Medicinal Plants Used By Traditional Healers in UNA District of Himachal Pradesh (North Western Himalayan Region), India

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Abstract: The present study was conducted in a Swan river (Main River of district) catchment area of district Una (H.P) to accumulate knowledge regarding diversity of plant resources that are used by local people for medicinal uses and to preserve the traditional way of curing ailments which are losing its importance in young generation. The plant kingdom represents a rich house of organic compound, many of which have been used for medicinal purposes and could serve as good efficacy in various pathological disorders in the coming years. This knowledge could be utilized in formulation of drugs in various discipline of medicine. Survey Questionnaire, participatory observations and field visits were planned to illicit information. Study revealed that 57 plant species are commonly used by local people for curing various diseases. In most of cases Leaf(11 spp.); whole plant parts and seed (10 spp.) each; root(6 spp.); flower (4 spp.); leaf and root (3); rhizome, root and bark, leaf and bark, root leaf and bark; fruit and root; bark fruit leaf (1 spp.); leaf. Implication of developmental activities and changing socio economic condition on traditional knowledge is also discussed. This study too revealed that rural people in this area still continue to depend on medicinal plants at least for the treatment of primary health care.

Keywords: Catchment area, Diversity, Organic compound, Survey Questionnaire, Participatory observations

I. Introduction

India is the one of the biodiversity rich country in the world. There are 4 global biodiversity hot spots namely Eastern Himalayas, Sunderland, Indo-Burman and Western Ghats and Srilanka (Anonymous, 2009) which are treasure of medicinal and economically important plants. The diverse natural habitats all over the Himalayan Region are rich repositories of plant diversity that are used for a variety of purposes i.e., food, fiber, fodder, medicine, spices, dyes, making agriculture implements etc. A large number of plants from the wild/cultivated are widely used in traditional systems of medicine.

From immemorial, the indigenous communities, all over the world, have been depending upon the ambient natural resources for their sustenance. This indigenous knowledge has evolved independently in a variety of ecosystems in different parts of the world (Jain and Sharma, 2000). However, due to changing perception of the user communities, commercialization and socio-economic transformation all over the world, there has been a general observation that the indigenous knowledge on sustainable use of resources has degraded severely (Gadgil et al., 1993), and needs to be documented before it is lost forever to posterity.

In the Indian Himalayan Region the use of medicinal plants is still a tradition continued by local people or ethnic communities. Even today still traditional health care practices hold much potential or most of the people depend upon local flora due to easily approachable to their habitat. Utilization of plants for medicinal purposes in India has been documented long back in ancient literature (Charak and Drdhbala, 1996).

In India, it is reported that traditional healers use 2500 plant species and 100 species of plants serve as regular sources of medicine. The knowledge of medicinal plants has been accumulated in the course of many centuries based on different system such as ayurveda, unani and siddha. However, organized studies in this direction were initiated in 1956 (Rao, 1996) and of late, such studies are gaining recognition and popularity to preserve not only traditional knowledge but also deteriorating useful plant species.

Many studies have been carried out on the use of the economical and medicinal plants in the Himachal Pradesh State viz. Kangra valley (Ahuwalia, 1952; Uniyal & Chauhan, 1971), Kullu (Rastogi, 1960; Uniyal & Chauhan, 1972; Dobriyal et al., 1997), Chamba (Gupta, 1961, 1971; Shabnam, 1964). Comparatively, information pertaining to folk and ethno botanical practices is scanty for Himachal Pradesh in general but, such kinds of studies have not been attempted in this area. Hence, an attempt has been made to document the precious indigenous wisdom on the medicinal usage of plants from the catchment area of swan river with a view not only to conserve it from being lost irreversibly to growing anthropogenic pressures but also for using them as valuable clues for social forestry endeavors, therapeutic agents, and sustainable management of species as well as their habitats.

