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## RESEARCH ARTICLE

## A SURVEY OF IMPORTANT INDIGENOUS MEDICINAL PLANTS OF DISTRICT BHIMBER AZAD JAMMU & KASHMIR, PAKISTAN

Nazar Hussain<sup>1\*</sup>, S. A. Majid<sup>1</sup>, M. Altaf Hussain<sup>2</sup> and M. Saleem Abbasi<sup>3</sup>

1. Department of Botany University of Azad Jammu & Kashmir Muzaffarabad-13100, Pakistan.
2. Department of Botany, Mirpur University of Science and Technology, Bhimber campus Bhimber Azad Kashmir.
3. Department of Cardiology, Abbass Institute of Medical Sciences Ambore Muzaffarabad, Azad Kashmir.

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### Abstract

A survey of medicinal plants was carried out about the traditional knowledge of rural people of District Bhimber and its allied areas. It was established that 96 plant species belonging to 49 families are currently used by common people and traditional plant medicines practitioner. Most medicinal plants grow in the wild (75%), while others are cultivated (25%) with predominant share of herbs (55%), trees (27%) and shrubs (17%). The frequently used species were *Justicia adhatoda*, *Azadirachta indica*, *Melia azedarach*, *Solanum nigrum*, *Allium cepa*, *Allium sativum*, *Tribulus terrestris* and *Solanum xanthocarpum* while the most frequently cited families were Meliaceae and Euphorbiaceae. It was noted that plant species like *Acacia modesta*, *Ficus carica*, *Melia azedarach* and *Butea monosperma* recorded throughout the region uniformly however some plants like *Azadirachta indica*, *Carica papaya*, *Ficus bengalensis* and *Glycyrrhiza glabra* are less common.

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### Introduction

Medicinal plants play an important role in the lives of rural people by curing common ailments especially in developing countries of the world. A large world population uses alternative medicines for their daily health care needs. According to Eddouks *et al.* (2002) more than 80% of the world population in developing countries uses plant medicines and about half of the population in industrialized countries also using traditional medicines as first line therapy (Bodeker *et al.*, 2002). About 70% of the world population also practices traditional medicines to meet their health care needs (WHO, 2002). Our region has a rich tradition of using natural medicines since very long history as rich in plant flora. According to Hocking (1958) more than 84% Pakistani population was practicing natural medicines as their first line therapy during early 1950's. The region of Azad Jammu & Kashmir (AJ&K) situated North-East of Pakistan is full of natural resources particularly plant flora as with 80% vegetation covers because of its extra-

ordinary climatic conditions. Ethnobotanical survey reveals that Kashmir Himalayan region is extremely wealthy in medicinal plants (Sharma & Jamwal, 1998; Singh, 1995; Bhattacharyya, 1989; Kaul *et al.*, 1995; Sharma, 1995; Lone, 2003; Dar, 2003; Ishtiaq, 2006; Qureshi, 2006 and Khan, 2007) as worlds medicinal raw material export mainly comes from this region (Shawl *et al.*, 2006) but its curative prospective has still yet to be explored.

The rural study area of district Bhimber is much populated by a varieties of species ranges from higher woody plants to lower herbaceous of immense economically importance. It is located about 17km from Mirpur towards East and 65km from Gujrat towards North. The area is dry and vegetation constitutes sub-tropical dry ever green forests. Chief vegetation constitutes *Acacia modesta*, *Dalbergia sisso*, *Ziziphus numularia*, *Justicia adhatoda*, *Themeda anathera* and *Heteropogon contortus*. The area is arid depends on rainfall all time however water from wells is used for drinking and to some extent for irrigation. There is no snow fall and the

average annual rain fall is 121.88 millimeters. The average annual humidity of the area lies between maximum 79.58% (8 am) and minimum 45.83% (5 pm), however, seasonal fluctuations are there. Soil is mostly sandy-clay and acidic in nature (Soil PH ranges from 5.8-7 with dominant concentrations of potassium, calcium and phosphorus salts).

Geographically it is located between 33.03° latitude and 74.82° longitude at an altitude ranges from 350-1350 meters above sea level. Spring and autumn are pleasant while winters are severe. June is the hottest month while December and January are the coldest with average maximum temperature varies between 22-48C° while the minimum lies between 6-18C° respectively.

The basic information on practices of medicinal plants and their uses by native cultures is useful not only in the conservation of traditional cultures and biodiversity, but also for community health care and drug development.

## MATERIALS AND METHODS

Ethno medicinal studies were carried out throughout the region selecting most important areas during January, 2008 to March, 2010. Traditional knowledge about medicinal usage was taken through oral interviews and questionnaire. For this selected all local healers, traditional practitioners, herbalists, hakims, botanists, old foresters, old farmers, plants dispensers and community people living across the study area. Biotic and abiotic factors were also assessed affecting vegetation cover.

