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Ethnobotanical study of jahangirabad, district mardan

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Abstract

The traditional utilization of medicinal plants in healthcare performs and providing indication to new areas of research and hence its importance is now well recognized. However, information on the uses of indigenous plants for medicine is not well documented from many rural areas of Pakistan including district Mardan. The present studies were aimed to explore the ethnomedicinal profile and conservation status of threatened flora of Jahangir abad. The study area is located in the district Mardan, Khyber Pakhtunkhwa, Pakistan, contains more than 90 species directly used by local communities. Of these plants, 51 are wild plants, 23 cultivated vegetable crops and 16 are important medicinal and economically important trees. *Menta longifolia*, *Calotropis procera*, *Solanum surretense, Allium sativum* and *Melia azedarach* had multipurpose medicinal uses. Different pathological effect and pitiless collection of medicinal plants in the area has threatened the survival of some essential and valuable medicinal plants like *Dalbergia sissoo* and *Tamarix indica* in the area of Jahangir abad.

Keywords: Medicinal plants, Ethnomedicinal uses, Conservation, 90 Species, Jahangir abad-Pakistan

Introduction

Mardan district be positions between 34005' to 34032' north latitudes and 71048' to 72025' east longitudes. It is surrounded on the east by Swabi and Buner districts, on the north by Buner and Malakand districts, on the west by Charsadda and Malakand districts and on the south by Nowshehra district. The northern branch of the district is bounded by hills, while south western parts are mainly composed of fertile plains with low hills strew across it. The minimum and maximum temperature recorded is 2.090C and 41.50C, respectively. Most of the rainfall occurs in the month of July and August. Maximum rainfall recorded for the month of August is 125.85mm.

In the developing countries more than 80% of relies herbal medicines as a primary health care requirements [14]. Plants had played vital role in the treatment of human ailment globally [17]. Ethnobotanical investigations play imperative role in bringing to light information about such plant species from our prosperous flora that can be source of safer and cheaper effective drugs for the assistance of mankind. Pakistan has rich history on the folk use of plants. Ethnomedicinal studies of diverse areas of Pakistan have been carried out by many workers in this field such as [20, 3, 4, 19, 1, 2, 18]. People living in villages and in tribal zone are using indigenous plants as medicines from long ago because this knowledge achieves them through generations, and is based on knowledge. Also the tribes and villages are far away from cities and mostly there are no health amenities [12]. Most of allopathic drugs also comprise extracts taken from medicinal plants Medicinal plants participate a key role in traditional health care system for human and animals [16]. This is investigative of the vast depository of knowledge of plant medicine that is still accessible for global use, provided of course that it does not get misplaced before it can be tapped or documented. Traditional and indigenous medical knowledge of plants, both oral and codified, are indubitably eroding [13]. Keeping in view the importance of medicinal flora, this study was approved to document and collect Ethnomedicinal tibb and ethnomedicinal knowledge about the wild and cultivated plants of Jahangir Abad, Takht Bhai, district Mardan, Khyber Pakhtunkhwa, Pakistan. Continuation famers usually include trees as an output product of their farm, whether it is for wood, soil conservation, shade, or fodder [21]. The majority of the plants were found to be used for multi purposes, such as medicinal, fuel wood, timber wood, fodder, fruits, edible, provides dry fruits, used in spices, agro-forestry is based on them, commercial fruit trees, wild edible fruits, can provide shade and can nests birds [11].

Materials and Methods

The study was carry out by frequently investigating throughout winter, spring and summer during the year 2010-2011 in the remote areas of council Jahangir Abad, Takht Bhai, distrit Mardan, Khyber Pakhtunkhwa, Pakistan. The information on ethnomedicinal uses of the indigenous plants have been illustrated after gathering information from general local people experienced elder rural folk, Village and Hakims and completed them by consulting literature. For gathering ethnobotanical information, visits were made to

settlements within the study area, including Merbazghaz, Merbazghaz Sardar korona, Qazi kaly, Sure khat, Jandi kalpani, kanda kass, khan ghari, Meraman kali, Wanakhel, Shahzada kale, Sharasool kaly, Perano kaly, Ghundy kaly, Wakhelkaly, Khatako kaly, Samar bagh (Niaz), Markaz korona and Cheal. A total of 18 villages were visited. The arbitrarily selected respondents of different ages from about 20 years and above were discussed in local languages, which is Pashtoo majority Mohmand tribe. During survey individual surveillance was also recorded. The data obtained from questionnaire was conversed and tabularized. The identification and nomenclature of the listed plants were based on The Flora of Pakistan [15].