Right from its beginning, the documentation of traditional knowledge especially of traditional uses of plants, has provided many important drugs of modern day. Even today this area holds much more hidden treasure as almost 80% of human population in developing countries is dependent on plant resources for health
II. Materials and Methodology

A. The study area and survey

Una has been one of the smaller districts of Himachal Pradesh, which is located in the western part of the state along its boundary with Punjab. The latitudinal and longitudinal extent of the district is from 31°-17'-52" to 31°-52'-0" north and 75°-58'-02" to 76°-28'-25" east respectively. The total geographical area of the district is 1540 sq. km which is about 2.8 % of the total area of the state. About two thirds of the district has an elevation between 300-600 meters and the remaining about one third between 600-900 meters from the sea level. A few ridge tops and peaks also have elevation more than 900 meters. River swan is the main river of the area fed only by rainwater situated in Shivalik foothills of northwest Himalayas. Its total length is 55kms. River overflows and erodes the banks during monsoon and causes damages to property and flora lying near the periphery of the river. Swan Catchment Area in Una district, Himachal Pradesh (The study area) shown in (figure-1).

B. Methodology

Data was collected according to the methodology suggested by Jain and Goel. Reconnaissance survey of the area was conducted during October 2014 to September 2015. Local healers called vaidys (traditional healers), native people and resource persons mainly elder persons using medicinal plants for curing various diseases were interviewed for documenting the information in their local dialect (Unabi).

Authentication of the collected specimens were got done by carefully matching with authentic specimens housed in the herbarium of northern circle of Botanical Survey of India (BSI). Data was tabulated plant name, family, local name, parts used.

III. Results and Discussion

India has a rich heritage of using plants as a medicines and Indian system of medicines utilizes 80% of the material derived out of plants. In India, there are at least 2,500 plant species having great medicinal value and most of them are growing wild. Out of these 750 plant species form the ingredient of 14,000 published recipes of Ayurveda, Siddha and Unani medicines (Dey, 1980). Jain (1964) wrote on the role of botanist in folklore research. He writes that folklore research study of all aspect of intellectual and material culture of indigenous or backward people. Arora (1987) described ethno botany and its role in the domestication and conservation of native plant genetic resources. He gave the detail account of the area where ethno botany has still a great to do. Kapur (1996) highlighted the traditionally important medicinal plant of Bhaderwah hills. Chauhan (1999) described medicinal and aromatic plants of Himachal Pradesh. Sharma et al., (2003) gave an account on commercially importance of medicinal and aromatic plants of Parvati valley (Himachal Pradesh). Prakash & aggarwal (2010) highlighted the traditional uses of medicinal plants of lower foot-hills, Himachal Pradesh. Kaur et al., (2011) studied the uses of plants in control of different diseases in Mandi district, Himachal Pradesh.

In the present study, 57 species belonging to 31 families were reported after undertaking the survey and having conversation with traditional healers, elder local persons (table1). It was found that dominated medicinal plants of this region are main source of primary health care. Majority of elder persons had sound knowledge of
medicinal plants and use of these plants in their daily life, while younger generations lack this. These plants are used in the forms of decoction, juice, powder, paste and whole plant extract. Three species belongs to monocotyledons and the remaining 53 species to dicotyledons, amongst the dicotyledonous families, Fabaceae(8spp.) with the most dominant family followed by , Euphorbiaceae (6spp.), Solanaceae(4spp.) Amaranthaceae, Moraceae and Combretaceae(3) ,Acanthaceae, Liliaceae, Rutaceae, Meliaceae ,Menispermaceae(2 spp.) and the rest of the families are represented by one species each. These medicinal plants are mainly used for the treatment of rheumatism and joint pain, diuretic, cough, diarrhea, skin disorder, fever, asthma, intestinal infection, stomach problem, burns, obesity, jaundice and digestion. leaf was the most widely used plant parts accounting for 11 species in total of 53 reported plants followed by whole plant parts and seed (10spp. ) each ,root(6),flower ,flower and leaf (4spp. )each, leaf and root(3),rhizome, root and bark, leaf and bark, root leaf and bark, fruit and root ,bark fruitleaf (1spp.) each. The growing population and increasing socio-economic necessities creates pressure on land use/land cover, this increased pressure results in unplanned and uncontrolled changes in the diversity of flora especially medicinal plants .medicinal too facing threats from mechanized farming , utilization of fertilizers, pesticides and herbicides.

