EUROPEAN ACADEMIC RESEARCH
Vol. II, Issue 1/ April 2014

ISSN 2286-4822
www.euacademic.org

Impact Factor: 3.1 (UIF)
DRJI Value: 5.9 (B+)

Indigenous Medicinal Plants of Village Mithakhel, District Karak, Pakistan

MUHAMMAD DAUD[1]
Department of Microbiology
Kohat University of Science and Technology
Kohat, Khyber Pakhtunkhwa, Pakistan
BASREEN AKHTAR
Department of Botany
Kohat University of Science and Technology
Kohat, Khyber Pakhtunkhwa, Pakistan
SAADULLAH
Department of Microbiology
Hazara University Manshera, Khyber Pakhtunkhwa, Pakistan
IMRAN KHAN
Department of Microbiology, Quaid-e-Azam University
Islamabad, Pakistan
HASNAIN NANGYAL
Department of Botany, Hazara University Manshera
Khyber Pakhtunkhwa, Pakistan
ZENAT FATIMA KHATTAK
Department of Pharmacy
Kohat University of Science and Technology
Kohat, Khyber Pakhtunkhwa, Pakistan
GHAZI REHMAN
Department of Microbiology
Kohat University of Science and Technology
Kohat, Khyber Pakhtunkhwa, Pakistan
NADEEM ULLAH
HUSSAIN AHMAD
Faculty of Medicine, Department of Microbiology
Near East University, Turkish Republic of Northern Cyprus
HIDAYAT ULLAH
Department of Microbiology
Hazara University Manshera, Khyber Pakhtunkhwa, Pakistan
JAFAR KHAN
Department of Microbiology
Kohat University of Science and Technology
Kohat, Khyber Pakhtunkhwa, Pakistan

[1] Corresponding author: khattaks2010@gmail.com

Abstract:

The research work was initiated to get information and report the prominent indigenous medicinal plants of village Mithakhel District Karak during 2013. As a whole about 47 plants belonging to 24 families were collected from various part of Mithakhel by using survey. Most of the plants belong to the following families, Moraceae (5 spp), Brassicaceae (4 spp), Rosaceae (4 spp), Solanaceae (3 spp), Zygophyllaceae (2 spp), Mimosaceae (3 spp), Poaceae (3 spp), Malvaceae (2 spp), Alliaceae (2 spp), Rutaceae (2 spp), Lamiaceae (2spp), Palmae (1 spp), Amaranthaceae (1 spp), Liliaceae (1 spp), Asclepidiaceae (1 spp), Cannabinaceae (1 spp), Papilionaceae (1 spp), Temaricaceae (1 spp) , Asclepiadaceae (1 spp), Sapindaceae (1 spp), Meliaceae (1 spp), Arecaceae (1 spp), Myrtaceae (1 spp) and Chenopodiaceae (1 spp). The local inhabitants were ignorant and had little knowledge about the medicinal plant and proper time of collection. Younger generation doesn't know about indigenous knowledge of various medicinal plants, but the old people especially women have some knowledge about the wild resources of medicinal plants. The Medicinal plants were identified botanically along with their scientific names, family names, Vernacular names, part used and medicinal uses. Most of the plants are wild while few plants are cultivated.

Key words: Medicinal plants, Mithakhel, Botanically identified.

Introduction

Medicinal plants play important role in traditional medicines, these plants are used for the treatment of various ailments [2].In world 4, 22, 000 plants are reported among them 50,000 are used in preparation of medicine [3]. The main objective of the research is to keep the record of indigenous uses of plants. For primary health care's needs 80% of the world population depend upon traditional medicine [4]. Instead of allopathic medicines plant remedies are often used [5]. The local people of the areas have good knowledge about the utilization of plants. As compared to costly pharmaceutical drugs local people mostly

prefer medicinal plants due to its easy availability and cheap therapy. Local people have the best knowledge about the therapeutic activity of traditional medicinal plants against different types of diseases. This knowledge has transferred to them by their ancestors [6].

In 1950 for traditional health practices eighty percent population of Pakistan was totally dependent on ethno medicines. [7] But now these medicines are used in rural areas [8] because with the passage of time indigenous knowledge develops which change the natural resources and culture.

About 6000 of plant species have been reported in Pakistan, among these plant species only 600 are documented [9].The research study was arranged in Mithakhel, District Karak. For different ethno botanical purposes people mostly depend upon wild sources because the agriculture is negligible.

On indigenous uses of medicinal plants various studies have been conducted in Pakistan [10] but the present study area is still unexplored. Therefore, a need was felt to document and conserve the traditional knowledge of the area before the information is lost forever. The aim of the study is to identify medicinal plants and explore their uses, to enlist the indigenous medicinal plants used by local people for common day ailments and to assess the plant conversation issues of the study area.

