



Ethnobotanical Study of Medicinal Plants of KPK Region

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Abstract

Medicinal Plants are important and are used for production of a number of drugs. The agenda of present article is to highlight the beneficial Plants and medicinal properties of plants from KPK topography. The review validates the use clinical use of these plants in treating different disease. The 31 plants highlighted are playing a major role in dealing with broad spectrum diseases. A variety of plant species is discussed in this paper along their local use.

Introduction

Ethnobotany is study of medicinal plants, their classification, cultivation and analyzing their use as Medicine, food and shelter. Medicinal plants hold an ever more importance in health sciences even in today's era of synthetic drugs. However, the usage of medicinal plants is often ignored and only limited to traditional, cultural and local usage [1]. Most of worlds healthcare needs come from plants. The Himalayan region including parts of Pakistan, Afghanistan, India, China, Bhutan and Nepal serve as great source of plant biodiversity and medicinal plants. Pakistan is blessed with great variety of exceptional medicinal plants of miraculous effectiveness against many diseases. Pakistan ranktss as 7th producer of medicinal plants in Asia. Around 75% of local population relies on medicinal plants for health care needs. Along with healthcare, medicinal plants also hold important value in food, cosmetics and dietary supplements [2].

Scope of Study:

The scope of the study mainly was to highlight the importance of medicinal flora of KPK. The importance of this flora has been a main concern with respect to health. The study aimed at providing awareness of the presence of such useful plants that could be a source for us to cure manydiseases and generate good amount of revenue.

The primary benefits of medicinal plants focused were, comparatively safer in use than the synthetic drugs, provide natural treatment with zero chance of any side effect, quite affordable and easy to extract, therapeutic index high as compared to synthetic drugs and profound benefits

Topography of KPK:

Pakistan is located between Latitude 23-35 to 37-05 N latitude and 60-50 E longitude. At northwest of the country lies Khyber-Pakhtun-Khawa. Mountain ranges run from north to south whereas the majority of plain regions are also surrounded by hills. The altitude varies from more than 25,000m to 374m above the sea level [1]. Climate also varies with the elevation levels with mostly warm summers and cold winters. The average temperature is 22.3 °C. Precipitation is up to 817mm per year while River Kabul remains the main source of water [2].