The plants collected and identified with the help of floristic literature available in the Department of Botany University of AJ&K, Muzaffarabad (Nasir and Ali 1970-1987; Ali & Qaiser, 1995-2008, Dwivedi, 2003 and Dwivedi & Shefali, 2008). The plants were arranged alphabetically according to their genera's, families, local names, habits and folk medicinal uses. Trees and shrubs are photographs and herbs collected in herbarium sheets.

### Important Medicinal Plants of District Bimber, Azad Kashmir

#### 1. *Acacia modesta* Wall.

Family: *Mimosaceae*

Local Name: Plahi

Habit: Tree

Folk Use: Leaves are used as fodder. Gum is tonic, stimulant. Wood is used as fuel, branches used as toothbrushes.

#### 2. *Acacia nilotica* (L.) Delile

Family: *Mimosaceae*

Local Name: Kikar

Habit: Tree

Folk Use: The wood is hard and durable and used for house construction, agricultural tools and as fuel

wood. Leaves are used as fodder for goats while Gum is used as tonic, also for curing diarrhea, dysentery and diabetes.

#### 3. *Adiantum venustum* D. Don.

Family: *Pteridaceae*

Common name: Dil-pata (Fern)

Habit: Herb, Wild.

Folk Uses: Rhizome is used as an astringent, diuretic and stomachic.

#### 4. *Adiantum Cappillus-veneris* Geutheer

Family: *Adiantaceae*

Local Name: Pani Boti (Fern)

Habit: Herb, wild

Folk Uses: It is used as expectorant, hair tonic and in stomach pain.

#### 5. *Ajuga bracteosa* Wall. Ex Benth.

Family: *Lamiaceae*

Local name: Korri booti

Habit: Herb, wild

Folk Use: Blood purifier, antidiabetic, fever, rheumatism, hair-tonic, abdominal pain, wounds and certain other maladies.

#### 6. *Achranthes aspera* L.

Family: *Amaranthaceae*

Local Name: Pathkanda

Habit: Herb, wild

Folk Uses: It cures eye disorders. Good for cough, worms and indigestion. Good in snake bite.

#### 7. *Albizia lebbek* (L.) Benth.

Family: *Fabaceae*

Local name: Sirin

Habit: Tree, wild

Folk Uses: Inflorescence used as poultice in stomach pain. Plant bark is antiseptic. Leaves used as fodder for livestock. Roots smoke used for cough. Seeds are astringent, given in piles and diarrhea.

#### 8. *Allium cepa* L.

Family: *Amaryllidaceae*

Local name: Piaz

Habit: Herb (Cultivated)

Folk Uses: Cultivated vegetable Bulb used as a flavoring and as condiments. Medicinally it is used as stimulant, diuretic, aphrodisiac and expectorant. It is widely used as salads because of its hypertensive and anticholesterolic activity.

#### 9. *Allium sativum* L.

Family: *Amaryllidaceae*

Local name: Thoom

Habit: Herb (Cultivated)

Folk Uses: Leaves are used as a vegetable. Bulb is used as a condiment and flavoring substance in cooking. Powder is extensively used as a condiment and also serves as a carminative and gastric stimulant. Fresh bulbs are eaten to treat hypertension and hyperlipidemia. The juice is useful in skin diseases and as ear-drop in ear-aches.

**10. *Aloe vera* L.**Family name: *Liliaceae*

Local name: Kanwargandal

Habit: Herb, Wild.

Folk Use: Cultivated for medicinal values. Juice is cathartic and also used in piles, constipation, fever and colic. The pulp is given for female ailments like menstrual irregularity. Leaves also used in wound healing, skin burns, curing ulcers and as laxative.

**11. *Amaranthus viridi* L.**Family: *Amarantheceae*

Local name: Gahnaar

Habit: Herb, Wild

Folk Uses: It is locally used as vegetables. It is considered good for obese persons. Used as anti-snake and in scorpion bite.

**12. *Amaranthus spinosus* L.**Family: *Amarantheceae*

Localname: Surkh ghanaar

Habit: Herb, wild

Folk Uses: The roots are used as diuretic. The leaves are eaten as vegetable, which are febrifuge. Fruits are roasted, grind and used as laxative.

**13. *Anagallis arvensis***Family: *Primulaceae*

Local name: Lesli booti

Habit: Herb, Wild

Folk Uses: A common wheat weed used in treating gout. It is also used for killing moths.

**14. *Artemisia scoparia* Waldst. & Kit.**Family: *Asteraceae*

Local name: Chau

Habit: Herb, Wild

Folk Uses: Plant extract is used for fever, cough, heart problems, purgative and to treat burns. Plant widely used as jahrroo in cleaning houses.

**15. *Asphodelus tenuifolius* Caven**Family: *Liliaceae*

Local name: Piazi

Habit: herb, Wild

Folk Uses: It is wheat weed. Seeds are anti-inflammatory and plants are purgative.

