

Traditional Ethnomedicinal Practice in the Homemade Alcoholic Beverage of Mising Community of Majuli District, Upper Assam

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Assam's Mising community is the state's second most populous tribal community. Since ancient times, the Mising tribe has consumed homemade alcoholic beverages. Mising community members, primarily drink two types of homemade alcoholic beverages: Po:ro Apong and Nagin Apong. Various plant ingredients were used in the preparation of the starter culture for such homemade alcoholic beverages as Apong. In Mising rural areas, the ingredients of these plants were also used in traditional ethnomedicinal practise. The current study documented the Mising community of Majuli District, Upper Assam's traditional ethnomedicinal practise in the homemade alcoholic beverage.

Keywords: Apong; Alcoholic beverage; ethnomedicinal; Mising; Majuli; Plant.

Homemade alcoholic beverages made from rice are popular among many tribal communities in northeastern India, with many of them having done so since ancient times^{1,2}. It is also associated with many occasions such as celebrations, ceremonies, festivals, weddings, and even death rituals in the socio-cultural lives of indigenous peoples³. The different processes' fermentation methods are nearly identical, with the exception that they are derived from different types of plant species used to prepare starter culture⁴. The Mising people of northeastern India, particularly Assam and Arunachal Pradesh, have a traditional homemade alcoholic beverage called "Apong" that is a part of their cultural, social, and religious life. According to various authors, different

plants were reportedly used in the production of homemade alcoholic beverages' starter culture in northeastern India. In the year 2021, this study aims to implement the traditional ethnomedicinal practise of making homemade alcoholic beverages in the Mising community of Upper Assam, Assam.

MATERIAL AND METHODS

Study area

A field survey was conducted for three months (September-December 2021) in villages and rural areas in the Majuli district, Upper Assam. The region was selected based on the available information on the distribution of traditional recipes for homemade alcoholic beverages. The

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information was collected primarily from rural households involved in the manufacturing process of homemade alcoholic beverages.

RESULT AND DISCUSSION

Observations

The following information was collected during the survey work during the survey period. Also mentioned are the scientific name and the local names (*in Mising*) of plants and various other ingredients used in the homemade preparation of alcoholic beverages. Table (1) shows the number of plants and their parts used to make homemade liquor starter culture cakes. All species were collected from nearby villages and forests as wild plants used by these tribes in the Majuli, district. Upper Assam. A total of 21 plant families were recorded during the investigation periods; these are *Poacea*, *Moracea*, *Costaceae*, *Zingiberaceae*, *Umbelliferae*, *Schizeaceae*, *Gentianaceae*,

Myrtaceae, *Solanaceae*, *Scrophulariaceae*, *Bromeliaceae*, *Lamiaceae*, *Laurels*, *Lamiaceae*, *Dogbanes*, *Rutaceae*, *Thelypteridaceae*, *Asteraceae*, *Lamiaceae*, and *Piperaceae*. Study periods we have visited more than 20 villages households they have similar kinds of plants species used processing homemade alcoholic beverages. We also documented these plants' ethnomedical practice in a rural area for a decade (Table 1). Generally, these phytonutrients are thought to improve the quality of the product and are used in the preparation of "epop". This study suggests that different plants species ingredients are used to meet different needs for improving the final product. However, some ingredients are used as preservatives, while others are used as an antioxidant, antimicrobial agents, and fragrances⁵. Two types of the homemade alcoholic beverage of Mising tribes, Po: ro Apong and Nogin Apong. Po: ro Apong: Po: ro Apong is the most popular homemade alcoholic beverage in Assam and Arunachal Pradesh. Methodology of Po: ro Apong and Nogin Apong extraction process briefly described the ^{1,4,6}. In Assam, different ethnic groups variety of plants ingredients used for processing starter culture cake of homemade alcoholic beverages; they believed these plants ingredients provide the fragrance, flavor, and color of alcoholic beverages⁷. Indigenous fermented food is prepared utilizing different substrates and non-pathogenic microorganisms as starter and processing culture to be sold at the local markets for local consumption. Probiotic bacteria play a major role in the production of most of the fermented foods and beverages⁸. Indigenous fermented foods are an integral part of diet of the ethnic tribes in the Himalayan belt of India, being the oldest and most



Fig. 1. "Epop" starter culture of Apong preparation by Mising women



Fig. 2. A Mising women filtration Po: ro Apong



Fig. 3. A women filtering of Nogin Apong

Table 1. Name of plant species commonly used in preparation of “*Epop*” starter culture of Apong

