

# Indigenous Tribal Healing Methods with Medicinal Plants in Alipurduar District, West Bengal, India: A Traditional Approach

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## Abstract

This research article explores the indigenous tribal healing methods prevalent in the Alipurduar district of West Bengal, India, focusing on the utilization of medicinal plants deeply rooted in the traditional knowledge systems of local tribal communities. The study reveals that more than 80% of the district's population, belonging largely to the SC/ST community, relies on medicinal plants for both healthcare and dietary practices. The study aims to investigate the indigenous knowledge of Traditional Healing Practices (THP) within the tribal community. It seeks to scrutinize the attitudes of the tribal community towards the application of Traditional/Herbal Medicines (TM/HM) and assess their perspectives on the acceptance of these practices within their healthcare systems. Furthermore, the article reveals a strong commitment among traditional healers to pass on their indigenous knowledge, with a focus on familial and personal connections. The positive perception of traditional healing practices within the community is evident, with a majority believing in the effectiveness of traditional medicine for common ailments and attributing its efficacy to disease eradication. Overall, this research sheds light on the intricate interplay between indigenous healing methods, medicinal plant usage, and community preferences, providing valuable insights for healthcare interventions and policy considerations.

**Keywords:** Alipurduar District, Tribal people, Traditional Healing, Herbal Medicine

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## I. Introduction

Indigenous tribal healing methods with medicinal plants refer to the traditional healthcare practices employed by tribal communities, specifically utilizing the therapeutic properties of plants endemic to their local environment. These methods are deeply rooted in the indigenous knowledge systems passed down through generations, embodying a holistic approach to well-being that encompasses physical, mental, and spiritual dimensions. Tribal communities often possess an intricate understanding of the medicinal properties of various plants, leveraging this knowledge to treat a spectrum of ailments and maintain overall health. The use of medicinal plants in indigenous healing methods involves not only the application of plant-based remedies but also a profound connection to the surrounding natural environment. Approximately 70% of India's population resides in rural regions, with a considerable number living near forests. These communities rely on various parts of plants for sustenance, medicinal purposes, and various aspects of their daily lives. Traditional medicine is extensively utilized, constituting approximately 40% of the overall healthcare provided. Around 85% of traditional remedies are sourced from plants. The National Medicinal Plants Board (NMPB) in India, under the Ministry of AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha, and Homoeopathy), works towards the conservation, cultivation, and sustainable use of medicinal plants. Alipurduar district has been carved out from Jalpaiguri on 25th June, 2014 as the 20th district in the state of West Bengal, India. It consists of Alipurduar municipality and six community development blocks viz Madarihat–Birpara, Alipurduar–I, Alipurduar – II, Falakata, Kalchini and Kumargram. There are 66 Gram Panchayats and nine census towns in six blocks. The district has its headquarters at Alipurduar. It comprises mainly of a rural population. More than

80 per cent of its total population belongs to SC/ST community. It is the hometown of various ethnic tribes like Rabha, Metch, Santhals, Madasia, Bodo and Toto & Oraons which makes the place more labyrinths. They employ medicinal plants both for treating illnesses and, at times, as a part of their daily dietary practices. Not only do their dietary habits and healing methods differ significantly from others, but they also contribute positively to the enhancement of health.

## **II. Study Area**

Alipurduar District, a recent addition to North Bengal, spans an area of 2526.30 sq. km (Statistical Hand Book of Jalpaiguri District, 2011). Positioned between 26°23'11" and 26°52'30" north latitudes and 89°02'30" and 89°53'07" east longitudes, the district was officially established on June 25, 2014. The district's administrative center is located in Alipurduar town, renowned for its significance in tourism, diverse forests, hills, tea gardens, picturesque landscapes, and the presence of various tribes such as Totos, Dukpas, Mechs, Ravas, Santals, among others (Grunning, 1911). The area is bounded by Assam in the east and Jalpaiguri district in the west and the Bhutan in the north, Koch Behar district in the south.

## **III. Objectives**

The study aims to investigate the indigenous knowledge of Traditional Healing Practices (THP) within the tribal community. It seeks to scrutinize the attitudes of the tribal community towards the application of Traditional/Herbal Medicines (TM/HM) and assess their perspectives on the acceptance of these practices within their healthcare systems. Furthermore, the research endeavors to investigate the holistic views of the tribal community concerning the conservation of plant resources and the environment, recognizing the symbiotic relationship between their traditional practices and the ecological balance. By addressing these objectives, the study aspires to contribute to a nuanced understanding of the cultural, medicinal, and environmental dimensions inherent in the traditional healing practices of the tribal community.

## **IV. Database And Methodology**

The entire study is based on a field survey conducted in the last month as well as the secondary data collected from various sources. A stratified simple random sampling technique has been applied. At first the entire district is selected and then data has been collected by open-ended questionnaires and semi structured interviews method at the household level from sample villages which is selected on the basis of concentration of Tribal peoples. As much as 200 households were selected. The collected data have been calculated with the help of some suitable descriptive statistical techniques and plotted as well on Excel and SPSS software.