**16. *Azadirachta indica* A. Juss.**Family: *Meliaceae*

Local Name: Neem

Habit: Tree

Folk Uses: Leaves and fruits used in curing diabetes, purifying blood and as contraceptive. Whole plant has also been used as vermifuge and antiseptic. Plant burned to smoke which fend off mosquitoes, hence safe to cause malaria.

**17. *Brassica campestris* L.**Family: *Brassicaceae*

Local name: Sirsoon

Habit: Herb, Cultivated

Folk Uses: Leaves and young branches are used as a vegetable. Oil is used in cooking and tonic. Oil is also used in massage curing headache, body ache and fatigues.

**18. *Brassica napus* Reichb.**Family: *Brassicaceae*

Local name: Gonglo

Habit: Herb, Cultivated

Folk Uses: Roots and leaves are used as vegetable and medicinally used as tonic, an aphrodisiac.

**19. *Butea monosperma* (Lam.) Taub.**Family: *Fabaceae*

Local name: Chichra

Habit: Tree

Folk Uses: Leaves as fodder for buffalo to increase milk. Flower for colic by making poultice and in dyes. Bark and resin in leucorrhoea, abortion pain and bleeding.

**20. *Calotropis procera* R. Br.**Family: *Asclepiadaceae*

Local Name: Akk

Habit: Shrub, wild

Part Used: Whole plant, Latex

Folk Use: All parts are used for making paste, which along with raw sugar is applied over the dog bitten wounds. The dry leaves are smoked for curing asthma and cough; large doses are poisonous for human beings. The latex is commonly used for ringworm and skin diseases. Roots and leaves have also been used as detergent. Young leaves are highly bitter, chewed and eaten in snake bite.

**21. *Cannabis sativa* L.**Family: *Canabidaceae*

Local Name: Bhang

Habit: Shrub, Wild

Part Used: Leaves, Flowers, whole plant, Seeds

Folk Use: Used as narcotic, sedative, analgesic and intoxicant. Leaves are used as green manure. Flowers are sedative, anodyne and narcotic. Charas or hashish is also prepared from it. Plant powder is used for cough, bronchitis and chest problems. Seeds are occasionally eaten and much valued for feeding birds. Seed oil is used in making of paints, varnishes and soap.

**22. *Carica papaya* L.**Family: *Caricaceae*

Local Name: Papeeta

Habit: Tree, cultivated

Folk Use: Fruit is used as digestant. It is also anthelmintic, laxative, tonic, nutritive and diuretic. Unripe fruit is good for excretory troubles in children. It is a good aphrodisiac.

**23. *Carissa opaca* Stapf-ex-Haines**Family: *Apocyanaceae*

Local name: Garinda

Habit: Shrub, wild

Folk Uses: Fruit and leaves are cardiac and stimulant.

**24. *Carthamus oxycantha* M. Bieb.**

Family: *Asteraceae*

Local name: Pohli

Habit: Herb, Wild

*Folk Uses:* Plant is wheat weed. Seeds are used as brain tonic and general vitality.

**25. *Capparis deciduas* (Forssk.) Edgew.**

Family: *Capparidaceae*

Local Name: Trrai

Habit: Shrub, wild

*Folk Uses:* Fruit is used for tonic, laxative and antidiabetic. Leafy-shoot powder is also used in curing diabetes mellitus. Plants are fodder for livestock.

**26. *Ceropegia bulbosa* Roxb.**

Family: *Asclepiadaceae*

Local name: Glut

Habit: Climber

*Folk Uses:* Leaves as good digestive. Tubers used as tonic in infertility and vitality.

**27. *Chenopodium album* L.**

Family: *Chenopodiaceae*

Local name: Gundera

Habit: Herb

*Folk Uses:* Whole plant is used for ulcers, swellings, anthelmintics and seminal weakness. Plant is also used as a vegetable.

**28. *Citrullus colocynthis* (L.) Schrad.**

Family: *Cucurbitaceae*

Local name: Tuma

Habit: Herb, wild

*Folk Uses:* Fruits used as purgative. Stem, roots and fruits are very bitter which mostly used in diabetes. Roots are also used as diuretic, in jaundice, hypertension and urinary diseases. Leaves have anti-inflammatory activity.

**29. *Convolvulus arvensis* L.**

Family: *Convolvulaceae*

Local name: Laili,

Habit: Herb, Wheat climber, wild

*Folk Uses:* Whole plant was used as detergent for washing clothes and hairs. It is also used as fodder for goats to increase milk.

**30. *Cordia obliqua* Wild**

Family: *Boraginaceae*

Local name: Lasoora

Habit: Tree, wild

*Folk Uses:* Fruits are rich in gummy latex which is used in paper binding in place of gum. These are aphrodisiac, laxative and used in indigestion. Fruits are used in making achaars that may enhance sexual desire in males.

**31. *Coriandrum sativum* L.**

Family: *Umbelliferae*

Local name: Dhania

Habit: Herb, (Cultivated)

*Folk Uses:* Fruits and leaves are used as spice in cooking. Medicinally used for flatulence, carminative, stomachic, dysentery, diarrhea, cough and vomiting. Seeds and fruits are also used in digestive ailments. Leaves are appetizer and extract is useful in conjunctivitis.

