ETHNO BOTANICAL EVALUATION OF MEDICINAL PLANTS OF GADOON AREA DISTRICT SWABI

Ch. Muhammad Muslim[1], Hassan Sher[2], Junaid Khan[2], Shahid Hussain[2], Ashfaq Ali[2] and Atif Majeed[3]

ABSTRACT

A study on traditional use and conservation status of some herbaceous medicinal Plants of Gadoon area District Sawabi was conducted during summer 2010. Data was collected using a simple and comprehensive questionnaire which was specially designed to meet the requirements of the present study. Interviews were arranged with knowledgeable persons and for validation purpose field visits were arranged. Data about conservation status was obtained through quadrate method. The study reported 40 herbaceous medicinal plants belonging to 33 different angiosperm families used by local people to cure different ailments. Lamiaceae was represented by maximum number of 6 species followed by Apiaceae and Solancaceae represented by 4 species each. Alliaceae was represented by 3 species while Amaranthaceae, Asterceae, Brassicaceae, Fabaceae and Pllygonaceae were represented by 2 species each. All other families were represented by 1 species each. Documented plants have defined uses for different purposes in the traditional systems of medicines. Plants species were also classified into five conservation classes out of which 7 were dominant 11 frequent, 9 common, 9 rare while 4 were classified as very rare.

Keyword: Ethnomedicine, medicinal plants conservation status, herbaceous plants, Gadoon area**.**

INTRODUCTION

The use of plants to cure common ailments is under in practice use since time immemorial. Ancient men tried to cure many human as well as livestock diseases by applying traditional knowledge of medicinal plants (Sher, 2001). Products of medicinal plants have been used successfully for various ailments both externally as well as internally. Regardless of the interest in use of synthetic or allopathic drugs, plants materials still remain as the “treatment of choice” as they have no or less side effects. About 6500 species of medicinal plants are used in Asia out of which 450 are used in India, 250 in Bangladesh, 100 in Nepal while 300 and 400 species of medicinal plants are used in Bhutan and Pakistan respectively. According to World Health Organization report (2002). 70% of the world population use medicinal plans for curing diseases through their traditional practitioners. In sub- continent plant oriented drugs are used extensively. The survey also reported that traditional healers treat 65% patients in Sri Lanka, 60%

1 Medicinal Plants Branch, Pakistan Forest Institute Peshawar
2 Centre for Plant Sciences and Biodiversity University of Swat
3 Deputy Director Technical, Pakistan Forest Institute Peshawar

in Indonesia, 75% in Nepal, 85% in Myanmar, 80% in India and 90% in Bangladesh. In Pakistan, 60% of the population, especially in villages is getting health care by traditional practitioners (Hakims), who prescribe herbal based medicines. However with the passage of time, folk knowledge about medicinal plants is diminishing.

Today's advanced world mostly upon relies allopathic drugs due to quick relief and associate facilities; this situation consequently is resulting in elimination of limited available folk knowledge about medicinal plants. Traditional use of medicinal plants has almost left cities and presently inhabits some remote areas of the world. Remote areas of Pakistan are also among those areas where traditional use of medicinal plants survives. One such area is the Gadoon area of District Sawabi where folk knowledge of medicinal plants still exists.

The study area is situated between 33°-55 N° longitude and 72 – 13, to 72 – 49 E longitudes. Annual rainfall ranges from 800mm to 1200mm which usually occur in the month of December to April and July to September. Temperature ranges from minimum to -2°C in December to a maximum of 41°C in June. Farming and livestock is the major source of livelihood. Vegetationally the area could be classified as sub-tropical and sub-humid temperate regions.

MATERIALS AND METHODS

A study on traditional use and conservation status of some herbaceous medicinal plants of District Sawabi was conducted during summer 2010. Data about number of herbaceous medicinal plants, its uses and parts used was obtained mainly through interviews and self-observation during field visits. For validation purpose interviews were arranged with skilled and experienced persons of the area known as, hakim, pansaris, as this group of people possesses traditional knowledge about medicinal plants. Which trickle down from generations to generations. Approximately one person amongst ten houses was interviewed. A comprehensive questionnaire was used for interview, which was compatible to meet the requirement of the study. To conclude the conservation status quadrate method was used with quadrate six of 2X2 m. The plants documented were collected, dried and mounted upon herbarium sheets using standard procedures. The dried plants were later on identified with the help of available literature of Ali and Qaisar.

