

6. Medicinal Plants Practiced by the Endemic Tribal and Bengali Healers of Tripura for Healing Gastrointestinal Diseases: An Ethnobotanical Study

Ananya Kashyap

Assistant Professor,
Department of Home Science,
H.P.B. Girls' College,
Golaghat, India.

Sutrina Dey

Research Scholar,
Department of Food, Nutrition and Dietetics,
Assam Down Town University,
Guwahati, India.

6.1 Abstract:

An ethno-botanical survey of plants in Tripura state revealed that some less known medicinal plants have been used by the indigenous tribes as well as Bengali communities. This ethno-botanical survey was conducted in the remote hills, forests and rural areas of Tripura, a diversified ethnic people rich state of North-east India, for gathering information about traditional healing methods of different common ailments. The uses of various medicinal plants by the indigenous tribal and Bengali communities of Tripura practiced for health care services were documented. Based on semi structured interview schedules, group discussions and information from the local informants, the valid scientific name, family, local name, dosages and traditional formulations were enumerated under the study. The ethnic people along with Bengali communities of Tripura are involved in using these medicinal plants. In this study, detailed information such as healer's details, preparation and dosage of medicine along with the name of folk plants and their parts used, patient details who had treated by the healers had been collected.

The data was obtained from both primary and secondary sources by the means of pretested interview schedule, whereas primary data sources were more dominant in the purpose of data collection to serve the objective of the study.

Keywords: *Ethnobotanical, medicinal, ailments, traditional, healing, collection*

6.2 Introduction:

Human beings and plants share an age old relationship. Man has been depending on plants for medicinal purpose before the beginning of the written records. Fossil records suggest that even the Neanderthal people were no exceptions.

About 250 years ago, 250,000 to 300,000 higher plants were the source of drugs for the world's population (Duke, 1990). Dependence on plants was still seen and it was estimated that 25% of prescription drugs contain active components derived from higher plants (Farnsworth and Morris, 1976). According to World Health Organization, about 80% of the world's population, especially in rural area depend on herbal medicine for their healthcare needs (Lingaiah et. al., 2013).

Gastrointestinal diseases refer to diseases involving the gastrointestinal tract, namely the esophagus, stomach, small intestine, large intestine and rectum, and the accessory organs for digestion, the liver, gallbladder and pancreas. According to the population census of 2011, about 83% of the Tripura's population of 3.7 million lives in rural area. Rural populations are comprised 69% of Bengali people and 31% of tribal populations. These people are well aware of the traditional use of various plant/forest resources in their daily life.

The present study was undertaken as an initiative for documenting the valuable information from tribes and non-tribal traditional healers and also from few old villagers about their unique knowledge on surrounding plants. By keeping eye on it, the following objectives were selected for the study:

- To prepare a database of the medicinal plants used by the Tribal and Bengali traditional healers of Tripura and to compare the collected data.
- To conduct a survey on Tribal and Bengali communities to observe the curative properties of these medical plants on various diseases.

6.3 Materials and Methods:

The study was conducted among the indigenous tribes and Bengali traditional healers residing in Tripura. In this study, 34 traditional healers were selected from different districts of Tripura. For the validation of the data, an open-ended interview schedule was prepared. All the data were analyzed on the basis of percentage. The study area was from the state of Tripura (Figure 6.1) located in the far end of north east India. The state covers an area of 1,049,169 hectares. Most of our study had been conducted in forested and rural areas of Tribal and Bengali-dominated villages in the North-Western part (22°59' to 24°14'N and 91°09' to 92°07' E) and South-Eastern part (91°18' to 91°59' E and 22°56'to 23°45'E) of West Tripura, Sipahijala, Gomati, Dhalai, Unakoti, Khowai, North Tripura and districts of South Tripura. The survey was conducted for a period of 2 (Two) months from the month of January to February, 2020. The data were obtained from both primary and secondary sources by using pretested interview schedule. After collection of data, the obtained data were coded on coding sheets using coding key for each question. The percentages of each response was calculated on the coding sheets and processed as follows:

The percentages of each response was calculated-

$$\text{Percentage} = \frac{\text{Number of responses obtained}}{\text{Total number of respondents}} \times 100$$



Figure 6.1: Study area (Map of Tripura)

Source: www.mapsofindia.com

6.4 Result and Discussion:

The present study was undertaken to obtain data about the practices followed by traditional healers in Tripura. During the study information of about 257 medicinal plants were collected which were used by the traditional healers in healing some common ailments.