**32. *Crotolaria mysorensis* Roth.**

Family: *Papilionaceae*

Local name: Parro

Habit: Herb, wild

*Folk Uses:* Its decoction is used in stomach pain and ulcers.

**33. *Cucumis sativus* L.**

Family: *Cucurbitaceae*

Local name: Khira

Habit: Herb, Creeping vegetable (Cultivated)

*Folk Uses:* Cultivated for its fruits making salads. Unripe fruits are used for fever, general debility, indigestion and burns. It is diuretic and in combination with other salads lower down blood pressure.

**34. *Cucurbita maxima* Duch. ex Lam.**

Family: *Cucurbitaceae*

Local name: Walayti kadoo

Habit: Herb, Creeping vegetable (Cultivated)

*Folk Uses:* Unripe and ripe fruits are used as vegetable and medicinally for burns, inflammations, jaundice and nervous disorders.

**35. *Cynodon dactylon* (L.) Pers.**

Family: *Poaceae*.

Local Name: Khabal ghas.

Habit and Habitat: herb, wild

*Folk Uses:* Root is. A decoction of inflorescence used in blood purifying and against blood dysentery. Powder used as aphrodisiac, diuretic, laxative and in indigestion.

**36. *Cuscuta reflexa* Roxb.**

Family: *Cuscutaceae*

Local Name: Neelodhaar/Amar-bail

Habit: Parasitic climber, wild

Part Used: whole plant

*Folk Use:* Its infusion is anti-lice and used for washing sores. The extract of the plant is applied to get rid of dandruff.

**37. *Cyperus rotundus* L.**

Family: *Cyperaceae*

Local name: Deela

Habit: Herb, wild

*Folk Uses:* Flowers making artificial crowns and rings by children's. Root paste used in wounds and fever. Fresh tubers are diaphoretic and astringent. Aerial parts used in increasing milk in animals.

**38. *Dalbergia sissoo* Roxb. ex DC.**

Family: *Fabaceae*

Local name: Tali, Shisham

Habit: Tree, wild

Folk Uses: Used in gonorrhoea. The timber is used as fuel wood. The wood is used for making furniture and agricultural tools. Branches used for thatching and fencing.

**39. *Daucus carota* L.**

Family: *Umbelliferae*

Local name: Gajir

Habit; Herb, (Cultivated)

Folk Uses: Cultivated for its edible roots used as salads. Seeds Aromatic, carminative; useful in kidney diseases, nerve tonic given in uterine pain.

**40. *Datura alba* Nees.**

Family: *Solanaceae*

Local Name: Dhatura

Habit: Shrub, wild

Folk Uses: Leaves and fruits are strongly purgative. It may often cause unconsciousness or even death, if many seeds are inhaled. Seeds are used in mental disorders.

**41. *Datura stramonium* L.**

Family: *Solanaceae*

Local name: Daturoo

Habit: Shrub, wild

Folk Uses: Leaf extract is used for injuries, wounds, bleedings and pains. The extract is also used for baldness.

**42. *Emblica officinale* Gaerth.**

Family: *Euphorbiaceae*

Local name: Amla

Habit: Tree, cultivated as well as wild

Folk Uses: Tree cultivated for its fruits which is rich in tannin and vitamins C. Mostly used in constipation, diabetes, cold, cough, hyperacidity and colic.

**43. *Eugenia jambolana* (Lam.) Meth.**

Family: *Myrtaceae*

Local name: Jamon

Habit: Tree, wild as well as cultivated

Folk Uses: Fruits are edible and used in diabetes. These are also used in constipation, stimulant and diuretic.

**44. *Euphorbia helioscopia* L.**

Family: *Euphorbiaceae*.

Local name: Korri Dhodhal.

Habit: Herb, Wild

Folk Uses: It is poisonous and cannot be eaten even by animals. The poultice of the plant material is used as anti-infective and anti-fungal. Dry plant smoke used to repel mosquitoes.

**45. *Euphorbia hirta* L.**

Family: *Euphorbiaceae*

Local name: Dodak

Habit: Herb, wild

Folk Uses: It is used in cough and asthma. It is Leaves used in diarrhoea, piles and semen debility. It is also laxative, astringent, aphrodisiac and enriches the blood.

**46. *Euphorbia royleana* Boiss**

Family: *Euphorbiaceae*

Local name: Danda Thor

Habit: Shrub, wild

Folk Uses: Plant is succulent and its latex is poisonous but highly anti-infective in stomach worms if used small proportion with vegetables. Pastes also used on skin boils.

**47. *Ficus carica* L.**

Family: *Moraceae*

Local name: Anjeer

Habit: Tree, wild

Folk Uses: Fruits are used as tonic and used in cardiac troubles, abdominal problems, expectorant and constipation. Stem latex is used for skin problems. Fruit also used to remove kidney stone and to remove obstructions of the liver and spleen.

