

Assam's Ethno medicinal knowledge from an Ayurvedic 'Health maintenance perspective' and its relevance today

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Abstract— Assam, a state in the north eastern part of India and a biodiversity hotspot is an abode of a number of ethnic communities like Karbi, Bodo, Hajong, Tai –Khamyangs, Ahom, Deori, Koch Rajbongshi, Chutia, Sonowal, Kachari, Mising, Rabha, Tiwa, Dimasa, Lalung, Chorei and many more. Each community intricately interwoven in the region's fabric yet retaining their distinct identity. Each ethnic community have their own traditional ethno medicinal practice. The World Health Organisation states that 65-80% of world population in developing countries depend on plants for Primary health care. In recent years, with the changing Health and Disease scenario world over, Ayurveda's health maintenance advocations like 'Rasayana' has found immense relevance. The use of ethno pharmacological, ethno botanical information has also gained tremendous attention in the scientific community. This reiterates that Ayurveda and ethno medicine needs to be looked at from multiple perspectives like:

1. Understanding ethnic health seeking behaviour.
2. Ayurveda and its health maintenance advocations like Rasayana.
3. Ethno medicinal knowledge and its viable role in devising an economic and cost effective treatment modality.
4. Relevance today in terms of the present health and disease scenario.

Key words: Ayurveda, Assam, ethnomedicine, Rasayana

I. INTRODUCTION

Assam, a state in the north eastern part of India and a biodiversity hotspot is an abode of a number of ethnic communities like Karbi, Bodo, Hajong, Tai –Khamyangs, Ahom, Deori, Koch Rajbongshi, Chutia, Sonowal, Kachari, Mising, Rabha, Tiwa, Dimasa, Lalung, Chorei and many more. Each community intricately interwoven in the region's fabric yet retaining their distinct identity. Each ethnic community have their own traditional ethno medicinal practice. The World Health Organisation states that 65-80% of world population in developing countries depend on plants for Primary health care. North east India is rich in plant biodiversity as well as ethnic diversity. The tribal population is 12.83 % in Assam. The ethnic community still maintain a great traditional knowledge base in herbal medicine .[1] In recent years, with the changing Health and Disease scenario world over, Ayurveda's health maintenance advocations like 'Rasayana' has found immense relevance. Many a disease's pathologic basis finds its etiology in the daily dietary habits. The fact that the advocations in Ayurveda like Rasayana can be incorporated on a daily basis and that the Ethno medicinal sources both traditional knowledge and practice are prevalent makes the proposal of 'Rampant and conscious use of Ethno medicine' even more relevant. Added to this, the fear of traditional knowledge, ethnobotanical information being threatened by modernization, deforestation further reiterates

the urgent need to give a serious insight into this. This paper delves into its perspective under the following heads:

The Ethnic fabric of Assam

The health seeking behaviour of the ethnic communities

Ayurveda and its health maintenance principles

Today's disease and health scenario

Relevance of ethno medicinal knowledge and Ayurveda's health maintenance advocations

Ethno medicinal knowledge and its viable role in devising an economic and cost effective treatment modality.

The Ethnic fabric of Assam :

Assam is a diaspora , it is historically a tribal state. Anthropometric data suggests that the following ethnic types exist in Assam:

1. Dolichocephalic-platyrrhine type
2. Dolichocephalic-mesorrhine type
3. Mesocephalic-mesorrhine type
4. Brachycephalic -leptorrhine
5. Brachycephalic-platyrrhine
6. Dolichocephalic-leptorrhine

The people of Assam inhabit and inherit a multi-ethnic, multi lingual and multi religious society. They speak languages that belong to three main language groups: Indo-Aryan, Austroasiatic and Tibeto-burman. Irano Scythians and Mediterranean elements also appear in the Assamese people.

Related ethnic groups like Kalita, Ahom, Assamese Brahmins (Including Ganaks), Chutiya, Koch Rajbonsis, Bodo, Dimasa, Karbi, Mikir, Mishings/Miri, Nath, Deuri, Kaibarta/Keot, Moran, Mottok, Kumar, Kayastha, Tiwa (Lalung), Rabha, Nadiyal, Sonowal Kachari, Thengal Kochari, Sarania Kachari, Tai phake and other Tai groups. People of Assam are a racial diversity of Australoid, Indo Aryan, Tibeto Burman including a mix of all three types of races. [2],[3],[4],[5],[6],[7],[8]

The health seeking behaviour of the ethnic communities:

