

Indigenous Knowledge of Folk Herbal Medicines by the Women of District Chakwal, Pakistan

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Issued 7 September 2006

ABSTRACT

The present research work was designed to gather indigenous knowledge of local women about herbal medicines. Present study was confined to interview women of remote villages of district Chakwal. The study was conducted from October 2004- February 2005. Indigenous knowledge was collected by interviewing about 50 women of different age groups between 20 and 80 years. Frequent field trips were arranged to collect plant specimens. Information about the local names, parts used and medicinal uses of plants was collected from native women. Indigenous information was arranged by ethnomedicinal inventory followed by botanical name, local name, family name, flowering season, part used and folk medicinal uses. A total of 38 species belonging to 36 genera and 24 families were recorded as being used by local inhabitants for the treatment of various diseases. It is concluded from this study that the women of the area have rich indigenous knowledge about the medicinal uses of native flora. Women of the area believe that these natural products are easily available, inexpensive and permanent cure for common day ailments.

Key words: Indigenous knowledge, folk herbal medicine, women and Chakwal.

INTRODUCTION

Since ancient times plants have been used throughout the world (including Asian and Pacific countries) in folk medicine and as local cures for common ailments. Folk medicine gave rise to traditional systems of medicines in various countries (e.g. China and other Far Eastern countries use about 80 percent of therapeutic agents from plants in their Traditional systems) (Pie,1991).

Medicinal plants have been used in the Islamic period for the cure of various diseases. Our Holy Prophet (P.B.U.H) used certain herbs for the cure of various diseases. It was reported that 84 percent of Pakistani population was dependent on traditional medicines for their medicinal needs. (Hocking, 1958).

Pakistan is quite rich in medicinal herbs growing in the wild. Most of these plants have remarkable medicinal value, often only known to indigenous communities. With rapid urbanization of forests and hills, the rich herbal wealth of our country is fast dwindling.

District Chakwal is bordered by the district of Rawalpindi and Attock on the north, district Jhelum on the east

and south-east, district Khushab on the south and district Mianwali on the west. The district lies between 71°-33' to 73°-16' east longitudes and 32°-33' to 33°-12' north latitudes. The total area of district is 6.524 Km² equivalent to 1631190 acres (Anon, 1998).

Local people of the area have always used medicinal plants for various diseases and depend on the surrounding plant resources from a very long time. The people of the area are very much close to natural vegetation. Women of the area are actively involved in the preparations of herbal medicines from the plants they collect from fields either by themselves or by their men and children. The area has not so far been explored ethnobotanically. So a survey was considered necessary in above respect to enlist the local plant species, their parts used and their medicinal uses to document such information.

Objectives of the study are; firstly, to record valuable information about medicinal plants of the area which has been transmitted from ancestors and knowledgeable persons. Secondly, to explore the medicinal plants of the area and open the field for further research by plant scientists, phytochemists and other researchers. Thirdly, to present the indigenous knowledge to a wider range of audience and lastly, to create awareness about indigenous plants and to renew the trend of using medicinal plants.

MATERIALS AND METHODS

Medicines prepared by the women of area from local plants were extensively used by their family members to cure various diseases. The selected remote villages were surveyed from October 2004 to February 2005. Plants used by local people were collected during frequent field trips. During field studies reliable women were approached and taken to the field. Interviews were taken from the local women about various medicinal plants and their uses. Information on mode of collection, processing, formulation and administration etc. were inquired in detail. Interviews were taken in the field and in the homes from the local women of various age groups. Questionnaires were also adopted for interviews. Plant specimens were collected and their local names, parts used and medicinal uses were recorded. Some useful discussions were held with some knowledgeable persons to confirm the information recorded from the informants. The collected specimens were dried and identified with the help of Flora of Pakistan (Nasir and Rafique, 1995). Plants were deposited as voucher specimens for future references in herbarium.

OBSERVATION ON FOLK HERBAL MEDICINE

The present study was conducted in remote villages of District Chakwal. A total of 38 species belonging to 36 genera and 24 families have been recorded as being used by local inhabitants for the treatment of various diseases. The recipes on folk herbal medicines were arranged in alphabetic order of botanical name followed by local name, family, flowering season, part used and folk medicinal uses.

1. *Acacia nilotica* (L.) Delile.

Local name:	Kiker
Family:	Mimosaceae
Flowering season:	May-October
Part used:	Bark, leaves and branches

Folk medicinal uses: Bark soaked in water for few hours and that water is used for gargling as a remedy of mouth sores, gum pain and toothache. Decoction is made by boiling leaves in water and used for loose motion.