**48. *Ficus palmata* Wall.**

Family: *Moraceae*

Local name: Phagwaar.

Habit: Tree, wild

Folk Uses: Fruit edible, laxative and plant milk used to cure warts.

**49. *Ficus bengalensis* L.**

Family: *Moraceae*

Local name: Bohrr

Habit: Tree, wild

Uses: Milk from stem, leaves used in making medicines for male infertility, increase semens counts. Fruit is useful in constipation.

**50. *Ficus religiosa* Roxb.**

Family: *Moraceae*

Local Name: Peepal

Habit: Tree

Part Used: Wood, Bark, Fruits

Folk Uses: Bark decoction is given in leucorrhoea, gonorrhoea and scabies while fruit are edible and laxative. Latex is used in making pills for curing impotency. Fruits are astringent, expectorant, laxative and conceptive.

**51. *Fumaria parviflora* Lam.**

Family: *Fumariaceae*

Local name: Paprra

Habit: Herb, wild

Folk Uses: Useful as blood purifier; skin diseases and diarrhoea.

**52. *Hibiscus esculentus* L.**

Family: *Malvaceae*

Local name: Bindi, Ocra,

Habit: Herb, vegetable, Cultivated.

Folk Uses: Fruit is used as a vegetable. These are anti-purgative, stomachic and aphrodisiac.



**53. *Glycyrrhiza glabra* L.**Family: *Papilionaceae*

Local name: Malathi

Habit: Corm, wild

Folk Uses: Roots are used for cough, bronchitis, asthma, sore throat, fever and abdominal disorders.

**54. *Hibiscus-rosa-sinensis***Family: *Malvaceae*

Local Name: Gul-khaira

Habit: Shrub, wild

Folk Use: Leaves and flowers have been used as aphrodisiac, laxative. Leaves are good for curing boils. Root decoction used in genital irritation and urthritis.

**55. *Hordeum vulgare* L.**Family: *Poaceae*

Local name: Jou

Habit: Herb, (Cultivated)

Folk Uses: It is very useful crop among cereals. Used as high energy, tonic, cooling, digestive and in ulcers.

**56. *Helianthus annuus* L.**Family: *Compositae*

Local name: Soorajmukhi

Habit: Shrub, Cultivated

Folk Uses: Seeds and flowers are used for fever, cough and throat problems.

**57. *Justicia adhatoda* L.**Family: *Acanthaceae*

Local Name: Baikar

Habit: Shrub, wild

Local Uses: Plant shoots smoke used as insect repellent. Leaves are applied to reduce swelling. The decoction of leaves is antispasmodic, expectorant and abortifacient. Leaves extract is also used in scabies and other skin diseases. Roots are used in rheumatism, pneumonia and cough.

**58. *Launaea acaulis* L.**Family: *Asteraceae*

Local Name: Mushka

Habit: Herb, wild

Folk Uses: It is used as nutritive, diuretic, stomachic and blood purifier. Leaves and roots are given in leprosy and leucorrhoea. It is used as antidote for poisoning. Roots relieve jaundice and skin disorders.

**59. *Luffa aegyptica* Mill.**Family: *Cucurbitaceae*

Local Name: Tori

Habit: climbing vegetable, cultivated

Folk Use: Fruits are used as vegetable. It is good for stomach and ulcer problems. Dried fruit case is used for cleaning utensils.

**60. *Lepidium sativum* L.**Family: *Brassicaceae*

Local name: Haleon, Garden cress

Habit: Herb, Cultivated.

Folk Uses: Leaves are used as a vegetable. Seeds are used as an eye cleaner. Oil is tonic and used for vitality.

**61. *Mentha arvensis* L.**Family: *Labiatae*

Local name: Podina

Habit: Herb, Cultivated

Folk Uses: Leaves are mostly used as salad and medicinally used for stomach problems, allergy and as carminative. Powder of leaves is used for birth control.

**62. *Mentha longifolia* L.**Family: *Labiatae*

Local name: Jangli podina

Habit: Herb, Cultivated

Folk Uses: The whole plant used as carminative and flavoring agent. It is used in medicines as stomachic, diuretic and anthelmintic. It cures bad taste of mouth, indigestion, constipation and worms. Plant extract is also used for liver problems, vomiting and indigestion.

**63. *Malva sylvestris* L.**Family: *Malvaceae*

Local name: Sonchal Gha

Habit: Herb, wild

Folk Uses: Young plants are used as vegetable and old plant stem is used for toothache. It is also used in curing hoarse throat.

**64. *Momordica charantia* L.**Family: *Cucurbitaceae*

Local name: Karella

Habit: Herb, Climber, (Cultivated)

Folk Uses: Fruit is used as a vegetable and famous for their bitter taste. Used as blood purifier and antidiabetic.