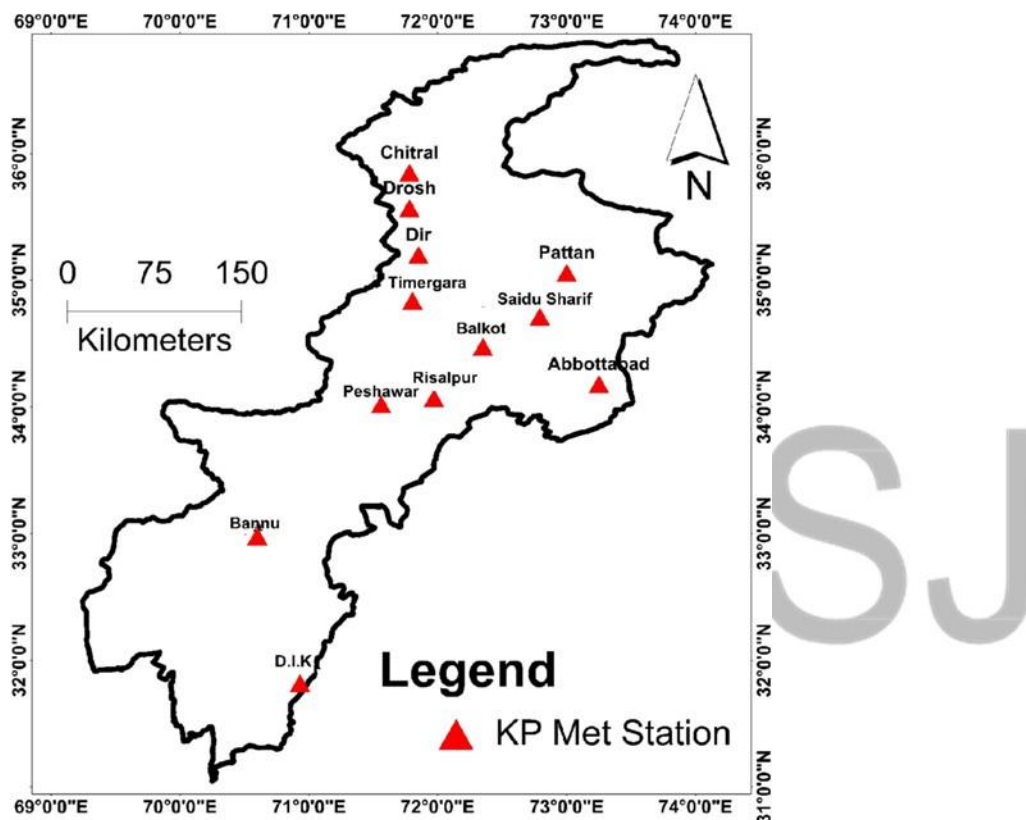


Figure: Areas described in KPK region for their medicinal Flora [2]

Flora of KPK:

KPK is home to great diversity of medicinal plants. The ethnobotanical exploration of flora of KPK found these medicinal plants effective in treating many diseases like diabetes, ulcer, even cancer. The tribal people and folklore have been using these medicinal plants for treating various diseases. The medicinal plants serve a source of income and treatment for local people. The experts on herbs and medicinal plants known as hakims run their herbal stores [3]. This is to be said that these medicinal plants are a treasure for people of these areas. The women of these areas use these medicinal plants for skin care and for cosmetic purposes [4].

Ethnobotanical study of Mirpur, AJK

Mirpur is located at south of Azad Kashmir and its topography comprises of plains and foothills of Himalayas [1]. Mirpur, AJK is home to great diversity of ethnobotanical medicinal plants; herbs, shrubs and trees. These plants are found in nearby hills, meadows and across Mangla dam hills [3]. The tribal people and folklore have been using these medicinal plants for treating various diseases. Ethnobotanical exploration was carried out in these areas which helped gather scientific information about these medical plants including; scientific name of specie, local name of plant, uses, and part of plant used in treatment. Most plants species were found effective against diseases like diabetes, jaundice, diarrhea, ulcer and even cancer [3].

Medicinal plants of Mirpur, AJK

***Adiantum incisum* Forssk**

Commonly known as Pershoofa. The whole plant has medicinal properties. The plant is effective in regulating menses in women. It is also used as diuretic. Treats cough and bronchitis [4].

***Carissa opaqa* Stapf.**

Commonly known as Granda. The parts of plant having medicinal properties are roots, leaves, berries. Berries of this plant are carminative and diuretic. Use of this plant relieves thirst and helps protect stomach lining. The plant has also been found to treat paralysis and diarrhea. By boiling the leaves of this plant, its liquor is used to treat jaundice [4].

***Zanthoxylum aromaticum* DC**

Commonly known as Timber. Parts of plant having medicinal properties are seeds, fruits and bark. Seeds of this plant are stomachic and tonic. The bark of this plant is used as miswak and treat teeth problems such as pyorrhea [4].

***Solanum surrattense* Burm. f.**

Commonly known as Mokri. Whole plant has medicinal properties. The extract by boiling this plant in water is used for treating rheumatism. Leaves of this plant is boiled and liquor is used for treating pain in body. It has also been found useful for cold, flu and joint pain [1].

Euphorbia prostrata

Commonly known as Biliboti. Whole plant has medicinal properties. This plant is blood purifier. Effective in treating skin diseases that result from blood problems. Its powder is used for curing premature ejaculation [4].