2. *Acacia modesta* Wall.

Local name: Phulahi

Family: Mimosaceae

Flowering season: November-March

Part used: Bark of tree

Folk medicinal uses: Decoction is made by boiling bark in water or powder of bark is made by grinding the bark. Used for treatment of gas trouble and abdominal diseases.

3. *Aloe vera* L.

Local name: Knwar gandal

Family: Liliaceae

Flowering season: Summer

Part used: Leaves

Folk medicinal uses: A piece of leaf is heated and applied on face pimples. Two-three teaspoons jel of the leaves is mixed with two to three drops of lemon juice and applied on pimples for one week. One large leaf is cut into small pieces, put in a new earthen pot, some lemon drops and ajwain seeds (250g) were also added. Dried in the sun and crushed powder is used for gas trouble and abdominal pains.

4. *Albizzia lebbek* (L.) Benth.

Local name: Shrin

Family: Mimosaceae

Flowering season: April-May

Part used: Leaves

Folk medicinal uses: Handful of leaves crushed finely with little water and infusion is cooked on little fire. Green solution is removed and clear solution is applied as eye-drops for eye problems and reddening of eye for three to four times.

5. *Allium sativum* L.

Local name: Thoom

Family: Alliaceae

Flowering season: Late spring

Part used: Fruit

Folk medicinal uses: Five to six pieces of garlic are heated with little mustard oil until red coloration. Oil obtained is used for ear pain (one to two drops).

6. *Anethum graveolense* L.

Local name: Soye

Family: Apiaceae

Flowering season: Jan-Feb

Part used: Seeds

Folk medicinal uses: Few seeds are taken with water for abdominal pain.

7. *Azidarachta indica* A.Juss

Local name: Neem

Family: Meliaceae

Flowering season: Summer

Part used: Leaves

Folk medicinal uses: Decoction of leaves is taken for digestive and gastric problems. Fresh leaves are boiled in water and tied on wounds. Leaves are dried, crushed and powder is mixed with small quantity of water and taken for the remedy of freckles on face.

8. *Bryophyllum pinnatum* Kurz.

Local name: Zakhm-e-hayat

Family: Crassulaceae

Flowering season: Throughout year

Part used: Leaves

Folk medicinal uses: Leaves are eaten as remedy for liverstones. Leaves are tied on wounds for two to three days for healing.

9. *Calotropis procera* Alton. F.

Local name: Ak

Family: Asclepiadaceae

Flowering season: Throughout year

Part used: Leaves and flowers

Folk medicinal uses: Latex of plants is applied externally on piles wounds for quick relief. Fresh young leaves and flowers are eaten against snake bite.

10. *Citrullus colocynthus* (L.) Schrad

Local name: Tumma

Family: Cucurbitaceae

Flowering season: June-September

Part used: Fruit

Folk medicinal uses: Fruit is cut, boiled in water and sugar added to make murabba. Used for constipation and abdominal diseases.

11. *Convolvulus arvensis* L.

Local name: Leli

Family: Convolvulaceae

Flowering season: Mostly throughout the year

Part used: Leaves and branches

Folk medicinal uses: Whole plant without roots is cut and cooked as vegetable used for abdominal pain and abdominal worms in children.

12. *Dalbergia sissoo* Roxb.

Local name: Tali

Family: Papilionaceae

Flowering season: March-April

Part used: Leaves

Folk medicinal uses: Leaves are crushed and boiled in water. Filterate is used to wash hair for removing dandruff and for long hair.

13. *Eucalyptus cammaldulensis* Dehn.

Local name: Lachi

Family: Myrtaceae

Flowering season: Sep-Nov

Part used: Leaves

Folk medicinal uses: Five to ten leaves boiled in water and decoction is taken for flu twice a day.

14. *Euphorbia royleana* Boiss.

Local name: Danda thor

Family: Euphorbiaceae

Flowering season: April-May

Part used: Main branch

Folk medicinal uses: A piece of main branch cut and put on fire for few minutes. Extract is taken by pressing it and used for ear pain (two to three drops).

15. *Fagonia indica* Burm. F.

Local name: Dhamian

Family: Zygophyllaceae

Flowering season: Most of the year

Part used: Leaves and branches

Folk medicinal uses: Whole plant without roots is crushed and extract is taken for pimples and acne problem of face. Dried plant is crushed, mixed with black salt and powder is taken for gas trouble.