**65. *Mangifera indica* L.**Family: *Anacardiaceae*

Local name: Amm

Habit: Tree, cultivated

Folk Uses: Bark of the plant is aphrodisiac, cardiac, appetizer and astringent. Fruits are good in bleeding piles, haemorrhage from uterus, lungs and intestine. Roots relieve jaundice and skin disorders. Fruits are main product if used with milk highly tonic.

**66. *Medicago sativa* L.**Family: *Papilionaceae*

Local name: Palooni

Habit: Herb, wild

Folk Uses: It is a chief source of fodder and some people use it as vegetable. Seeds are used for joints pain, gout and indigestion and also used as a general tonic.

**67. *Melia azedarach* L.**Family: *Meliaceae*

Local Name: Dharek

Habit: Tree, wild

Folk Use: Plant bark is used for curing fever and is anthelmintic, astringent, poisonous with bitter taste. Leaves are used as fodder for goats and are carminative. Fruits extract is taken in snake bite and curing diabetes.

**68. *Morus alba* L.**

Family: *Moraceae*

Local name: Toot

Habit: Tree, wild

Folk Uses: Plant is mainly fodder for livestock and growing silk-worms. Stem and branches are used for making agricultural tools. Roots are used for diabetes and fruits are laxative, purgative, used as general tonic in fever and sore throat.

**69. *Musa paradisiaca* L.**

Family: *Musaceae*

Local name: Kella

Habit: Shrub, wild as well as cultivated

Folk Uses: Young pseudo stem and inflorescences decoction on low heat used as pregnancy diet for easy delivery. Fruit used in constipation and vitality.

**70. *Nerium oleander* L.**

Family: *Apocynaceae*

Local name: Gundera

Habit: Shrub

Folk Uses: Stem used in rat poisoning. Leaves often used by rubbing in headache and BP lowering. Increase lactation in cattle, camel fodder. Leaves with honey used as a poultice in gangrene. Bark is used to treat arthritis. Stem branches used as mouthwash.

**71. *Nerium indicum* Mill.**

Family: *Apocyanaceae*

Local Name: Gunday

Habit: Shrub, wild

Folk Use: Ornamental but poisonous. The leaves decoction in the form of paste is applied externally on the skin to prevent skin diseases.

**72. *Ocimum basilicum* L.**

Family: *Labiatae*

Local name: Niazboo

Habit: Herb, wild

Folk Uses: Leaves and flower decoction is used for cold-flu, fever, headache and stomach problems. Leaves juice used in making poultice for severe infections and boils in animals.

**73. *Olea ferruginea* Royle**

Family: *Oleaceae*

Local name: Kaoo

Habit: Tree, wild

Folk Uses: Bark is used for curing fever. Plant is now commercially used for the production of olive fruits after grafting to *Olea europea*. Plant used fodder for livestock. Wood is used for making agricultural tools.

**74. *Oxalis corniculata* L.**

Family: *Oxalidaceae*.

Local name: Khatimithi

Habit: Herb, wild

Folk Uses: plant is used as antimalarial, blood purifier and in hepatitis B, abdominal pain.

**75. *Papaver nudicaule* L.**

Family: *Papaveraceae*

Local name: Ghoshal

Habit: Herb,

Folk Uses: Flowers are used as a dye and some people prescribed it for cough, fever, chest complains and heart problems.

**76. *Populus caspica* Bornm.**

Family: *Salicaceae*

Local Name: Sufaida

Habit: Tree, wild

Folk Uses: Plant used as fuel wood and making matches. Leaves serve as fodder for livestock. Leaves are used in fever and headache.

**77. *Plantago lanceolata* L.**

Family: *Plantaginaceae*

Local name: Isapgol

Habit: Herb, cultivated as well as wild

Folk Uses: Leaves extract is used for wounds and seeds are used for constipation, abdominal problems, eye redness and for washing hairs. Soups are best in ulcers, piles and hemorrhoids.

**78. *Punica granatum* L.**

Family: *Punicaceae*

Local Name: Darrona

Habit: Shrub, wild

Folk Uses: It is used in curing fever, burning, heart diseases and throat infections. Fruits are good for appetizer and used in making chatinies. Fruits are used for improving memory, brain and strength. It is laxative and astringent.

**79. *Ricinus communis* L.**

Family: *Euphorbiaceae*

Local Name: Arundo

Habit: shrub, wild

Folk Use: Leaves are emetic, narcotic, poisonous and purgative. Poultice is applied to swellings. Castor oil is purgative, given in constipation before and after child birth to mothers. Fresh leaves dipping in olive oil and put on the thorax, relieves cold and mild respiratory problems in children's. Seeds used for abortion and as contraceptive.

**80. *Raphanus sativus* L.**

Family: *Brassicaceae*

Local name: Choo Molo

Habit: Herb (Cultivated)

Folk Uses: Roots, seeds and leaves are used for indigestion, stomachic, jaundice, inflammation, colic, flatulence and skin diseases. Some people used these roots in asthma, diarrhea and paralysis. Seeds are used as aphrodisiac.