The main purpose of the study was to document the traditional knowledge about the treatment of gastrointestinal diseases which was verbal in nature and still undocumented. The obtained findings are as followed:

Age group of the healers: Among the 13 traditional tribal healers, it was revealed that the majority of the healers were under the age group of 40-60 years i.e. 46%, 23% of them were under the age group of 60-80 years, 23% of them were under 20-40 years age group and 8% were fall under the age group above 80 years.

Among 21 traditional Bengali healers, 38% were under 20-40 years, 33% were under 60-80 years, 24% of them under 40-60 years and rest 5% of them were under 80 years and above age group. After analyzing the age distribution, it was revealed that most of the traditional healers were middle aged and elderly people.

Gender distribution of the healers: The study revealed that in Tripura, people take the knowledge of healing as a form of property. It was the social system in which males predominant in roles of social privileges and control of property so the knowledge was mainly transfer to male members of the family for which female traditional healers are less in number than the male healers. In case of tribal healers, among 13 persons, 11 were males and rest 2 of them were females and in case of Bengali healers, 19 were males and 2 were females.

Socio-economic condition of the healers: According to the study, 21% of tribal healers were under LIG (< Rs. 10000) and 79% were under MIG (Rs. 10000-Rs. 25000). In case of Bengali healers, 90% were under MIG (Rs. 10000- Rs. 25000) and rest 10% were under LIG (< Rs. 10,000). Since the entire traditional healer group earn their living by healing people and they do not have any other occupation, so their income level might be limited for which all the traditional healers come under middle and lower income group.

Duration of practice of the healers: In case of tribal healers, the highest percentage i.e. 46% had an experience of 10-20 years and 8% had experience more than 40 years which was minimum. Whereas, in case of Bengali healers, 38% have a healing experience in between 10-20 years which was maximum and 5% have experience more than 40 years which was minimum.

Literacy rate of the healers: In case of tribal healers, most of the healers were under-matriculation which was almost 62% and only 8% of the tribal healers were under graduate. Fifteen percent of them were illiterate which means literacy rate was almost 85%. Among Bengali healers, 33% healers were fall in each group of under matriculation and HSLC pass. Both of H.S passed and under graduate group were found to be 5% and 10% were illiterate which means literacy rate was around 90%.

Knowledge of healing of the healers: The knowledge of healings gained from two different sources. One source was ancestral which means they gained from their forefather, another one was from ancient gurus who deal with such types of medicinal plants and about their compositions. In case of tribal healers, 9 healers got their knowledge ancestral and 4 of them got from their master. On the other hand, in case of Bengali healers, 12 of 21 healers got their knowledge from their forefathers traditionally and rest of them gained from their spiritual teachers (Gurus).

Opinion of the healers regarding their practices: There was no negative feedback about their healing practices since they had a long years of experience. About 91.9 % of the traditional healers follow the traditional healing practices when they themselves or any of their family member fall sick, and rest 8.1 % approached the doctor for treatment. No negative health effects were seen in the healers during their practices.

Materials or items used by the healers: Types of materials used by the healers for their healing practices were different plants parts and the animal parts. Among the 40 healers 87.5% used the plant parts and remaining 12.5 % used animal part for the healing practices. Most of the products used for treatment were domestic and easily available. People still believe in local traditional healers. The healers also had full faith on their practices and believed that they can cure the diseases which they treat. They also claimed for absence of side effects of the treatments.

Preparation and preservation of drugs: All the traditional healers prepared the drug by themselves. Among the 34 healers only 17.65% of the healers i.e. 6 healers used to preserve their drugs. They preserved for more than 1 week to 2 months. The remaining 82.35% healers did not preserve the drug they prepared. They prepared the medicines fresh only when the patient comes.

It was found from the study that all the healers followed herbal method to heal different ailments. The present study revealed that traditional medical practitioners treat all age groups and all problems, using and administering medicines that are readily available and affordable. Their treatment was comprehensive and has curative, protective and preventive elements. So it can be concluded that the healing practices differ from tradition to tradition and person to person.