RESULTS

The study reported 40 herbaceous plants belonging to 33 different angiosperm families used by local people to cure different ailments. *Lamiaceae* with 6 species was represented by maximum number of plants followed by *Apiaceae* and *Solanaceae* with 4 species each. *Alliaceae* was represented by 3

species while *Amaranthaceae*, *Asteraceae, Brassicaceae, fabcaeae* and *Polygonaceae* were represented by 3 species each. 1 species each was reported for *Cannabibaceae, Chenopodiceae, Funaraceae, Papaveraceae, Peonaceae, Pedaliaceae, Plantagincaeae, Poaceae, Pligoncaeae, Hypericaceae, Nyctaniginaceae, Valerianceae, Violaceae* and *Zygophyllaceae*. Details of species used and their medicinal uses are given in detail below.

Table 1. Medicinal plants and their uses

S. No.	Botanical name	Family	Local name	Parts used	Medicinal usage
1	*Ajuga bracteosa*	lamiaceae	Booti	Leaves and stem	Sedative, relieve dyspepsia and diarrhea
2	*Allium cepa*	Alliacae	Pyaz	Bulb and leaves	Stimulant, diuretic and aphrodisiac
3	*Allium sativum*	Alliaceae	Ooga	Leaves and clove	Carminative, stimulant and used to treat poultry
4	*Aloe vera*	Alliaceae	Azmaray panra	Whole plant	Analgesic, antipyretic, warmed leaves are put on burnt body parts to cure them
5	*Amaranthus caudatus*	Amaranthaceae	Chalwaii	Leaves and roots	Anthelminthic
6	*Amaranthus viridis*	Amaranthaceae	Kured	Leaves	Emollient, decoction relieve cough and flu
7	*Brassica campestris*	Brassicaceae	Sharsham	Oil from seeds	Syphilis, scabies and dermatitis
8	*Cannabis sativa*	Cannabinaceae	Bhang	Grains and leaves	Sedative, anodyne, used as narcotic
9	*Carhamus oxyacantha*	Asteraceae	Kareeza	Seeds	Oil from seed is tonic and laxative, used in jaundice
10	*Centratherum anthelminticum*	Asteraceae	Kalazeera	Fruits	Anthelmintic, coolant, depressant and used in dyspepsia
11	*Chenopodium album*	Chenopodiaceae	Lama sarmay	Shoot tips and leaves	Tonic, anthelmintic, emollient
12	*Coriandrum sativum*	Apiaceae	danyal	Leaves and fruits	Collant, relieve digestive ailments
13	*Cumpdpm dactylon*	poaceae	Kabal	Stem and leaves	Considered antiseptic
14	*Datura stramonium*	solanaceae	Dalthora	Leaves and fruits	In small amount used in whooping cough and nasal pains
15	*Daucus carota*	Poaceae	Gazara	Roots and fruits	Carminative, enhance eye sight
16	*Foeniculum vulagare*	Solanaceae	Kaga	Fruits	Anti vomiting, stimulant, carminative
17	*Fumaria indica*	Apiaceae	Papra	Leaves and stem	Cure fever, reduce pain, blood purifier

S. No.	Botanical name	Family	Local name	Parts used	Medicinal usage
18	*Hypericum perforatum*	Apiaceae	Shin chai	Leaves	Stimulant, carminative
19	*Lepidium sativum*	Fumaraceae	Halam	Seeds	Purgative, used in dysentery
20	*Lotus carniculatus*	Hypericaceae	Fateh khana	Whole plant	Antiseptic, stop bleeding, relieve backache
21	*Mentha longifolia*	Brassicae	Velanay	Leaves and stem	Carminative, increase digestive power
22	*Mentha viridis*	Fabaceae	Pudina	Leaves and young shoots	Powerful carminative
23	*Mirabilus jalapa*	Lamiaceae	Gul-e-nazak	Leaves	Wound healing
24	*Nicotiana rustica*	Nyetanginaceae	tambakoo	Leaves and stem	Insecticidal, anthelmintic, germicide
25	*Ocimum bacilicum*	Lamiaceae	Kashmalu	Leaves and flowers	Cure fever, relieve earache, diarrhea and flu
26	*Paeonia emodi*	Peonaceae	Mamekh	Rhizome, flowers and seeds	Purgative, emetic, used for nerve disorders and to avoid stomach problems
27	*Papever somniferum*	papaveraceae	Khash khasash	Capsule seeds	Sedative, demulcent, hypnotic, narcotic, relieve cough and toothache
28	*Plantago ovata*	Plantaginaceae	Ispaghol	Seed and husk	Carminative, laxative, stimulant
29	*Polygonum aviculare*	Polygonaceae	Machunkay	Whole plant	Treatment of livestock diseases
30	*Rumex hastatus*	Polygonaceae	Tarookai	Whole plant	Cure jaundice, antiseptic
31	*Salvia moorcroftiana*	Lamiaceae	Khardag	Leaves	Used to release puss from swollen skin
32	*Salvia plebeia*	Lamiaceae	Gumamlay	Leaves and fruits	Sedative, tricharia, nerve tonic, relieve dysentery
33	*Solanaceanum nigrum*	Solanaceae	Kachmachu	Leaves and fruits	Diuretic, laxative, emollient, good in spiting piles and dysentery
34	*Solanum surattense*	Solanaceae	Tarkha hindwana	Leaves and fruits	Carminative, stimulant, diuretic, relieve pain and asthma
35	*Sesamum indicum*	Pedaliaceae	Kunzala	Seeds	Tonic, relieve bed wetting, seed oil used for massage
36	*Trachyspermum ammi*	Apiaceae	Sperkai	Fruits	Used in dyspepsia and other gastric problems
37	*Tribuus terrestris*	Zygophyllaceae	Markundai	Leaves and fruits	Diuretic, aphrodisiac, useful in urinary problems
38	*Trigonella foenum-graecum*	Fabaceae	Malkhwaza	Seeds	Nerve tonic, remedy for various genealogical problems
39	*Valeriana jatamansi*	Valerianaceae	Muskbala	Rhizome	Carminative, antispasmodic, used in dyspepsia, relieve cough