**81. *Rubus fruticosus* L.**

Family: *Rubiaceae*

Local name: Aakhra

Habit: Shrub, wild

Folk Uses: Fruits are edible and appetizer. These are used in curing fever and as diuretic.

**82. *Rumax dentatus* L.**

Family: *Polygonaceae*

Local name: Jangli Palak

Habit: Herb, wild

Folk Uses: Herb is basic in nature and used as antacids. Leaves are also in scorpion bites and allergic reactions of acidic nature plants.

**83. *Solanum nigrum* L.**

Family: *Solanaceae*

Local name: kach mach

Habit: Herb, wild

Folk Uses: Ripe fruits are edible and used for heart diseases and fever. Leaves are used for gout, rheumatism, joints pain, enlargement of spleen and liver. Fruits are also used for hepatitis B.

**84. *Stellaria media***

Family: *Caryophyllaceae*

Local name: Stalli

Habit: Herb, wild

Folk Uses: Plant is used as antacid. Externally it is used as poultice in joint pains and high fever, abdominal pain, cough and diuretic.

**85. *Solanum xanthocarpum* Schard & Wendl.**

Family: *Solanaceae*.

Local Name: Mokrri

Habit: Herb, wild

Folk Uses: Use: Fruits is effective in respiratory diseases and throat disorders. It cures gonorrhoea. It is good in snakebites. Fruit burned and smoke applied in severe asthmatic attack. It is also used as anti-inflammatory, diuretic and appetizer.

**86. *Sesamum indicum* L.**

Family: *Pedaliaceae*

Local name: Til

Habit: Herb, Crop, cultivated

Folk Uses: Plant is fodder for livestock. Oil is highly tonic, used for vitality and for massages in body aches.

**87. *Sonchus asper* L.**

Family: *Asteraceae*.

Local name: Dodhak

Habit: Herb, wild

Folk Uses: Common weed of wheat crop. It is used in jaundice. Increase milk yield in cattle.

**88. *Tribulus terrestris* L.**

Family: *Zygophyllaceae*

Local name: Bhakhrra

Habit: Herb, wild

Folk Uses: Leaves are used in the removal of urinary bladder and kidney stones. It is aphrodisiac and carminative. Fruits and seeds used in conditions such

as congestion, headache, hepatitis, kidney problems and impotence. They are also considered astringent, diuretic, and tonic. They are taken for dysentery and bladder pain.

**89. *Trigonella foenum-graecum* L.**

Family: *Umbelliferae*

Local name: Methi

Habit: Herb, Cultivated

Folk Uses: The seeds are used as carminative and tonic. The seeds are used as a spice and condiment. The leaves are used as a pot herb and fodder.

**90. *Verbascum thapsus* L.**

Family: *Scrophulariaceae*

Local name: Jangli tobacco

Habit: Herb, cultivated

Folk Uses: Leaves are boiled and used in abdominal pain. Leaves extract is expectorant, astringent and oil used in ear-aches.

**91. *Verbena officinalis***

Family: *Verbenaceae*

Local name: Neeli Booti

Habit: Herb, wild

Folk Uses: It is used as antidepressant, antispasmodic, diuretic and in conditions of amenorrhoea, dysmenorrhoea.

**92. *Vitex negundo* L.**

Family: *Verbinaceae*

Local Name: Bannanh

Habit: Shrub, wild

Local Uses: Fresh roots are used as bandage to relieve pain of chest and back. Plant shoots are used as toothbrush. Leaves are aromatic, febrifuge, diuretic and anthelmintic. Fresh leaves are also used in gum diseases. Leaves are smoked to relieve headache. Flowers are astringent and tonic.

**93. *Xanthium strumarium* L.**

Family: *Asteraceae*

Local Name: Kangi kanda

Habit: Shrub, wild

Folk Use: Leaves decoction is recommended in long-standing malarial fever.

**94. *Zizyphus jujuba* Mill.**

Family: *Rhamnaceae*

Local Name: Bairi

Habit: Tree, wild

Folk Use: Fruit edible, tonic, laxative, bloods purifier and cure indigestion. Bark macerated in milk is given along with honey in diarrhoea and dysentery.

**95. *Zizyphus numularia* (Burm. f.) Wight & Arn.**

Family: *Rhamnaceae*

Local Name: Kokni bairi

Habit: Shrub, wild

Folk Use: Fruits are edible, tonic and laxative with sweet taste. Leaves extract used in scabies and boils. Plant used as hedges and branches are also used for fencing.



**96. *Zizyphus sativa* Gaertn.**Family: *Rhamnaceae*

Local Name: Bairre

Habit: Tree, wild

Folk Use: Fruits are edible, used as astringent, cooling. Leaves are main fodder for livestock. It is mainly fuel wood, used in fencing and hedges.

**97. *Zea mays* L.**Family: *Poaceae*

Local name: Makai

Habit: Annual crop (Cultivated)

Folk Uses: Maize is the second chief source of food and straw and its grain is also used for curing dysentery, jaundice and cough problems.