Ethnobotanical study of Ghokand, KPK

A total of 109 species of plants were identified. These belonged to 64 families. Four species of

Pteridophytes, 99 species of angiosperm, 3 species of Gymnosperms and 3 species of fungi were reported. Out of these 52.29% were herbs, 24.77% were shrubs and 22.93% were trees. Wild herbs were the most used ones due to availability and their efficacy. The most widely recognized therapeutic families were Asteraceae, Lamiaceae, Rosaceae and Moraceae. Most of the people reported that these drugs were collected from forests, hilly areas and deserts. [5]

Medicinal plants of Ghokand, KPK

3297 uses were reported for treatment of different plants. In these 38.63% of these leaves were used, 12.87% were leaves, 12.87% were fruits, 8.33% were barks and 7.57% were whole plants. Gum, bulb, branches and flowers were the least used ones. [4] The most widely used methods for preparation of medicine were decoction which was 29%, followed by preparation of juice which was 21% and least used methods were direct usage and poultice (both are 16% each).[6]

Justicia Adhatoda

Justicia Adhatoda commonly known as Batuzin, for relieving joint pain and injuries Justicia Adhatoda's leaf extract is used for this purpose.

Berbis lyceum

Locally known as Kashmal it is widely used for diabetes, muscle growth and diarrhea. Commonly used parts of part are barks and leaves of Berbis lyceum.

Aconitum violaceum

Aconitum violaceum, is known to be effective against cough, neural disorders, heart disorders and asthma. Locally people use whole plant to make medicines.

Aconitum vulgaris

Aconitum vulgaris, locally named as Monkshood, is used as a whole for treatment of cardiac problems and intestinal worms.

Olea ferruginea

Olea ferruginea's pure leaf extract has antifungal properties and so it is widely used by the locals to prepare anti-fungal medicines.

Ethnobotanical study of Ayubia National Park

KPK

Ayubia National Park comes under the area of moist temperate forests of Western Himalayas of Pakistan. The park holds a prime importance in conservation of biodiversity and medicinal plants. Ayubia National Park comes under the area of moist temperate forests of Western Himalayas of Pakistan. The park holds a prime importance in conservation of biodiversity and medicinal plants.

Ayubia National Park comes under the area of moist temperate forests of Western Himalayas of Pakistan. [7]

Medicinal plants of Ayubia National Park

Ethnobotanical Studies portray that 80 plants exist in the park holding medicinal properties. The dominating family includes Asteraceae with 9 species. Different plants were observed and examined among them, the most therapeutic part were the leaves 35.8%, Herbs 3.7%, Stems 3.7, Fruits 18.5 %, shoots 12.4 %, rhizomes 2.6 %. [8] The wealth of medicinal plants is key source for manufacturing drugs. Pharmaceutics obtain one half of drugs and medicines from medicinal plants. Medicinal Flora is beneficial in inventing most important drugs like vincristine, digoxin etc. According to WHO, 80% medicines have been made by Plants and is used by humans on a broad spectrum.

Therapeutic Compounds

In the park, many plants have been used against various disorders due to its therapeutic action, such as *Hedera nepalensis*, *Achillea millefolium*, *Bergenia ciliata*, containing active constituents like alkaloids, flavonoids, and phenols. In Galiyat area, mostly people depend upon plants for curing ailments, they prepare concoctions through personal experience gained from their ancestors.

Bergenia ciliata

Some important medicinal plants of the park are *Bergenia ciliata* (*Zakhm i hayat*) a very precious herb used in cure of every wound or infection of body, the roots work best for stomach diseases.

***Paeonia emodi* Wall (Mamaikh),**

Paeonia emodi Wall (Mamaikh), an ideal herb for internal body pain, it is a very expensive herb that have high market value.

Medicinal Plants of District Kabul Swat

***Ficus carica* Czern. and Rav.**

Fruits of this plant are used for heart patient, used as food and fruit are also used for stomach diseases. latex are also used for removal of thorn from the body

***Solanum nigrum* L.**

Use as a vegetable and fruit are use for kidney stone and hepatitis. The Leaves in the form of paste are applied to skin to cure eczema. The fruits are edible and are used to cure fever

Zanthoxylum armatum DC.