## **V. Results**

This study suggests that the Tribal community primarily accepts traditional medicine (TM) due to its perceived effectiveness, cost-effectiveness, and a perceived lack of access to modern healthcare services (MHCS).

A significant majority of respondents (73.68%) cited the effectiveness of TM, while 18.42% emphasized its cost-effectiveness. Furthermore, 4.39% mentioned a lack of access to MHCS (Modern Health Care Service) as a reason for choosing TM. When it comes to healthcare preferences during illness, the community exhibits a diverse approach, with 38.06% preferring modern medicine, 37.31% opting for traditional methods, 9.70% favoring Ayurvedic approaches, and 14.93% choosing a combination of these.

Interestingly, in situations where traditional healers (THP) are preferred, respondents indicated a preference for common ailments (48.57%), while only 1.90% preferred THP for acute conditions. The level of satisfaction with healthcare choices is reasonably distributed, with 37.86% moderately satisfied, 30.10% very satisfied, and 26.21% satisfied, while 5.83% expressed dissatisfaction.

The reasons behind the disinterest of recent generations in traditional medicine include a lack of awareness about its importance (25.20%), dependency on MHCS (56.91%), superstitions (11.38%), and illiteracy (6.50%).

The collection of traditional medicine primarily involves reliance on herbalists (59.46%) and self or relatives (27.93%). Lastly, when treatment costs are constant, 48.54% prefer only traditional healers, 38.83% opt for only modern medicine, and 12.62% prefer a combination of both, reflecting a nuanced approach influenced by various factors.

## **VI. Discussion**

Findings provide insights into the literacy status and educational knowledge of male and female traditional healers. Among male healers, 79.17% are literate, while 20.83% are illiterate. In contrast, all female healers are reported as illiterate, indicating a significant disparity in literacy rates between male and female practitioners. Moreover, when considering the educational levels attained by male healers, 75% have completed

primary education, and 25% have reached the secondary level. On the other hand, all female healers are reported to be illiterate, suggesting a stark contrast in educational opportunities between genders. The overall literacy rate among healers, combining both genders, stands at 71.43%, with 28.57% being illiterate. These findings highlight gender-based disparities in literacy and educational access among traditional healers, emphasizing the need for targeted interventions to address educational inequities in the context of traditional healing practices.

This study also reveals that a significant proportion of traditional healers (92.86%) express a willingness to pass on their indigenous knowledge; indicating a strong commitment to preserving and transmitting their healing practices. When it comes to their preferred recipients, 61.54% prefer passing knowledge to their own sons and daughters, while 15.38% choose members within their community. Notably, a considerable portion (30.77%) expresses a preference for passing knowledge through a combination of legacy and self, showcasing the importance of familial and personal connections in the transmission of traditional healing practices. The sources of indigenous knowledge for these healers are diverse, with 14.29% relying on family tradition, 7.14% on religious books, 10.71% on dream advice, and 50% on other unspecified sources.

The data also indicates a reliance on accumulated experience, as 75% of healers with over 15 years of practice wish to pass on their knowledge. Additionally, in the context of traditional medicine (TM), 52.68% of respondents believe it is most effective for common ailments, while 35.71% view it as suitable for complicated cases.

The presented list enumerates various medicinal plants with their scientific names, local names, parts used, and prescriptions in indigenous healing practices.