**DISCUSSIONS**

The biochemical and pharmacological studies now established that natural remedies have been proved very effective in treating diseases of mild nature as common cold to severe as cancer. The natural plant remedies are very economical, empirical and safe enough as compared to allopathic drugs. We being a under develop country have not enough budget to spend in conventional healthcare yearly on fastly growing population but on the other hand rich in natural medicinal resources. If our health professional plan to use this natural resource by binding both conventional and traditional healthcare forces together we can easily combat diseases by saving many of our national revenue. To promote traditional knowledge a close liaison should be established between the traditional healers and conventional health practitioners for the well-being of community. At times patients afraid regarding negative attitudes of most of conventional doctors towards their plant medicine so most of patients do not inform when visits them. So doctors must be positive and encourage patients to talk about their plant medicines that may affect the outcome and management of their disease. For this conventional medical doctors should work side by side with traditional healers to develop a close understanding, giving patient's confidence on their treatment and for better compliance. It should be as ideal that if a diagnosis is made by the conventional doctor but the patient is under the care of the traditional healer and the conventional medical doctor follow-up the patient's progress during and after treatment by the healer. Government should organize some short courses regarding the use of plant medicines to educate both of these health professionals to bring in stream line their expertise for patients and it must be include in health policy. It was also noted during survey some rural physicians have also adequate knowledge of herbs beside allopathic in the treatment of these common ailments so they can assist in this regard. In this way we can

serve our people through a simple, affordable, accessible system of healthcare in current stress of economic constraints.

It was observed that in last two decades there is a quick decline in practice of traditional knowledge of natural medicines in new generations. The loss of knowledge on preparing medicine was due to several reasons including loss of interest in new generation, easy approach to allopathic drugs, loss of old assets, urbanization, easy approach to allopathic drugs and less people coming forward to adopt traditional healing practice professionally. So there should be a concrete effort to patronize the traditional folk knowledge in such a way that people adopt it professionally and establish herb gardens in the community to ensure supply for treatments. Herbalist should be trained ensuring improved ways of drug preparation and runs herbal clinic like allopathic for the community.

These natural medicines renders a lot of services to the community by curing many of diseases like common cold, influenza, fever, malaria, cough, asthma, head and body aches, antidiabetic, antihypertensive, anticholesterolic, cardio-vascular, urino-genital, anticancerous, constipation, dysentery, diarrhea, ulcers, hemorrhoids, abdominal pain, skin infections, lungs and kidney infections, throat infections, eye infections, inflammations, gynecological infections, anti-infectives, hepatitis, impotence, allergies, anti-poisonous, male and female infertilities, general vitalities, fatigues, wounds and burns, etc.

So I emphasize the fact that being a state highly rich in natural medicinal flora we should take it on priority not only for healthcare needs but require its conservation and sustainable usage. We can document our traditional knowledge by making some smart plans but we can't bring back the endangered plant species or plant gone extinct. The plant like *Taraxicum officinale*, *Bauhinia variegata*, *Cordia obliqua* and *Ficus bengalensis* are now at endangered so therefore it is the need of the time to carry out extensive surveys in order to document traditional knowledge from our old assets before it disappears with the aging farmers and folk healers on one side and make strategies to conserve most valuable flora from being waste.

The natural medicinal flora greatly threatened by illiterate villagers who aggressively harvest and sell to invaders just at small money. This indiscriminate practice is going throughout the region threatening our valuable plant species near extinction (Dhar *et al.*, 2000). Deforestation was a existing threat but after earthquake it goes four times high and now people greatly depends on wood for building. Government institutions also failed to protect the

harm to the conservation of biological diversity and erosion of this valuable treasure. Now people everywhere badly affect this precious resource through cutting, burning, grazing and trading for their own benefits. This situation might be alarming because many of native highly valuable species have become extinct and some are endangered. Despite we focus on these assets

It is therefore necessary that systematic cultivation of medicinal plants be introduced in order to conserve biodiversity and protect threatened species. Systematic cultivation of these plants could only be initiated if there is a continuous demand for the raw materials. For this we can focus on domestic, regional and international markets to generate orders earning handsome income through integrate efforts.

Biotic and abiotic factors are the basic indicator measuring the prevailing effects on the vegetation cover of an area. Although it is beyond the scope of present analysis but people suffering in the study area are being imposed by social and political insecurity that can't be overlooked in any comprehensive approach to achieving a locally sustainably use of medicinal plants. With the increase in prices of basic commodities and high market inflation people suffering now more depend of plants for shelters, burnings, agriculture tools, fodders, furniture and medicines. Investors are now investing more on rural areas for land forms, goat forms, dairy forms, animal husbandry and timber wood. Overgrazing, overbrowsing and overexploitation leads to certain characteristics changes in vegetation cover by decreasing in density. This creates very adverse situation for conservation of medicinal flora. Though some of areas protected through declaration of national park like Machiara (AJ&K, Pakistan), but much more yet to be done for the sustain use of traditional medicinal flora.

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