Use for as a carminative .antacid and use as a tonic and also use antipyretic and some hakim use as an antimalarial. Stomachic, tonic Fruits are powdered and eaten with boiled egg for chest infection

Discussion:

Ethnobotany is an integral part of indigenous local knowledge of a particular society. Different societies or communities have their own knowledge about plants and their use. Surveys from local inhabitants indicated their profound and long- term use for the society. In the present review 31 plants from different regions of KPK belonging to different classes have been discussed along with their clinical significance in curing various diseases.

Conclusion:

The ethnobotanical surveys of KPK region revealed that study area has rich flora with great diversity and medicinal uses. The present study lacks the phytochemical studies of these plants which can open more ways in fields of pharmaceutics and medicine. There is still room for conducting more studies based on the findings of this study. GC-MS can help in analysis of phytochemical and chemotaxonomic properties of these medicinal plants. These medicinal plants are the major economic source for communities of present study area. Most of the emerging economies depend on medicinal plants for treatment of ailments. Attention should be drawn to make use of rich flora of study area KPK, Pakistan for trade and economy of country. Moreover, the present ethnobotanical knowledgeable is restricted to indigenous culture and measures should be taken for the conservation of endangered plant species. [7]

TABLE: Important Medicinal Plants of KPK

Botanical Name	Part Used	Ethnomedical Uses
<i>Clematis Montana Dc</i>	Flower and shoot	<ul style="list-style-type: none"> • Rheumatic joints, gouty arthritis, anti inflammatory
<i>Jasminum Humile L</i>	Shoots and Flower	<ul style="list-style-type: none"> • Heart Tonic
<i>Paeonia Emodi Wall</i>	Root	<ul style="list-style-type: none"> • Back ache and internal body pains
<i>Aetemisia vulgaris</i>	Leaves	<ul style="list-style-type: none"> • Swelling and wound healing
<i>Rumex hastatus</i>	Leaves	<ul style="list-style-type: none"> • Skin rash
<i>Buxus wallaichiana</i>	Leaves	<ul style="list-style-type: none"> • Arthritis and bone pain
<i>Rosa damascena</i>	Petals of flower	<ul style="list-style-type: none"> • Diabetes
<i>Tamarix aphylla</i>	Leaves and bark	<ul style="list-style-type: none"> • Diabetes, Pneumonia & Hepatitis
<i>Cedrus deodora</i>	Oil and gum	<ul style="list-style-type: none"> • Used as antiseptic
<i>Adiantum incisum Forsk</i>	whole plant	<ul style="list-style-type: none"> • regulating menses in woman, diuretic, for cough and bronchitis
<i>Carissa opaqa Stapf</i>	Roots, leaves, berries	<ul style="list-style-type: none"> • Berries of this plant are carminative, diuretic. • relives thirst • treat jaundice
<i>Zanthoxylum aromatus DC</i>	seeds, fruits and bark	<ul style="list-style-type: none"> • seeds of this plant are stomachic and tonic • teeth problems such as pyorrhea
<i>Solanum surrattense Burm. f.</i>	whole plant	<ul style="list-style-type: none"> • treating rheumatism • treating pain in body

		<ul style="list-style-type: none"> • for cold, flu and joint pain
<i>Euphorbia prostrata</i>	whole plant	<ul style="list-style-type: none"> • blood purifier • treating skin diseases • curing premature ejaculation
<i>Zanthoxylum aromatus DC</i>	seeds, fruits and bark	<ul style="list-style-type: none"> • seeds of this plant are stomachic and tonic. The bark of this plant is used as miswak and in treating teeth problems such as pyorrhea
<i>Jasminum Humile L</i>	Shoots and Flowers	Local people have strong belief that this plant has the properties for being a heart tonic.
<i>Paeonia Emodi Wall</i>	Whole Plant	Having excellent properties against back ache and internal body pains, Local informers said that this plant has helped in treating a number of pains from a long time. [4]

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