While plants have adapted to the diverse habitats of the world through their physical and biochemical modifications, human populations have adapted largely through the generation and application of knowledge-both ecological and technological, practical and theoretical. Today, traditional societies throughout the world possess a wealth of such knowledge which they have accumulated during prolonged interaction with the natural world, which remains fundamental to their physical, social and spiritual well being. [9] This remains true in the case of Assam too. There are innumerable plant lores that the ethnic people boast of and it is very evident in their diet and indigenous treatment options. Diverse ethnic groups of Assam have their own traditional medicine associated with their customs and ethos. There has been practice of conscious incorporation of plants and herbs in their diet with an aim of health maintenance. There are also instances where they seek help from traditional herbal healers for diseases ranging from gastro-intestinal, respiratory, general debility, carcinomas, tuberculosis, bone disorders to obstetric and gynaecologic. There are cultural practices aimed at better health in different seasons. A few examples are: 101 greens (Locally called esho ek bidh saak or pason) at the time of the Bohag Bihu, a festival celebrated at the onset of spring, practice of consuming certain flowers for protection against chicken pox and measles, colds, skin disorders, gynaecological disorders, fever, cough, pneumonia e.t.c. Just after delivery, certain plants are mandatory for early recovery of the new mother and for proper lactation. Plants like Tulsi (*Ocimum sanctum*), bhedailata (*Paederia foetida*), bahkah (*Adhatoda vasica*), bilwa (*Aegle marmelos*), halodhi (*curcuma longa*), joba (*Hibiscus rosa sinensis*), nirgundi (*Vitex negundo*) to name a few are used in varied ailments [10],[11],[12],[13] Many plants are used as a preventive option too. Such innumerable practices only reaffirm and reiterate the immense health consciousness of the people of this region and their close connect with herbs and plants from the perspective of health and treatment. It also suggests how a co-evolution between man and environment exists and that it should not be disturbed. The Padmapurana of Narayandeva, a Manasa poet of the

seventeenth century, furnishes us with items of Assamese diet including herbs [14]

Ayurveda and its health maintenance principles :

Ayurveda has postulated health maintenance principles like 'Swastha vritta'. It has stressed on health maintenance primarily followed by treatment of the diseased. Advocations like Rasayana have been exclusively made with the aim of a long and healthy life. Its treatises like Charak Samhita, Sushrut Samhita, Astanga, Bhaishajya ratnavali and others have vividly elucidated upon Rasayana. In fact, the topics of treatment (chikitsa) first initiates with preventive and health maintenance concepts like Rasayana and Vajikaran followed by treatment indications for diseases. Charak in his treatise, Charak Samhita has elucidated upon Rasayana extensively and has described Rasayana as that which helps in acquiring the best quality of tissues in the body, and a means to acquire long life, good memory, excellent mental retention, health, youthfulness, lustre, physical and sensory health and delayed ageing.

Charak has started the Chikitsa sthana or the subject of treatment with Rasayana namely. He has explained treatment modalities as two types:

Swasthasya urjaskar meaning that which ensures health and excellent energy, strength.

Aturasyaroganut that which cures the diseased [15], [16]

Sushruta has expounded Rasayana naming the chapter literally as 'Sarvopghata shamaniya rasayana' (diseases preventive modality). There is mention of formulations ensuring longevity of life named as 'Ayuh kanya rasayana' He has also advocated Vajikarana or aphrodisiac therapy as beneficial in the debilitated and named the chapter literally as 'Kshinabaliya vajikaranchikitsitang'. There is an entire chapter named 'Svabhava vyadhi pratisedheniya rasayana' discussing therapies preventing diseases. A chapter named 'Nivritta santapiyang rasayana' deals with Rejuvenatory therapy only [17],[18],[19],[20] It is mentioned that one must consume rasayanas during teenage, at youth and in mid age to promote longevity, memory, intellect, health. There is indication for use of amlakhi, haritaki, nirgundi, ashwagandha, triphala as Rasayana kalpas (prepared formulations) [21] Astanga Sangraha, another of the important treatise has stated that Rasayana is one of the assets of health 'Arogya sadhan' [22] Astanga hriday too has an entire chapter on Rasayana wherein numerous single herbs and formulations are advocated to ensure good health and disease defence. [23],[24] Ayurvedic treatises also advocate Rasayana in immune compromised disorders for early recovery. For example, in Tuberculosis major immune deficit occurs. It is also noteworthy that most of the HIV infected persons in their terminal stage succumb to Tuberculosis. Ayurveda

mentions use of haritaki, amalaki, sunthi, jivanti, pippali, kantakari, vasak in Rasayana formulations.[25] Rasayanas like Nirgundikalpa, nirgundipanchanga kalpa has been considered as ultimate not just for defying ageing process but also for recovery in immune compromised disorders called Kshaya which has symptoms like tuberculosis.[26] Another treatise, Sharangadhar Samhita has defined Rasayana as those formulations that evade 'Jara' and 'vyadhi' meaning old age and disease. Chakradatt has an entire section on Rasayan called 'Rasayanadhikar'[27] Bhava Prakash, another of the major treatises of Ayurveda describes about Rasayana in 'Rasayana adhikara chapter'[28] Surprisingly, many of the herbs and plants mentioned in these formulations in various classics of Ayurveda are very much used by the ethnic groups in their diet and treatment regimen till date.