Results

The data composed are arranged in alphabetical order of the family name. The local name for each species in local language is also given. The botanical name and their medicinal uses are given to each species. The introductory ethnobotanical survey designated that more than 90 species of plants can be observed in the Jahangir abad. 51 are known to have instant benefits to the communities in the Council Jahangir abad and used during daily life (Table 1).23 vegetable crops species were stated to be used in cooking and traditional therapeutic practices in the Jahangir abad (Table 2). 16 trees are found in these areas which are used for different purposes medicinally and economically (Table 3).

The accessible indigenous communities of the area with a traditional system of health care demonstrated a vast amount of knowledge on plant use.

Discussion

The buildup of knowledge of plants uses however co-evolved with human nation through the pragmatic use of plants, generation to generation. The utilizing of medicinal plants for the subsistence of human being is as old as the human chase itself. People would have remained showing to plague, chronic and prevalent diseases, besides sharp ailments [10]. The people of Jahangir abad, Khyber Pakhtunkhwa, Pakistan have constantly used medicinal plants for diverse diseases and have been dependent on immediate

TABLE 1 Common Uses of Wild Plants in Jahangir abad

Family	Botanical name	Local name	Ethno medicinal Uses
Acanthaceae	*Justacia adhatoda* L.	Bekar	febrifuge, anti diabetics, respiratory tract infection, asthma
Amaranthaceae	*Amaranthus spinosus* L.	Azgho chalwere	Abdomen swelling, vegetable.
Umbelliferae	*Foeniculum vulgare* Mill.	kaga	Medicinal, anorexia and gastritis
Asclepidaceae	*Calotropis procera* (Wight.) Ali.	Spalmai	Piles, backache, toothache, utilized as astringents, snake bite, ear pain, cough, asthma, ring worm, , lung diseases
Asphodilaceae	*Asphodelus tenuifolius* Cavan.	Pyazake	Baldness
Asteraceae	*Silybum marianum* Gaertn.	Lache dana	Medicinal, abdominal pain
Asteraceae	*Sonchus asper* (L.) Hill.	Shoda pai	Medicinal, Enhancing milk production in cattle's Asthma, anti poison,
Asteraceae	*Artemesia maritima* L.	Terkha	Carminative, pain killer
Asteraceae	*Xanthium strumarium* L.	Geshke	Eczema, blood purifier
Asteraceae	*Carthamus oxycantha* M. Bieb.	Kareeza	Laxative, fever, measeles
Asteraceae	*Echinops echinatus* (Roxb.)	Nary ghana	Skin itching
Brassicaceae	*Eruca sativa* Mill.	Juwaha	Constipation, vermifuge, diarrhea,
Brassicaceae	*Lepidium sqautatum* Forrsk.	Skha bote	Utilized against Irritation
Brassicaceae	*Nasturtium officinale* R.Br.	Tarmeera	Anti diabetic, purgative
Cactaceae	*Opuntia monacantha* haw.	Sapera	Antitussive, anti diabetic, kidney pain, diarrhea
Caesalpinoideae	*Cassia ocidentalis* L.	Laram jarai	Scorpion bite
Cannabaceae	*Cannabis sativa* L.	Bhang	Abdomen cramps, diarrhea, anorexia, cooling agent, falling hair
Caryophylaceae	*Silene conodia* L.	Mangote	Myalgia, massages
Chenopodiaceae	*Chenopodium album* L.	Sarmy	Carminative
Convulvulaceae	*Convulvulus arvensis* L.	Perwata	Astringents, kidney stone remover
Convulvulaceae	*Ipomea carnea* Jacq.	Gul abasi	Acne remover skin
Cucurbitaceae	*Citrullus colocynthis* L.	Kharery	bronchial asthma, abdominal pain, strengthen eyesight, diabetes, against hepatitis, toothache, ear pain
Cuscutaceae	*Cuscuta reflexa* Roxb.	Neela dari	Diarrhea, schizophrenia
Cyperaceae	*Cyperus rotundus* L.	Dela	Bacach, pimple
Euphorbiaceae	*Euphorbia prostrata* Aiton.	Zelae boty	Treatment of acne
Euphorbiaceae	*Ricinus communis* L.	Aranda	Poisonous, asthma, duration, diarrhea, arthritis
Fumariaceae	*Fumaria indica* Hausskn.	Papra	Hepatitis, skin irritation, ache and abdomen swelling.