Types of gastrointestinal ailments treated by traditional healers: from the Table 6.1 it can be seen that most of the plant parts were used to treat anal fistula followed by gastritis and lastly piles. *Trachys permum* was used in treating almost all the major gastrointestinal diseases followed by *Cassia fistula*.

Parts of plants used by the healers to heal some common gastrointestinal problem: Among these 40 plants that used by the Bengali healers for healing different ailments. The traditional medicinal plant parts used by the healers for the treatment of some common ailments such as leaves, fruits, roots, whole plants, flowers, stem etc.

The most commonly utilized plant parts were fruit (20%), root (19%), leaf (18%), bark (15%) and whole plant (11%). While flower, rhizome, stem, climber, seeds, latex, wood etc. were rarely used to treat various ailments. One hundred and forty-one plants used by the tribal healers for healing purpose.

The most commonly utilized plant parts were leaf (38%), root (15%), fruit (14%), bark (12%). While flower, rhizome, stem, climber, seeds, latex, wood etc. were rarely used to treat various ailments. For reference study, list of medicinal plants along with common name, scientific name, family, parts used and disease treated had been enumerated in detail (Table 6.1).

6.5 Conclusion:

After the completion of the study, it can be concluded that most of the rural people of Tripura were still believed in the aged old traditional healing and the use medicinal plant in healing different ailment. So, it was the need of the hour to preserve these age old traditions of healing common ailments practiced by the local traditional healer and also the value of different medicinal plants used by them in healing different ailments.

So, it was the high time for preservation and promotion of age old traditions of the indigenous tribal and Bengali community to integrate the traditional knowledge of healer and their healing practices with the modern medicine for the welfare of the mankind as a whole.

Thus it can be concluded that though modern medical science has provided support in healing simple and complicated diseases, but these communities were still depending on traditional healers and their knowledge of healing practices for different ailments. But the mode of practice was mostly oral and it is coming to extinct stages. The study was an attempt to document this fading knowledge in order to conserve it for future generation to come.

6.6 Recommendations:

- For proper documentation more time was required.
- The phytochemical quality and other medicinal properties should be properly analyzed.
- It was recommended that mass awareness should be done regarding the need for conservation of the medicinal plant and also in promotion of knowledge of the traditional healers.

6.7 References:

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Table 6.1: List of medicinal plants used by traditional Bengali and Tribal healers to treat gastrointestinal disorders:

Sr No.	Local name	Common name	Scientific name	Family	Part use	Name of diseases to be treated
1.	Chal mugra	Chalmugra	<i>Hydnocarpus kurzii</i>	<i>Achariaceae</i>	Fruit	Anal fistula
2.	Jangli horitki	Black Myrobalan	<i>Terminalia citrina</i>	<i>Combretaceae</i>	Fruit	Anal fistula
3.	Neem	Neem	<i>Azadirachta indica</i>	<i>Apiaceae</i>	Leaf	Anal fistula
4.	Jowan	Ajwain	<i>Trachys permum</i>	<i>Apiaceae</i>	Fruit	Anal fistula, Piles, gastric problem, gastritis, constipation
5.	Triphola	Amalaki, Vibhitaki, Haritaki	<i>Emblica officinalis</i> , <i>Terminalia chebula</i> , <i>Terminalia Belerica</i>	<i>Phyllanthaceae</i> <i>Combretaceae</i>	Fruit	Anal fistula
6.	Sona pata	Shyonak	<i>Cassia fistula</i>	<i>Fabaceae</i>	Leaf	Anal fistula, Piles, gastritis, constipation
7.	Kalomegh	Kalmegh	<i>Andrographis paniculata</i>	<i>Acanthaceae</i>	Leaf	Anal fistula