Today's disease and health scenario:

If we were to see the WHO statistical health profile of India, out of the top ten causes of death, Ischaemic heart disease, stroke, tuberculosis, acute respiratory infections, chronic respiratory diseases, diabetes are predominant. [29] Tuberculosis remains the leading cause of death among people living with HIV i.e one in three AIDS related deaths. [30] W.H.O says that nearly every family in the world is touched by cancer, which is now responsible for one sixth deaths globally. Now stress is made to reduce its burden and improve the survival and quality of life of the patients. Cancer care is the call. [31] Today, there is a definite surge in life style disorders, immune compromised disorders. Even treatment interventions entails immune deficit that's uncalled for. Thus, strengthening the body in terms of health maintenance and disease defence is important.

Relevance of ethnomedicinal knowledge and Ayurveda's health maintenance advocations :

Ayurveda is basically an excerpt of the Atharva veda. Ethnomedicinal practice was prevalent in Assam from ages. If we were to surf through the Atharva veda and ethno medicinal knowledge in Ayurveda then surprisingly and convincing us further, we find references and mentions of the KIRATAS, people who lived in India's north eastern part of the hills and forests in .In Atharva veda, it is mentioned that a young maid of kirata race, a little damsel digs the drugs with a shovel wrought of gold on the high ridges of the hills suggesting that they were gatherers and had ample knowledge of herbal medicine. In Kalika purana, epics like Mahabharata and Ramayana, the kiratas were termed as yellow skinned, strong, shining in gold. This mention of the Kiratas in the vedas imply that in around 10th century B.C when the vedas were supposed to have been compiled, these people were occupying the slopes of the Himalayas and other regions. In the battle of Mahabharata Bhagadatta, the king of

Pragjyotish (modern day Kamrup, Assam) was composed of Kiratas. Even Vishnu purana speaks of the geographical distribution in the eastern India consisting of Kiratas. In the Periplus of the Erythrean Sea, a Greek word of 1st century B.C, there is mention of Kirrhadae in the hills of Assam and Burma which is no other than the Kiratas. References confirm that Kiratas were a group of yellow skinned people whose home was in the Himalayan slopes and in the mountains of the east particularly in Assam. [2] ,[6] An important Ayurvedic treatise, Dhanvantari nighantu on medicinal plants mentions the Kiratas-aboriginal tribes of being conversant with the plants, their size, shape, colour, name, habitat and types. [32] This reiterates how well these ethnic group of people who has had several genetic strains by now coexisted with nature and had profound knowledge of herbs.

By far, the biggest human use of natural world has been the use of plants as medicines. The biggest capital till date has been Knowledge capital. In the context of traditional medicinal knowledge and Ayurveda's health maintenance principles, if both could be tapped well, then Health for posterity will not be a distant dream. For example, Cancer is the second leading cause of death. It's worth mentioning that 'Ageing' is a fundamental factor for the development of cancer. The incidence of cancer rises dramatically with age. The overall risk is combined with the tendency for cellular repair mechanisms to be less effective as a person grows older. [33] Also, radiation and chemotherapy brings with it adverse effects, both short term and long term. These can be mitigated with Rasayana. Ageing, a predisposing factor can be slowed and may be reversed with Rasayana. The quality of life can be assured to patients. Again, in HIV infection, patient's care has seen an evolving role and herein the potential role of Rasayana and Traditional health maintenance options needs to be explored. Similarly, in the case of Tuberculosis too Rasayana, Vajikarana can be stressed upon to enhance immunity and strength.

Ethno medicinal knowledge and its viable role in devising an economic and cost effective treatment modality:

Kneading both the ethno medicinal knowledge and the Ayurvedic advocations is the need of the hour. Assam is a meeting place of different ethnic strains which contributed to the evolution and development of different racial groups and cultures. Traditional phyto therapy and new drug discovery cannot be seen with two perspectives but it should be blended and branded in today's marketing age. Moreover, the traditional food are more of a functional food in terms of the presence of functional components like anti-oxidants, medicinal body healing chemicals, probiotics, dietary fibres. The functional molecules help in weight management, blood sugar level balance and immune support. The functional

properties are further enhanced by processing methods like sprouting, fermenting, etc [34] ,[35]These methods and concepts are ancient and traditional but their relevance still continue. With the surge in life style disorders and ailments like Cancer, their incorporation in modern day health care delivery makes more sense today. It has the potency to work wonders and serve greater purposes like: biodiversity conservation, preservation of traditional knowledge, cost effective health and treatment options and freedom from lifestyle disorders. Moreover, this part of the world with an abundant forest cover with lots of medicinal plants in the vicinity needs to be utilised. It has one-sixth of the country's forest resources as a whole with 39% in Assam. The Botanical survey of India has identified 47,688 plants out of which 10,400 have medicinal properties. Unfortunately, many of these are turning endangered. [36] There is a need of conservation and what better way than stressing on the prospects of health assurance through these medicinal plants by propagating proper programmes than simple afforestation drive . In fact, today the burden of diseases has shifted to non- communicable ailments and so there should be a shift to preventive and maintenance care from conventional medicine. From this perspective, traditional health care and Ayurveda can be of great benefits. One must not forget that ethno botany has not died in modern age but it is a continuing process. Extensive study concerning mutual relationship between plants and traditional people as well as their potential application is the call of time. It should not be allowed to dwindle and disappear.

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