Lamiaceae	*Menta longifolia* L.	Elane	Diarrhea, anorexia
Lamiaceae	*Origanum vulgare* L.	Shamake	Fever, diabetes
Lamiaceae	*Otostegia limbata* Boiss.	Pesh knar	Ear wound, acne
Malvaceae	*Malvastrum coromandelianum* L.	Tar panra	Dysentery, anti diuretic agent
Menispermaceae	*Tinospora malabarica* Mires.	Gillo	antipyretic agent in animals, Veterinary plant, anorexia
Nyctanginaceae	*Boerhavia repens* L.	Insat	Mastitis
Nyctanginaceae	*Mirabilis jalapa* L.	Gul abasi	Removal of pus from acne
Oxalidaceae	*Oxalis corniculata* L.	Treewake	Eye redness, irritation
Papilionaceae	*Trigonella foenum graceum* L.	Malkhuza	Warming purposes
Poaceae	*Cynadon dictylon* L.	Kabal	Astringents
Poaceae	*Saccharrum munja* Roxb.	Dadam	Vormifuge
Poaceae	*Cymbopogon citrates* (D.C.) Stapf	Shergashy	chronic fever
Polygonaceae	*Polygonum plebejum* R.Br.	Machechke	Refrigerant, bleeding with urination
Polygonaceae	*Rumex dentatus* L.	Shalkhe	Edible, constipation, gastritis
Polypodiaceae	*Adiantum capillus-veneris* L.	Sumbal	Refrigerant
Sapindaceae	*Dodonea viscosa* L.	Ghuraske	Hepatitis, astringents
Scrophulariaceae	*Verbascum thapsus* L.	Khar dag	Removal of pus from acne, antipyretic agent
Solanaceae	*Datura alba* Nees.	Datora	Poisonous, oligomenorrhea in animals, diarrhea
Solanaceae	*Solanum nigrum* L.	Kachmacho	Medicinal, hepatitis, abdomen swelling
Solanaceae	*Solanum surretense* Schrsd & Wendl.	Mara ghoni	Myalgia, pain, tinea carporus, reduction of body fats, prolong period of menses
Solanaceae	*Withiana somnifera* L.	Koti lal	Antipyretic, nausea animal mistatus, pregnant women in dysmenorrhoea
Solanaceae	*Physalis minima* (D. Don)	Mangoty boti	Scabies, itching
Verbanaceae	*Verbena officinale* Willd	Shamake	Antipyretic
Zygnemantaceae	*Spirogyra longata* Kutsing.S	Jalai	Body warming in winter, brain paralysis as to open closed veins

plants. Ethnomedicinal folk recipes used to treat different disease, economically, food, shelter, nutritional value, elemental analysis of some fodder plant species and other important culture purposes [5, 6, 7].

TABLE 2 Ethno medicinal Study of Cultivated Vegetable of Jahangir abad

Family	Botanical name	Local name	Ethnobotanical Uses
Alliaceae	*Allium cepa* L.	Pyaz	myalgia and other body pain especially in carriage animals
Alliaceae	*Allium sativum* L.	Ooga	Snake and scorpion bite, Blood pressure, spice, diarrhea
Cruciferae	*Daucus carota*	Gazara	eye sight, eyes infection
Cruciferae	*Raphanus sativus* L.	Molay	Hepatitis, salad
Cruciferae	*Brassica rapa* L.	Tepar	anti diuretic agent, salad
Chenopodiaceae	*Beta vulgaris* L.	Chakander	Coolness, remove constipation
Brassicaceae	*Bracissa oleracea* Var. Capitata	Band gobi	Curries, salad
Brassicaceae	*Bracissa oleracea* Var. Botrytis L.	Gul gobi	Salad, soups
Solanaceae	*Solanum tuberosum* L.	Aalo	Energetic, aprodiazic
Solanaceae	*Solanum melongena* L.	Batengar	Stimulant, constipation, toothache
Solanaceae	*Lycopersion esculentum* Mill.	Tamater	Blood purification, anti hypersensitivity,
Solanaceae	*Capsicum annum* L.	Marchakei	Anti diabetic, anti cancer
Malvaceae	*Abelmoschus esculentus* L.	Benday	Laxative
Leguminoseae	*Pisum sativum* L.	Mater	Laxative, body energizer
Cucubetaceae	*Memordica charantia* Linn.	Karela	Anti diabetic, Blood pressure, blood purification
Cucubetaceae	*Cucumis sativus* L.	Badrang	Skin diseases
Cucubetaceae	*Lufa cylindrica* R.	Zaga toray	Ulcer
Cucubetaceae	*Citrullus vulgaris* S.	Endwana	Blood purification, diuretic,
Cucubetaceae	*Cucumis melo* L.	Hatakay	Laxative

Chenopidacea	*Spinacia oleracea* L.	Palak	carminative stomach acidity, Diuretic
Leguminoasae	*Trigonella foenumgraecum* L.	Methi	Laxative
Brassicaceae	*Brassica campestris* L.	Sharsham sag	Prolix, dysmenorrhoea
Umbelliferae	*Coriandrum sativum* L.	Dhania	anti diuretic, Pain killer

Continuation famers usually include trees as an output product of their farm, whether it is for wood, soil conservation, shade, or fodder [21]. The majority of the plants were found to be used for multi purposes, such as medicinal, fuel wood, timber wood, fodder, fruits, edible, provides dry fruits, used in spices, agro-forestry is based on them, commercial fruit trees, wild edible fruits, can provide shade and can nests birds [11].