IV. Conclusion

The present study shows that swan river catchment area in una district is rich with valuable medicinal flora and traditional knowledge seems confined to elderly people while younger generation is ignorant about the vast medicinal resources available in their surroundings. This knowledge passed orally from one generation to another but not documented as such. So this documentation is necessary for safe guarding this valuable information for the well being of future generation. Parts of these plants may be assessed pharmacological point of view for its effective utilization. Therefore this study would be help for future investigation of its potential to be used as drugs which may be helpful in modern healthcare system.

![Fig.2: Family wise distribution of medicinal plants recorded from swan river catchment area.](image)

![Fig 3: Use of different plant parts for treatment of various diseases recorded from swan river catchment area.](image)

<table>
<thead>
<tr>
<th>Sr. no</th>
<th>Scientific name</th>
<th>Local name</th>
<th>Family</th>
<th>Part used</th>
<th>Medicinal Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>Acacia catechu</td>
<td>Khair</td>
<td>Mimosaceae</td>
<td>R.</td>
<td>Paste of fresh root is applied on the joint once day for week for rheumatism.</td>
</tr>
<tr>
<td>3.</td>
<td>Acacia nilotica Delie</td>
<td>Babul</td>
<td>Mimosaceae</td>
<td>L.</td>
<td>Paste prepared by grinding leaves with mustard oil is applied on burn thrice a day till it cures.</td>
</tr>
<tr>
<td>4.</td>
<td>Achyranthes aspera Linn.</td>
<td>Puthkanda</td>
<td>Amaranthaceae</td>
<td>W.P</td>
<td>Decoction of herb is used as diuretic; seeds are used in treating hydrophobia and snake bite.</td>
</tr>
<tr>
<td>5.</td>
<td>Acorus calamus Linn.</td>
<td>Barya</td>
<td>Liliaceae</td>
<td>Rh.</td>
<td>Rhizome paste along with warm mustard oil for fever and with honey against cough.</td>
</tr>
<tr>
<td>6.</td>
<td>Adhatoda vasaica Nees</td>
<td>Basuti</td>
<td>Acanthaceae</td>
<td>L and R</td>
<td>Leaves and roots are useful in case of Rheumatism</td>
</tr>
<tr>
<td>7.</td>
<td>Argemone mexican L.</td>
<td>Kandayi</td>
<td>Papaveraceae</td>
<td>S</td>
<td>Dry powder of seeds applied on gums a day reduces the gum problem</td>
</tr>
<tr>
<td>8.</td>
<td>Aegle marmelos (L.) Cnorr. Serr.</td>
<td>Bel</td>
<td>Rutaceae</td>
<td>F</td>
<td>Unripe fruit is astringent, digestive and stomachic, used for diarrhea and dysentery.</td>
</tr>
<tr>
<td>9.</td>
<td>Aloe barbendensis</td>
<td>Kwareya</td>
<td>Liliaceae</td>
<td>L</td>
<td>Juice extract used for stomach problems, and for treatment of ear pain</td>
</tr>
</tbody>
</table>
10. **Amaranthus Caudatus L.** | Chauli | Amaranthaceae | L | Fresh juice of leaves mixed with curd is taken orally thrice a day in case of intestinal inflammation.

11. **Amaranthus Viridis** | Kanha | Amaranthaceae | L | Used as laxative.

12. **Acacirachita indica** | Neem | Meliaceae | W.P | Used in treatment of fever, diarrhea and skin diseases.

13. **Boerhavia diffusa L.** | Isit | Nyctaginaceae | R & L | Root paste mixed with honey to cure cough. Leaves used for body pain.

14. **Barleria cristata L.** | Raktu jhuni | Acanthaceae | R & L | Root and leaves and root used for coughs and inflammations.

15. **Bauhinia variegata L.** | Karal, kachnar | Fabaceae | R and I | Root carminative decoction prevents obesity.

16. **Bombax ceiba L.** | Semal | Malvaceae | W.P | Bark demulcent, tonic, emetic and styptic.

17. **Bryonopsis laciniosa L.** | Shibli | Cucurbitaceae | S | Seed used for fever for fever.

18. **Butea monosperma** | Phal | Fabaceae | | Seed powder given to expel germs.

