Medico-Ethno Botanical Practices among *Bhotia* Tribe of Kumaon Himalaya: A Case Study from Bageshwar District, Uttarakhand, India

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**ABSTRACT**

**Introduction:** Traditional folk practices still hold major places as one of the major health-providing systems for the remote tribal and village people.

**Aim:** To study and collect folklore medicinal knowledge for further validation, so it can be used for the benefit of society.

**Materials and methods:** Medico-ethno botanical survey was done of Bageshwar district in Kumaon Himalayan region of Uttarakhand state of India.

**Observation:** Bhotia tribal community is major inhabitants of the forest areas in this region. Folklore was collected through participatory rural appraisal (PRA) technique.

**Result:** Totally 18 folklores were collected and documented.

**Conclusion:** Such traditional knowledge needs to be documented and preserved, as they are getting extinct gradually which may result in loss of such precious knowledge to be lost by mankind which may pave the path of future health care system.

**Keywords:** Ayurveda, Bageshwar, Bhotiya community, Folk practices, Uttarakhand.

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**Conflict of interest:** None

**INTRODUCTION**

The endeavor to achieve and maintain an optimum state of health has always exercised the minds of men since ancient times. As a result, a number of healing systems evolved across the globe. People have devised systems to mitigate the wearisome situations arising out of diseases using their own method, which vary from one community to another.¹

Folk medicine incorporates healing practices and ideas on health care which are confined to a particular group in a culture, and are usually transmitted orally or word of mouth. Across the entire Himalayan region, folk healers have a remarkable knowledge of herbs, gathered through generations and passed on through years of apprenticeship. The traditional healers in the region have developed the health care traditions through constant healing practices from generation to generation which is rooted in understanding and realistic considerations. Traditional wisdom of Himalayan communities is passed through proverbs, folklores, legends, customs, and myths.

These sources reveal how troubles emerge in life and how they are resolved by the combined efforts of a community. In the long history of local influences, there are deformations, distraction, and alteration in folk healing practices on the negative side, and creativity, revisions, and improvements on the positive side. But the folk systems have remained responsive to local needs and expectations. Various studies have been done to collect various folklores from various tribes of the Himalaya region.

**MATERIALS AND METHODS**

**Study Area**

The Medico-ethno botanical tour of Bageshwar district forest division was carried out during (2014-2015). Bageshwar district is located between 29.85°N latitude and 79.77°E longitude and has 2,302 km square area. Bageshwar district is a district of Uttarakhand state in northern India (Fig. 1). Bageshwar district is in the eastern Kumaon region of Uttarakhand, and is bounded on the west and northwest by Chamoli district, on the northeast and east by Pithoragarh district, and on the south by Almora district. The medico-ethno botanical survey tour was carried out in Dharamgar adjoining areas,
Kapkot, Bharari, Shama, Song, Loharkhet, Kameridevi, Pachar, Garur, Shikhar, and Paudidhar forest areas of Bageshwar district, Uttarakhand. Bhotiya community is a major tribal community of this region and folklore was collected from them through PRA technique.

Bhotiya Tribe

The Bhotiya people are closely related to several other groups and ethnic boundaries are porous. One group is in the northern part of the Indian state of Sikkim, another in Bhutan, and also the Uttarakhand Bhotiya of the upper Himalayan valleys of the Kumaon and the Garhwal divisions of Uttarakhand. These include the Shauka tribe of Kumaon, the Tolchhas, and the Marchhas of Garhwal. The Bhotiya tribal communities have a wealth of knowledge on the use of medicinal plants in their locality. Collection of medicinal plants from the wild has long been conducted while grazing livestock in the forests and alpine pastures. The Bhotiya have their own culture, tradition and religious beliefs. Their major occupations have been sheep rearing and agriculture, with agriculture taking precedence over pastoralism at present. Almost all of the households are involved in agricultural activities by way of subsistence farming.

Similar study was done by Phondani et al on the medicinal plants and knowledge of diseases among Bhotiya tribal communities in the Niti valley of Alaknanda catchment in central Himalaya. Indigenous knowledge of local traditional healers was assessed and 86 plant species were identified which are used for the treatment of 37 common ailments.

DISCUSSION

In the present study, 18 species belonging to 18 genera and 13 families, i.e., shrub (1 sps.), tree (2 sps.), herb (15 sps.), were recorded under the study which are used in the treatment of various ailments by Bhotia tribes. The utilization pattern of the species indicated that leaves of 5 sps., roots of 10 sps., whole part of 1 sps., bark of 1 sps., and inflorescence of 1 sps. are used in various ailments, i.e., cold, cough, eczema, indigestion, rheumatism, fever, jaundice, leukorrhea, stomatitis, alopecia, dandruff, wounds, etc. (Table 1, Fig. 1, and Graphs 1 to 3).