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Sr No.	Local name	Common name	Scientific name	Family	Part use	Name of diseases to be treated
8.	Ananta mul	Anantamoola	<i>Hemidesmus indicus</i>	<i>Apocynaceae</i>	Root	Anal fistula
9.	Manjistha	Indian madder	<i>Rubia cordifolia</i>	<i>Rubiaceae</i>	Climber	Anal fistula
10.	Basak	Basaka	<i>Adathoda vasica</i>	<i>Acanthaceae</i>	Leaf	Anal fistula
11.	Guduchi	Giloy	<i>Tinospora cordifolia</i>	<i>Menispermaceae</i>	Climber	Anal fistula
12.	Holud	Termeric	<i>Curcuma domestica</i>	<i>Zingiberaceae</i>	Root	Anal fistula
13.	Goggul (purified)	Goggulu	<i>Commiferamukul</i>	<i>Burseraceae</i>	latex	Anal fistula
14.	Jam pata	Black berry	<i>RubusSp.</i>	<i>Rosaceae</i>	Leaf	Piles
15.	Durba	Bermuda grass	<i>Cynodon dactylon</i>	<i>Poaceae</i>	Leaf	Piles
16.	Gada phool	Marigold	<i>Tagetes erecta</i>	<i>Asteraceae</i>	Leaf	Piles
17.	Haritaki	Black myrobalan	<i>Terminalia chebula</i>	<i>Combretaceae</i>	Fruit	Piles, Gastric problem
18.	Amloki	Indiangoose berry	<i>Phyllanthus emblica</i>	<i>Phyllanthaceae</i>	Fruit	Piles
19.	Bohera	Vibhitaka	<i>Terminalia bellirica</i>	<i>Combretaceae</i>	Fruit	Piles
20.	Padma mul	Lotus	<i>Nelumbo nucifera</i>	<i>Nelumbonaceae</i>	Root	Piles
21.	Chatrak	Mushroom	<i>Agaricus campestris</i>	<i>Agaricaceae</i>	Whole	Piles , other gastrointestinal ailments
22.	Pipul	Pippala	<i>Ficus religiosa</i>	<i>Piperaceae</i>	Fruit	Gastritis
23.	Aada	Ginger	<i>Zingiber officinalis</i>	<i>Zingiberaceae</i>	Root	Gastric problem, constipation
24.	Gulanacha	Heart leaved moonseed	<i>Tinospora cordifolia</i>	<i>Menispermaceae</i>	Stem	Abdominal pain
25.	Pathor kuchi	Air plant	<i>Kalanchoe pinnata</i>	<i>Crassulaceae</i>	Leaf	Abdominal pain
26.	Khabaron	Garlic chives	<i>Allium tuberosa</i>	<i>Amaryllidaceae</i>	Leaf	Abdominal pain
27.	Fema fulgach	Crape Jasmine	<i>Tabernaemontana</i>	<i>Apocynaceae</i>	Flower	Abdominal pain
28.	Lau ishrimula	Lau ishrimula	<i>Hemidesmus indicus</i>	<i>Apocynaceae</i>	Fruit	Abdominal pain
29.	Lati manglang	Lati manglang	<i>Cissus repens</i>	<i>Cissus repens</i>	Climber	Abdominal pain
30.	Long / kavanga	Long	<i>Syzygium aromaticum</i>	<i>Myrtaceae</i>	Fruit	Gastritis
31.	Jaiphal	Nutmeg	<i>Myristica fragrens</i>	<i>Myristicaceae</i>	Fruit	Gastritis

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Sr No.	Local name	Common name	Scientific name	Family	Part use	Name of diseases to be treated
32.	Elachi	Cardamum	<i>Elettaria cardamomum</i>	<i>Zingiberaceae</i>	Fruit	Gastritis
33.	Sikgasi	Couldn't be identified	-	-	Leaf / bark	Gastritis
34.	Vanjambir	Vanjambir	<i>Glycosmic pentaphyla</i>	<i>Rutaceae</i>	Leaf	Gastritis
35.	Kutti jurkha	Kutuja	<i>Holorrhena antidysentrica</i>	<i>Apocynaceae</i>	Stem	Gastritis
36.	Kaladaru	Kaldharu	<i>Phlogacanthus thyrsiflorus</i>	<i>Acanthaceae</i>	Leaf	Gastritis
37.	Chitamul	Leadwort	<i>Plumbago zeylanica</i>	<i>Plumbaginaceae</i>	Root	Gastritis
38.	Birongo	Birongo	<i>Einbelia ribes</i>	<i>Primulaceae</i>	Fruit	Constipation
39.	Lebu	Lemon	<i>Citrus limon</i>	<i>Rutaceae</i>	Fruit	Gastritis
40.	Gol morich	Black pepper	<i>Piper nigrum</i>	<i>Piperaceae</i>	Fruit	Gastrointestinal ailments