste together with <i>Drymaria cordata</i> , <i>Centella asiatica</i> and <i>Metha spicata</i> ; juice extracted from the paste is used as a medicine in diarrhoea and dysentery	Lahoo D, et al. (2011)
15.	<i>Paedaria foetida (L)</i>	Rubiaceae	Bodo Kachari	<i>Khiphibandang</i>	Young stems and leaves	The paste of the leaves and young stem helps relieving from dysentery and stomach ache	Basumatary et al. (2014)
			Apatani	<i>Phadobas lodi</i>	Stem	Gastritis, diarrhoea, stomach disorder	Kala C.P, (2005)
			Adi-Miniyong	<i>Yepe-tree</i>	Leaf	Besides used as vegetable to cure diarrhoea and dysentery, the paste of the leaves applied to skin diseases	Baruah et al. (2013)
16.	<i>Plantago major L.</i>	Plantaginaceae	Jaintia	<i>Chhakur-blang</i>	Leaf	An equal proportion of crushed leaves and raw milk is mixed and taken in an empty stomach for almost a week to cure jaundice; leaf extract is used for curing ear ache, tooth ache and gum bleeding	Sajem et al. (2006)
			Apatani	.....	Leaf	Constipation	Kala C.P, (2005)

17.	<i>Spilanthes paniculata</i> D.C	Asteraceae	Jaintia	<i>Santustem</i>	Flower	Flowers are crushed and applied twice daily to relieve tooth ache and cure cavity formation	Sajem et al. (2006)
			Apatani	.....	Leaf	Constipation	Kala C.P, (2005)
18.	<i>Terminalia chebula</i> Retz.	Combretaceae	Bodo Kachari	<i>Selekha</i>	Fruit	Powder of the dried fruit is taken orally to relieve Stomach pain and also for gastric problem.	Basumatary et al. (2014)
			Chutia	<i>Silikha</i>	Seed	Decoction of seed given once daily for 7 days in asthma	Borah S.M, et al. (2012)
			Apatani	<i>Ontyal</i>	Fruit	Cough	Kala C.P, (2005)
			Nepali, Lepcha and Bhutia	<i>Harra</i>	Fruit, Bark	Fruits and bark are dried and crushed to make powder, and administered orally with water for indigestion, diarrhoea, fever, throat infection	Idrisi et al. (2010)
19.	<i>Zanthoxylum oxyphyllum</i> Edgew	Rutaceae	Bodo Kachari	<i>Mejenga</i>	Leaf	Used as remedy for toothcare	Basumatary et al. (2014)
			Apatani	.....	Fruit	Stomach disorder	Kala C.P, (2005)
20.	<i>Zingiber officinale</i> Rosc.	Zingiberaceae	Bodo Kachari	<i>Haizeng</i>	Rhizome	Paste of rhizome is effective in stomach disorder, cough, cold, fever and in healing arthritis	Basumatary et al. (2014)
			Apatani	.....	Rhizome	Cough	Kala C.P, (2005)