**Table 1: Medicinal plants used by the Tribal People**

Sl.No.	Scientific Name	Local Name	Parts Used	Prescription
1	<i>Adhatodavastica</i> Nees	Basak	Leaves	To cure cough and cold, bronchitis
2	<i>Andrographis peniculata</i> (Burm.f.) Wall.ex Nees	Kalamegh	Leaves	Extract of leaves or dried leaf paste used in indigestion
3	<i>Calotropis procera</i> (Willd.) Dryander Ait	Akanda	leaves	Leaf warmed under slow heat and applied to relieve arthritic pain and swelling
4	<i>Tagetes patula</i> L.	Genda phul	leaves	Paste used to stop bleeding
5	<i>Curcuma domestica</i> Valetton	Haldi	Rhizome	Raw rhizome used as blood purifier; leaf extract used to treat amoebic dysentery
6	<i>Cynodon dactylon</i> Pers.	Durbaghas	Whole plants without roots	Extract used to cure leucorrhoea
7	<i>Musa paradisiaca</i> L.	Athia kala	Ripened fruit	Ripened fruit used in stomach trouble
8	<i>Allium sativum</i> L.	Rasun	Rhizome	Used in Diabetes and jaundice.
9	<i>Emblica officinalis</i> Gaertn.	Amloki	Fruits	Used in fever, diarrhoea and Dysentery.
10	<i>Terminalia chebula</i> (Gaertn.) Retz.	Haritaki	Fruits	Used in stomach, constipation, and diabetes.
11	<i>Withaniasomnifera</i> (L.) Dunal	Ashwagandha	Roots, leaves	Extract of fresh leaves and roots used as nervine tonic.
12	<i>Jatropha gossypifolia</i> L.	Varenda	Stems and leaves	Extract of leaves and stems used as inducer of male fertility
13	<i>Rouwolfia serpentina</i> (L.) Benth.exkurz	Sarpagandha	Roots	Roots extract used in Diabetes, and prevent hyper tension.
14	<i>Bacopa monniera</i> (L.) Penn.	Brahmi	Leaves	Extract of fresh leaves used in diabetes and used as nervine tonic.
15	<i>Bryophyllum pinnatum</i> (Lam.) Kurz	Patharkuchi	Leaves	Pulp of fresh leaves used in diabetes
16	<i>Ocimum sanctum</i> L.	Tulsi	Leaves	Leaves used in cold and cough
17	<i>Enhydra fluctuans</i> Lour	Halencha	Leaves	It used as remedy of Diabetes.
18	<i>Terminalia arjuna</i> (Roxb. ExDC.) Wt.& Arn.	Arjun	Stem	For hyper tension diabetes and weak-heart patient.
19	<i>Azadirachta indica</i> A.Juss.	Neem	Leaves	Used in treatment of skin diseases.
20	<i>Tinospora cordifolia</i> (Willd.) Miers ex Hook.f. & Thoms	Gulancha	Leaves	For Tuberculosis, burning sensation during urination.
21	<i>Asparagus racemosus</i> Willd.	Shatamuli	Whole plant	For indigestion and in high blood pressure.
22	<i>Piper nigrum</i> L.	Gol marich	Seeds	For the treatment of cough and cold.
23	<i>Brassica nigra</i> (L.) G. Koch	Sarisha	Seeds	Seeds oil warm with garlic and massage on muscle and joint for cure joint pain.

24	<i>Centella asiatica</i> (L.) Urban	Thankuni	Leaves	For the cure of Decentre.
25	<i>Cannabis sativa</i> L.	Ganja	Leaves	Used as nervine tonic.
26	<i>Acacia nilotica</i> (L) Willd. <i>Exindica</i> (Benth) Brenan	Babul	Gum	Gum mixed with honey used in diabetes
27	<i>Aloe vera</i> (L.) Wild	Ghritakumari	Muselage of leaves	Prescribed in diarrhoea, diabetes, insomnia, control stress, and used in skin diseases.
28	<i>Hemidesmus indicus</i> (L.) R.Br.	Anantamul		For dyspepsia, fever and paste of leaves used in skin diseases.
29	<i>Vitex megado</i>	nishinda	Leaves	To stop pain, jaundice and arthritis.
30	<i>Leucas plukeratii</i>	Dandakalash	Whole plant	To stop pain and arthritis.
31	<i>Glycyrrhiza glabra</i>	Jasthi modhu	Whole plant	Used for jaundice.
32	<i>Moringa oleiferalam</i>	sajna	Leaves	For blood pressure, liver problem, pariah.
33	<i>Oroxylum indicum</i>	sonapata	Leaves	For cure of pain and gases.

The documented plants were organized based on their scientific names, vernacular names obtained during fieldwork, parts utilized, and techniques for herbal preparation usage. However, complete information on the method of using herbal preparations could not be obtained universally. This limitation arose from the traditional healers' reluctance to disclose certain details, as they believe that revealing such knowledge, especially to urban individuals, might diminish the effectiveness of the medicine.

### VII. Preservation Of Medicinal Plants by The Tribal Community

Tribal communities often have a deep understanding of their local ecosystems and have developed sustainable practices for preserving medicinal plants for traditional treatments. Here are several ways in which tribal communities preserve medicinal plants.

During the harvest of underground plant parts such as tubers, rhizomes, fleshy roots, and bulbs, tribal communities ensure the regeneration of species by leaving some reproductive parts intact. Harvesting all fruits or nuts from a single plant is deemed sinful, believed to lead to incurable diseases. Certain fruits are avoided before specific ceremonies, and plants used in worship and marriage ceremonies are conserved. Some of the medicinal plants are actively preserved due to their dual significance-serving as a food source during lean months and holding religious importance.

### VIII. Conclusion

The study underscores the deep-rooted connection between tribal communities and their natural environment, emphasizing the profound knowledge passed down through generations. The acceptance of traditional medicine, driven by its perceived effectiveness and cost-effectiveness, is evident among the majority of respondents, with a notable reliance on medicinal plants for both healthcare and dietary practices. However, gender-based disparities in literacy and education among traditional healers highlight the need for targeted interventions to address inequities. The willingness of healers to pass on their indigenous knowledge, especially to family members, signals a commitment to preserving their healing practices. Overall, this research contributes valuable insights into the intricate dynamics of traditional healing methods, calling for a balanced approach that respects and preserves indigenous knowledge while addressing educational disparities and promoting coexistence with modern healthcare practices.

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### Declarations

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Conflict of interest: None declared

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