S. No.	Botanical name	Family	Local name	Parts used	Medicinal usage
40	*Viola serpens*	violacae	banafsha	Flowers and leaves	Remedy for cough and fever

CONSERVATION STATUS OF DOCUMENTED MEDICINAL PLANTS IN THE STUDY AREA

One aim of the present study was to point out present conservation status of the documented medicinal plants. Table 2 contains data about present conservation status of herbaceous medicinal plants in the study area. Based on density, frequency and cover plants were classified into five different conservation classes. Out of 40 documented plants 7 were dominant 11 frequent, 9 common, 9 rare while 4 were very rare.

Table 2. Conservation status of the medicinal plants

S. No.	Species	Conservation status	S. No.	Species	Conservation status
1	*Ajuga bracteosa*	frequent	21	Mentha longifolia	Frequent
2	*Allium cepa*	Common	22	Mentha viridis	rare
3	*Allium sativum*	Common	23	Mirabilus jalapa	
4	*Aloe vera*	Frequent	24	Nicotiana urstica	Common
5	*Amaranthus caudatus*	rare	25	Ocimum bacilicum	Frequent
6	*Amarantus viridls*	Very rare	26	Paeonia emodi	rare
7	*Brassica camestris*	Dominant	27	Papever somniferu	Dominant
8	*Cannabis sativa*	Common	28	Plantago ovata	rare
9	*Carthamus oxyacantha*	Dominant	29	Polygonum aviculare	Common
10	*Centratherum*	Frequent	30	Rumex hastatus	Dominant
11	*Chenopodium album*	Common	31	Salvia moorcroftiana	Frequent
12	*Coriandrum sativum*	Rare	32	Salvia plebeian	Dominan
13	*Cynodon dactylon*	Dominant	33	Solanum nigrum	Very rare
14	*Datura stramonium*	Frequent	34	Solanum surattense	Rare
15	*Daucus carota*	Rare	35	Sesamum indicum	Common
16	*Foeniculum vulagare*	Frequent	36	Trachyspermum ammi	Frequent
17	*Fumaria indica*	Dominant	37	Tribulus terrestris	Common
18	*Hypericum perforatum*	Very rare	38	Trigonella foenum-graecum	Frequent
19	*Lepidium sativum*	Rare	39	Valeriana jatamansi	Very rare
20	*Lotus carniculatus*	rare	40	Viola serpens	Common

DISCUSSION

The practice of using plants and their products to get rid of many humans as well as livestock disease dates back to the ancient world. Ancient mode of treatment relied on the use of crude drugs obtained from plants to combat various ailments. Even use of plants as source of medicines is still in practice in

major parts of the world mostly in remote areas and is thought as the treatment of choice. Similar results were also reported by Sher and Hussain (2009). Medicinal plants are playing an important role in the traditional system of medicine (Sher and Hussian, 1998). Present study reported 40 herbaceous medicinal plants used by the inhabitants of target area. These plants are usually prescribed by the local healers or hakims. Local healers are in fact the agents who are keeping the use of plants and their product in crude, alive in the traditional system of medicines. These findings are in parallel with the findings of Khan (1998). Majority of the medicinal herbs had multiple medicinal uses and are utilized by the inhabitants for more than one purpose. Similarly majority of them are used to treat common ailments like abdominal problems, gastric problems, some are used for sedative prupose shile others were antheminthic. Sher *et al*. (2000), also observed that most of the wild medicinal plants were used frequently for curing of abdominal problems like constipation, diarrhea and dysentery by the locals in District Swat, Pakistan. These finding also match the findings of Arshad and Akram (1999). They reported important medicinal plants from Rawalpindi Pakistan used in various ways to get rid common ailments. Conservation status of the medicinal plants indicated that majority of the medicinal herbs are either dominant or lies in the category of frequent and common.

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