S/No	Scientific name	Family	Local name	Plant part used	Ethno medical used (in villages people)
1	<i>Oryza sativa</i> L.	Poaceae	Dhan	Rice grains	Used as food
2	<i>Artocarpus heterophyllus</i> Lamk.	Moraceae	<i>Kathal</i>	Leaves	Used in anti-bacterial and fungal properties.
3	<i>Costus speciosus</i> J. E. Sm.	Costaceae	Jomlakhuti	Leaves	Used as jaundice, antioxidant
4	<i>Zingiber officinale</i> Rosc. (Zingiberaceae	Ada	Bulb	Used in Diarrhea, loss of appetite, infections, cough, and bronchitis
5	<i>Centala acciatica</i>	Umbelliferae	Bor Manimuni	Whole plant	As used appetiser, Liver function
6	<i>Hydrocotyl rotundifolia</i> (Roxb);	Umbelliferae	Soru-manimuni	Whole plant	Used as appetiser, and againstdysentery
7	<i>Lygodium japonicum</i> (L)	Schizeaceae	Kopou dhekia	Leaves	Used as Root and leaves possessmedicinal property
8	<i>Swertia chirata</i> (Buch-Hem)	Gentianaceae	Churota tita	Leaves and Burk	Used as Bitter tonic, liver disorders, malaria, and diabetes
9	<i>Psidium guajava</i> L.	Myrtaceae	Modhuri	Leaves	Used as lower blood sugar, and digestive System
10	<i>Solanum torvum</i> Sw.	Solanaceae	Tita-Bhekuri	Leaves	Used as reproductive problems treatment, wounds, and tooth decay
11	<i>Scoparia dulcis</i> L.	Scrophulariaceae	Bon-dhuniya	Leaves	Used stomach problems, diabetes, jaundice, fever, kidney stones, skin disease, reproductory issues, and pile
12	<i>Ananas comosus</i>	Bromeliaceae	Anaras	Leaves	Used as skin injuries
13	<i>Leucas aspera</i>	Lamiaceae	Dronbon	Whole plants	Used as treatment of dysentery, urogenital disorders, piles, and fever ,
14	<i>Cinnamomum verum</i>	Laurels	Dalchini	Leaves	Used as anti-diabetic, antioxidant, and Jaundice effects
15	<i>Occimum sunctum</i>	Lamiaceae	Tulsi	Leaves	Used as a diarrhea, fever, cough, dysentery and eye disease
16	<i>Rauwolfia serpentina</i>	Dogbanes	Arachoritita	Leaves	Effective treatment for hypertension and Snake bites
17	<i>Murraya koenigii</i>	Rutaceae	Sarpagandha	Whole plant	Used as digestives, Fever and appetizers in Indian cookery
18	<i>Cyclosorus dentatus</i>	Thelypteridaceae	Narasingh	Leaves	Used as diarrhea, wound hill and possessmedicinal property
19	<i>Ageratum conyzoides</i>	Asteraceae	Bihlongoni	Leaves and bark	Used against stomach pain, dysentery and diarrhea
20	<i>Vitex negundo</i>	Lamiaceae	Posotiya	Leaves and bark	Used as muscle aches and joint pains, possessmedicinal property
21	<i>Piper longum</i>	Piperaceae	Jaluk	Leaves	Used as a cough, fever, antioxidant, anti-inflammatory and muscle aches

economic methods for development of a diversity of aromas, flavors, and textures, as well as food preservation and biological enrichment of food product by the manipulation of different microbial population⁹.

CONCLUSION

Alcoholic beverages, particularly Misings' Apong, are often thought to have medicinal properties by them and are primarily consumed as a relaxant. It's also used as an offering in religious ceremonies, crisis rites, and other celebrations, so it's a drink with cultural significance in Mising society. However, the drink is only brewed in households, and no attempt has been made to commercialise it. The recipe for the drink is a gendered affair, and it is usually only known by the women in the community. There is variation in the brewing process in different regions due to the lack of a standard procedure for the knowledge of the recipe being passed down orally for generations. As a result, a thorough scientific examination of the ingredients and the brewing process will standardise the process. The scientific method will ensure that the right amounts of ingredients are used and that the medicinal properties of the ingredients are preserved. The beverage can then be used for commercial production once the procedure has been formally documented in a scientific manner. Commercialization of the drink could result in revenue that could be used for Mising society's overall development as well as provides employment for the community's youth.

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Conflict of Interest

The authors have no conflict of interest.

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