16. *Foeniculum vulgare* Mill

Local name: Sonf

Family: Apiaceae

Flowering season: Summer

Part used: Inflorescence

Folk medicinal uses: Dew is taken from the inflorescence in the morning and put in the eye for eye-cataract.

17. *Hordeum vulgare* L.

Local name: Jo

Family: Poaceae

Flowering season: September-February

Part used: Seeds

Folk medicinal uses: Seeds are boiled in water and decoction is taken for kidney pain.

18. *Melia azedarach* L.

Local name: Dharek

Family: Meliaceae

Flowering season: April-June

Part used: Leaves and fruit

Folk medicinal uses: Leaves are crushed and dipped in a water tub. Feet are put in that tub. It is used for foot itching and burning. Dried fruits are crushed and powder is taken for piles (one teaspoon) with water.

19. *Morus alba* L.

Local name: Shehtoot

Family: Moraceae

Flowering season: Summer

Part used: Leaves

Folk medicinal uses: Leaves are boiled in water for few minutes and decoction is taken for cough and throat irritation.

20. *Nigella sativa* L.

Local name: Kalongi

Family: Apiaceae

Flowering season: June-September

Part used: Seeds

Folk medicinal uses: Seeds are taken with water for stones of body organs in many diseases. Kalongi seeds are taken with ajwain seeds for body stones.

21. *Ocimum basilicum* L.

Local name: Niazbo

Family: Lamiaceae

Flowering season: Summer

Part used: Leaves

Folk medicinal uses: Fresh leaves are chewed to treat mouth sores.

22. *Peganum heramala* L.

Local name: Hermal

Family: Zygophyllaceae

Flowering season: April-October

Part used: Seeds and whole plant

Folk medicinal uses: Seeds are taken with water for abdominal pain. Plant is incompletely burnt and smoke is spread in the room. Smoke has insecticidal properties and kills the insects.

23. *Plantago lanceolatum* L.

Local name: Ispaghul

Family: Plantaginaceae

Flowering season: April-August

Part used: Seed husk

Folk medicinal uses: Seed husk is taken with water for gas trouble and indigestion. Seed husk is mixed with yogurt and taken for stomach pain and stomach ulcers.

24. *Praecitrullus fistulosus* (Stocks.) Pangalo.

Local name: Teenda

Family: Cucurbitaceae

Flowering season: August-September

Part used: Leaves

Folk medicinal uses: Leaves are cooked as vegetables and taken for blood pressure.

25. *Psidium guajava* L.

Local name: Amrood

Family: Myrtaceae

Flowering season: Autumn and early winter

Part used: Leaves

Folk medicinal uses: Decoction made by boiling three to four leaves with one cup of water is taken after lunch for high blood pressure.

26. *Punica granatum* L.

Local name: Anar

Family: Punicaceae

Flowering season: September-december

Part used: Fruit

Folk medicinal uses: Outer covering of fruit is dried, crushed and powder is taken with water for diarrhea (one table spoon daily).

27. *Raphanus sativus* L.

Local name: Mooli

Family: Brassicaceae

Flowering season: February-March

Part used: Fruit

Folk medicinal uses: Fruit is cut longitudinally, salt is applied and hanged over night. In the morning it is taken for treatment of jaundice.

28. *Rhazya stricta* Decne.

Local name: Venra

Family: Apocynaceae

Flowering season: December-March

Part used: Leaves and branches

Folk medicinal uses: Fresh leaves are dried, crushed and powder is taken with water for pimples and acne problem of face. It is a blood purifier. Fresh leaves are kept in shoes and put under feet for foot burning. Branches are used as toothbrush for teeth ache.

29. *Ricinus communis* L.

Local name: Arind/harnoli

Family: Euphorbiaceae

Flowering season: Summer-fall

Part used: Leaves

Folk medicinal uses: Leaves are heated and used as poultice on wounds and swollen places because of wound healing effect.

30. *Rosa incica* L.

Local name: Gulab

Family: Rosaceae

Flowering season: Throughout summer and spring

Part used: Flowers

Folk medicinal uses: Extract of flowers (arq-e-gulab) is used for eye burning. Petals of flowers and sugar are put in jar for two to three days and the product (gulkand) is taken for constipation and abdominal pain.

31. *Solanum nigrum* L.

Local name: Kachmach

Family: Solanaceae

Flowering season: Summer

Part used: Leaves and branches

Folk medicinal uses: Aerial part of plant is boiled in water and cooked as vegetable. It is taken for gas trouble,

abdominal pain and stomach ulcer.

32. *Solanum surratense* Burm.F.