In the Bhotiya communities, traditional healers identify causes of illness or have set prescription for a particular disease which they identify on their own pattern before prescribing treatment. The dose given to the patient depends on their age, physical status, and health conditions. The method of use of plants varies according to the nature of disease. In the majority of the cases, a decoction of various parts of plants used is administered for treating a disease or diseases. Most of the decoctions are made just by crushing the plant parts as cold decoction but some are made by boiling plant parts in water, drinking after cooling. Paste of some plants is used in muscular pain and in wound healing.

CONCLUSION

The vast traditional knowledge of herbs in the Himalayan region is depleting because of rapid socioeconomic and cultural changes that are taking place and migration of local inhabitants. Documentation of this knowledge is valuable both for the communities and their future...
Table 1: Plants documented as used medicinally among the Bhotiya communities of Bageshwar district rural areas in Kumaon Himalaya, India

<table>
<thead>
<tr>
<th>Botanical name</th>
<th>Sanskrit name</th>
<th>Local name</th>
<th>Folklore uses</th>
<th>Accession No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Picrorhiza kurroa&lt;sup&gt;8&lt;/sup&gt; Royle ex Benth.</td>
<td>Kutki</td>
<td>Kutka</td>
<td>5 gm root powder used for 2–3 days in fever</td>
<td>27673</td>
</tr>
<tr>
<td>Pleurosporum angelicoides (DC.) C.B. Clark.</td>
<td>–</td>
<td>Chippi</td>
<td>Small piece of the root (5 gm) chewed during body ache or any type of pain</td>
<td>–</td>
</tr>
<tr>
<td>Rheum australe D. Don</td>
<td>Revand chini</td>
<td>Chuchi</td>
<td>Fresh root paste (4–5 gm) used for 3 days in cut and wounds</td>
<td>27793</td>
</tr>
<tr>
<td>Dactylorhiza hatagirea (D. Don.) Soo</td>
<td>Salampanja</td>
<td>Hatajari</td>
<td>Dried tubers are crushed with water and paste is applied over cuts and wounds</td>
<td>20817</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dried tubers are crushed with water 1–2 gm and paste is given to the patient for blood purification</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Tuber soaked in milk overnight is chewed in the morning with milk in empty stomach used as tonic</td>
<td></td>
</tr>
<tr>
<td>Arnebia benthamii (Wall. ex G. Don) Johnston</td>
<td>Ratanjot</td>
<td>Balchadi</td>
<td>Dried inflorescence is dipped in mustard oil Quantity sufficient (QS), oil is massaged over scalp to reduce dandruff</td>
<td>–</td>
</tr>
<tr>
<td>Angelica glauca&lt;sup&gt;6&lt;/sup&gt; Edgew.</td>
<td>Choraka</td>
<td>Gandhrayani</td>
<td>Root is dipped in water overnight and infusion is sieved though cotton cloth. Cold infusion is given in the morning empty stomach to cure gastritis and stomach ache</td>
<td>27789</td>
</tr>
<tr>
<td>Aconitum heterophyllum Wall. ex Royle&lt;sup&gt;7&lt;/sup&gt;</td>
<td>Ativisha</td>
<td>Atish</td>
<td>Dried roots of the plant are ground on a stone to form fine paste and minute doses of the paste are used for intoxication of charas addicted person and also used in fever</td>
<td>27782</td>
</tr>
<tr>
<td>Betula utilis D.Don.</td>
<td>Bhojpatra</td>
<td>Bhojpatr</td>
<td>Root is ground to form fine paste, 5–8 gm given twice daily for 7 days in jaundice</td>
<td>5111</td>
</tr>
<tr>
<td>Datura metel L.&lt;sup&gt;8&lt;/sup&gt;</td>
<td>Dhatura</td>
<td>Datura</td>
<td>Dried datura leaves with garlic and apium seeds are dipped in mustard oil. Quantity sufficient oil is massaged over the joints in joint pain</td>
<td>19085</td>
</tr>
<tr>
<td>Asparagus racemosus Wild.&lt;sup&gt;9&lt;/sup&gt;</td>
<td>Satarwar</td>
<td>Satwar</td>
<td>6–8 gm root powder is given orally to the patient twice a day to cure leukorrhea</td>
<td>27213</td>
</tr>
<tr>
<td>Achyranthes aspera&lt;sup&gt;10&lt;/sup&gt; L.</td>
<td>Apamarga</td>
<td>Chirchita, Ultisaji, Apamarga</td>
<td>1 gm root paste with 1 gm pepper powder is mixed and is given orally once a day in jaundice</td>
<td>22612</td>
</tr>
<tr>
<td>Azardirachta indica A. Juss&lt;sup&gt;11&lt;/sup&gt;</td>
<td>Nimba</td>
<td>Neem</td>
<td>Fresh leaves are crushed with ajwain (Trachyspermum ammi L.) and mixed with mustard oil. Quantity sufficient mixture is applied over and around affected part in alopecia</td>
<td>22521</td>
</tr>
<tr>
<td>Ajuga parviflora Benth</td>
<td>Neelkanthi</td>
<td>Ratpatia</td>
<td>Leaves are chewed to cure diabetes</td>
<td>2385</td>
</tr>
<tr>
<td>Peristrophe paniculata (Forsk.)&lt;sup&gt;12&lt;/sup&gt; Brumitt.</td>
<td>Kakjangha</td>
<td>Kankadi</td>
<td>Whole plant paste applied in cuts</td>
<td>19813</td>
</tr>
<tr>
<td>Bergenia ligulata (Wild.) Engl</td>
<td>Pashanbheda</td>
<td>Pashanbheda</td>
<td>Rhizomes are collected and cut into small pieces and burnt with sesame (Sesamum orientale L.) oil and filtered through a fine cloth. Quantity sufficient oil is applied over and around the affected part for healing of wounds</td>
<td>27809</td>
</tr>
<tr>
<td>Thymus serpyllum L.</td>
<td>Ajmoda bheda</td>
<td>Van ajwain</td>
<td>Cold, cough, and gastric problems. This is taken as decoction</td>
<td>27966</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cleans the stomach when taken after being soaked in water overnight</td>
<td></td>
</tr>
<tr>
<td>Origanum vulgare L.</td>
<td>Van-Tulsi</td>
<td>Bhoothkesh</td>
<td>They boil the leaves with tea. It neutralizes the acidity of tea</td>
<td>27868</td>
</tr>
<tr>
<td>Selinium vaginatum (Edgew) C.B.Cl.</td>
<td></td>
<td></td>
<td>The root or the whole plant is set on fire and then the smoke is given to the cows. They start lactating</td>
<td>27669</td>
</tr>
</tbody>
</table>