19. **Cannabis sativa L.** | Bhang, ganja | Cannabaceae | W.P | Source of hemp fiber and Seed oil extracted by heating applied on joints in case of arthritis treatment taken at bed time only.

20. **Cassia fistula L.** | Amalas | Fabaceae | R and B | Used as emetic, febrifuge, laxative. It is useful, leprosy, constipation, fever and heart disease.

21. **Cassia tora L.** | Fanwar | Fabaceae | W.P | Purgative used in ringworm and other skin diseases.

22. **Cucuta reflexa Roxb.** | Akashbel | Convolvulaceae | St. | Wath in warm decoction of stem is used on swollen part and for rheumatism.

23. **Cynomorium dactylon (L.) Pers.** | Durva | Poaceae | W.P | Used in dysentery, dropsy, haemorrhage and scabies.

24. **Cissampelos pareira** | Patindu | Menispermaceae | L | Heated leaves applied to cure pimples, leaves against dysentery.

25. **Datura inoxia** | Datura | Solanaceae | S | Seed mixed with mustard oil applied on external swelling.

26. **Eclipta alba** | bhringraj | Asteraceae | L | Used for stomach by applying paste of leaf.

27. **Euphorbia hirta L.** | Dudhi | Euphorbiaceae | W.P | Used in cough, asthma and digestive problems.

28. **Ficus benghalensis L.** | Bargad | Moraceae | F & I | Fruits are eaten at the time of scarcity. Leaves lopped for fodder. Latex applied in rheumatism and lumbago.

29. **Ficus racemose Roxb.** | Gular | Moraceae | R | Root used in diarrhea and diabetes.

30. **Jatropha curcas linn.** | Jabhota | Euphorbiaceae | S | Oil is extracted from seed used for swelling, seed powder used for constipation.

31. **Ocimum sanctum L.** | Tulsi | Labiatae | W.P | Leave oil have antibacterial and insecticidal properties.

32. **Phyllanthus niruri L.** | Rhoemna aamla | Euphorbiaceae | R | Decotion of roots is recommended for two weeks in the treatment of jaundice, hepatis and other liver disorder.

33. **Mentha Longifolia** | Podina | Lamiaceae | L | Boiled leaves with tulsi leaves used for stomach pain as soup named as cardu in local language.

34. **Moringa oleifera lank.** | Sunane | Moringaceae | S | Green pods mixed with rye prepared as achar (pickle) for stomach pain and seed oil used for rheumatism.

35. **Morus alba L.** | Toot | Moraceae | L and F | Fruits eaten in sore throat and skin infections. Leaves helpful in lowering blood pressure.

36. **Mallotus philippensis (Lam.) Muell.-Arg..** | Kamila | Euphorbiaceae e | F | Anthelmintic.

37. **Melia azedarach L.** | Drek | Meliaceae | L and B | Insect repellent, anthelmintic, diuretic.

38. **Murraya koengi (L.) Spreng.** | Ghandhela | Rutaceae | R, I and B | Bark and roots are used as stimulants. Leaves used for diabetes and dysentery and for curries.

39. **Oxalis corniculata L.** | Khati amini | Oxalidaceae | L | Used for leucorhea ;leaf extract put on patasha(candied sugar) consumed early in the morning daily for a week.

40. **Portulca oleracea linn.** | Kuffa | portulacaceae | L | Leaves used as vegetables (sag & chatni) good source of vitamin c.

41. **Plumbago zeylanica linn.** | Chitra | Plumbaginaceae | R | Root used for toothache.

42. **Phyllanthus niruri Linn.** | Bhumi aamla | euphorbiaceae | W.P | Juice whole plan mixed with doob grass used for ulcer.

43. **Riccinus communis** | Erand | Euphorbiaceae | S | Seed oil is prescribed for Rheumatism pain.

44. **Sesamum indicum Linn.** | Til | Pedaliaceae | S | Seed Oil extracted from the seeds is used in Rheumatism.
57. **Wrightia somnifera**
   Ashwagandha
   Solanaceae
   R
   Roots used in treatment of rheumatism.

St=stem, f=flower, L=leaf, st=stem, r=rhizome, r=root, b=bark

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**References**


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