TABLE 3 Midicinal Uses of Trees in Jahangir abad

Family	Botanical name	Local name	Ethnobotanical Uses
Mimosaceae	*Acacia nilotica* L.	Kikar	aprodiasic, Diarrhea, toothache Diabetes, Cough
Moraceae	*Morus alba* L	Spin tooth	laxative emollient, Purgative, hepatitis
Mimosaceae	*Acacia modesta* Wall	Palosa	Blood purifier, backache, belly pain, abdomen swelling
Mimosaceae	*Morus nigra* L.	Toor toth	Laxative, emollient, Antitussive agent
Euphorbiaceae	*Ricinus communis* L.	Aranda	Poisonous, asthma, duration, diarrhea, arthritis, Snake bite
Myrtaceae	*Eucalyptus camaldulensis* Dehnh	Lachi	Asthma, antipyretic agent
Mimosaceae	*Albezzia lebbak* L.	Srekh	male sexual power, nocturnal emission
Caesalpinaceae	*Cassia fistula* L.	Lamdais	Hepatitis, abdominal pain, Diarrhea
Rhamnaceae	*Ziziphus jujuba* Mill.	Bera	Bronchitis, diabetes, tonsils, refrigerant
Meliaceae	*Melia azedarach* L.	Shundai	Fever, Blood purifier, antipyretic, anti diabetic, abdomen swelling, dandruff
Papilionaceae	*Dalbergia sissoo* Roxb.	Shawa	Refrigerant agent, skin irritation
Rosaceae	*Prunus persica* (L.) Batsch	Shaltalo	Strep throat
Moraceae	*Ficus religiosa* L.	Peepal	Asthma, Vermicide, cough
Moraceae	*Ficus carica* Hausskn.	Inzar	Constipation, Piles, stomach pain, toothache
Tamaricaceae	*Tamarix indica* Willd.	Ghaz	burnt regions, Toothache
Bombacaceae	*Bombax ceba* L.	Sumbal	bone fracture, cracks

TABLE 4 Threatened Plant Species of the Council Jahangir abad and their causes

Botanical name	Local name	Family	Causes of threat
Acacia modesta Wall	Paloosa	Mimosaceae	Extra cutting for medicinal intention
Acacia nilotica L.	Kiker	Mimosaceae	Extra cutting
Butea monosperma	Palai	Papilionaceae	Extra cutting
Cassia fistula L.	Landais	Caesalpinaceae	Extra cutting
Dalbergia sissoo Roxb.	Shawa	Papilionaceae	Pathalogical disease, extra cutting
Tamarix indica Willd.	Ghaz	Tamaricaceae	Extra cutting, no proper care

.There is a specific treat that certain medicinal plants are endangered due to their present development activities, habitat specificity, small population, size, habitat alteration and *Tamarix indica* (Pashto; Ghaz) is extant in village Merbazghaz, the name of the village was kept due to the name of this plant and due to different pathological effect and anthropogenic activities, *Dalbergia sissoo* is going to be endangered (Table 4). During the study huge number of plants determined which is used in medicine. Conservation of medicinally precious plant species has become vital [8] due to increasing curiosity in herbal medicines for health care all across the globe [9]. Biodiversity and conservation of the medicinal plants with in the Jahangir abad will need sustainable management practices and agricultural development.

Conclusions

Medicinal plants still play a vital role in the globe of human health in the Jahangir abad. The local flora is thus extremely important to afford the first health care within the domestic of the Jahangir abad. The domestication of medicinal plants will construct new occasion for the local people such as stipulation of an alternative income and

could help reduce the pressure on the wild population. The elements present in these medicinal plants have important role in the treatment of diseases. The results of present work showed variation in elemental composition of medicinal plants from region to region, thus there is a need to vouch for more research on medicinal plants to incorporate their medicinal values in the advance system of medicine It is also very important to train the community on the proper propagation techniques in order to support the domestication of priceless and threatened medicinal plants. Successful conservation and biodiversity of the medicinal plants with in the Jahangir abad will need sustainable management practices and agricultural development.

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