generations and for scientific consideration of wider uses of the knowledge. The indigenous knowledge and rights of the Bhotiya communities and local people regarding uses of plants needs to be secured. Appropriate mechanisms for effective benefits sharing of potential value of this knowledge need to be developed and the folklore collected may be further subjected to clinical studies for validation and so can be used for the benefit of masses. During the study, it was observed that the availability of these plants was decreasing at an alarming rate. As the
study shows that the maximum plant part used is root part or whole plant, and maximum numbers of herbaceous plant are in use, this observation reveals massive habitat destruction of herbaceous plant. The study also reveals that overexploitation and unplanned agriculture were the reasons for depletion of medicinal plants. Therefore, the medicinal plants used as traditional health care system need urgent conservation.

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REFERENCES


हिन्दी सारांश
कुमाऊं हिमालय की भोटिया जनजाति में चिकित्सा प्रजाति वास्तविक अन्याय:
उत्तराखंड के बागेश्वर जिले का एक अध्ययन

परिषद: दूरस्थ जनजाति व ग्रामीण क्षेत्र में पारंपरिक लोक चिकित्सा पद्धति वर्तमान में भी स्वस्थ्य हेतु मुख्यतः प्रचलित है क्योंकि दूरभाग ज्ञानों ने अभी भी वह एक ग्रामीण स्वस्थ्य प्रणाली है।

उद्देश्य: आगरणी प्रमाणीकरण हेतु पारंपरिक लोक चिकित्सा समस्याओं को एकदम से हटाना और समस्याओं का नियंत्रण करना की एक सरकारी जरूरत है।

उपज: इस उद्देश्य के लिए, लोक चिकित्सा के निर्देश दीए जाएं।

परिणाम: सन्तलाधि 18 लोक चिकित्सा दायित्व को एकत्र किया गया।

निष्कर्ष: इस तरह के पारंपरिक ज्ञान का संरक्षण करने की आवश्यकता है क्योंकि अनेक समय से वह बहुमूल्य ज्ञान विकल्प होता जा रहा है, जिसके परिणामस्वरूप ऐसी असमृत जानकारियों का नुकसान हो सकता है जो निर्देश में स्वस्थ्य देखभाल प्रणाली का नाम्नप्रद व्यवस्था कर सकते हैं।

खंडी सम्य: आश्वेष, बागेश्वर, भोटिया समुदाय, लोक प्रथाएं, उत्तराखंड।