Local name: Muhakri

Family: Solanaceae

Flowering season: Throughout year

Part used: Fruit

Folk medicinal uses: Fruit is dried, crushed and powder is taken for abdomen pain and gas trouble.

33. *Syzygium cumini* (L.) Skeets.

Local name: Jaman

Family: Myrtaceae

Flowering season: March-May

Part used: Seeds

Folk medicinal uses: Dried seeds (guthli) crushed and powder is taken with water for diabetes.

34. *Tagetes petala* L.

Local name: Satbarga

Family: Asteraceae

Flowering season: Jan-Feb

Part used: Leaves

Folk medicinal uses: Fresh leaves are crushed and taken with water for ear pain.

35. *Trachyspermum copticum* L.

Local name: Ajwain

Family: Apiaceae

Flowering season: November-March

Part used: Seeds

Folk medicinal uses: Seeds are taken with little salt for gas trouble as stomach tonic.

36. *Tribulus terrestris* L.

Local name: Bhakra

Family: Zygophyllaceae

Flowering season: Throughout year

Part used: Leaves and whole plant

Folk medicinal uses: Plant without root is dried and crushed. One teaspoon on this powder is taken with water daily for rheumatism for fifteen days.

37. *Withania somnifera* (L.) Dunal

Local name: Aksun

Family: Solanaceae

Flowering season: Throughout year

Part used: Leaves

Folk medicinal uses: Decoction is made by boiling four leaves in four cups of water until one cup is left and is taken for rheumatism twice a day.

38. *Zizyphus nummularia* (Burm.F) Wight and Arn.

Local name: Beri

Family: Rhamnaceae

Flowering season: Summer and early Autumn

Part used: Leaves

Folk medicinal uses: Fresh leaves are crushed, soaked in water for few hours and filtrate is used for hair washing for shining of hair.

DISCUSSION

It is a well-established notion that man from the beginning of civilization is dependent on plants for health, food and shelter and other daily requirements of life. The unrecorded history of herbalism was handed down to generations by word of mouth specially in rural areas where herbs were indispensable not only for curing ailments but also for such household tasks as preserving food, dyeing clothes and repelling fleas.

The present study was conducted in remote villages of District Chakwal. A total of 38 species belonging to 36 genera and 24 families have been recorded as being used by local inhabitants and for the treatment of various diseases. It was found that many plants have similar medicinal uses as described by Ahmad *et al.* (2003) and Ashfaq *et al.* (2003) For example *Withania somnifera* (Aksun) is used for rheumatism. *Dalbergia sissoo* (Sheesham) leaves are used for softening and removal of dandruff of hair. Dried fruit of *Melia azedarach* (Dharek) is crushed and used for piles. *Aloe vera* is used for skin diseases and stomach diseases.

The wild medicinal herbs of the area are collected by low income villagers specially women and used effectively against various ailments. This is the need of time that such indigenous knowledge about medicinal plants should be documented and biochemical analysis and pharmaceutical screening of these plant species need to be carried out in order to cross check local information and scientific investigation for production of commercial products. In order to avoid the loss of these valuable plant species, in-situ and ex-situ conservation methods should be practiced as long term conservation program.

REFERENCES

Ahmad, M., M. A. Khan and R. A. Qureshi. 2003. Ethnobotanical Study of Some Cultivated Plants of Chhuchh Region (District Attock). Hamdard Medicus., 46 (3): 15-19.

Ahmad, M. 2003. Ethnomedicinal and Taxonomic studies of Economically Important Plants of Tehsil Attock. M. Phill Thesis, Department of Biological Sciences. Quaid-e-Azam University Islamabad : 205-207.

- Anonymous.1998. District Census Report of Chakwal. Population Census Organization, Statistical Division, Government of Pakistan, Islamabad.
- Ashfaq, S., M. Ahmad and M. Arshad. 2004. Ethnomedicinal Observations of Medicinally Important Plants of Tehsil Fateh Jang, District Attock. Pak. J. Arid. Agric.7(1): 25-33.
- Hocking, G. M. 1958. Pakistan Medicinal Plants I, *Qualitas Plantarum Et. Material Vegetabiles.*, 5 : 145-153.
- Nasir, Y. J. and R. A. Rafique. 1995. Wild Flowers of Pakistan. T. J. Roberts. Oxford University Press, Karachi : 298.
- Pie, S. 1991. Conservation of Biological Diversity in Templeyard and Holly Hills by Dia-ethnic Minorities of China. *Ethnobiology* ., 3 : 27-35.