Materials and Methods

Study area:

Mitha Khel is a village and Union Council in Karak District of Khyber-Pakhtunkhwa province of Pakistan. It is located at 33°08'43N 71°11'21E with an altitude of 372 meters (1223 feet). It consists of various areas which are (Taqqi Mithakhel, Sangrati Mithakhel, Zeyrae, Mastikhel, and Darbaskhel).

Collection of medicinal plants data:

Ten (10) Trips were arranged to twenty (20) different sites of Village Mithakhel District Karak Kpk, Pakistan to explore and collect important medicinal plants during 2013.A total of 47 medicinal plants were collected.

Exploration of medicinal plants:

For proper guidance and collection of plants map of Mithakhel was obtained from concerned office. A proforma was design to explore the medicinal plants of study area. i: e name of plant, Vernacular/Local name, Family of plant, Part use in medicine and its medicinal uses.

Results and Discussion

List of medicinal plants:

During summer and winter season total 47 Medicinal plant species belonging to 24 families were collected. Information regarding their botanical name, vernacular name, family, part used and their medicinal uses are listed in the Check List (Table.1).

Botanical Name	Vernacular name	Family	Part use	Uses
Abelmoschus esculentus Moench	Bhindae	Malvaceae	WP	Used as Laxative; Used in Constipation; Dry Plant is used as Fuel.
Acacia modesta Wall	Palosa	Mimosacea e	WP	Used in Diarrhea treatment; Used in Dysentery; Dry Plant is used in manufacturing of tooth brush.
Acacia nilotica L	Kikar	Mimosacea e	WP	Used in Diarrhea treatment; Used in Dysentery; Dry Plant is used in manufacturing of tooth

				brush.
Albezzia lebbeck (L) Benth	Sreen	Mimosaceae	WP	Whole Plant is used in Timber; Used in Furniture; Also used for Ornamental purpose.
Allium cepa L	Pyooz	Alliaceae	B&L	The bulb and leaves are used as Condiment & Flavoring agent
Allium sativum L	Weza	Alliaceae	B&L	The bulb and leaves are used as Condiment & Flavoring agent.
Amaranthus viridus L	Ranzaka	Amarantha ceae	WP	Used as Vegetables; Used as Tonic Fodder for animals.
Aspodelus tenuifolius Caven	Jungli pyoz	Liliaceae	WP	Its seeds are applied to inflamed parts.
Avena sativa L	Karyana	Poaceae	WP	It is used as a Fodder; In dry form it is used as Fuel.
Brassica compestris L	Woeri	Brassicace ae	WP	Used as Fodder; Used as Tonic; Used as Laxative and Purgative.
Brassica rapa L	Tepr	Brassicace ae	Root & leaves	Leaves are used as Fodder; as laxative; used in Constipation; Roots are used as Vegetable.
Brassica oleracea L	Gopa	Brassicace ae	Flower & leaves	Flower is used for Gas troubles; Used as Vegetable; Leaves are used as Fodder.
Calotropis procera Willd	Spulmaka	Asclepidiac eae	Stem, leaves and milky juice	Used as bandage for rheumatic joints and swellings; Dried stem is used as a Fuel.
Cannabis sativa L	Bange	Cannabina ceae	Leaves and fruits	Use as cooling agent as stimulant as tonic; cure urinogenital diseases.

Cynodon dectylon L	Barawa	Poaceae	WP	Used as fresh fodder for animals; Used in dysentery; Vomiting, Tonic & Ornaments.
Dalbergia sisso Roxb	Shawa	Papilionaceae	WP	Used as Tooth brush; Used in Snuff preparation, Timber, Furniture.
Eruca sativa Mill	Shershum	Brassicaceae	WP	Used in Fever, Cold, Influenza
Saccharum arundinacium	Kana	Poaceae	WP	Soil binder; Binder making; Used as Fuel, Fodder
Morus nigra L	Toor toot	Moraceae	WP	Fruits are edible' Leaves are used for feeding silkworms; Used to cure several diseases like diabetes, and to reduce blood sugar level.
Morus leavigata L	Shah toot	Moraceae	WP	Fruits are edible; Leaves Juice keeps skin smooth, healthy and prevent throat infections; Leaves are used as fodder for cattle.
Morus alba L	Speen tooth	Moraceae	WP	Leaves are used as silk worms feed and cattle feed for milk production; Fruits are used for making wine; Seeds are used for making jam; Fruits are edible and used to cure several diseases like sore throat and Dyspepsia.
Tamarix aphylla	Ghaz	Temaricaceae	WP	Used as Germicide; Used as Soil binder; Used in Agricultural tools and Blood Clotting.
Withnia coagulans	Shapianga	Malvaceae	WP	Used in dyspepsia & flatulence.

Caralluma edulis	Pamana	Asclepiadaceae	Arial part & Flower	Used for Prevention of aging, Alzheimer Diabetics, Hypertension.
Citrus limon	Nimbo	Rutaceae	Fruit, Roots & Seeds	Mosquito repellant; Diuretic; Laxative; Used in Constipation, Diarrhea, Skin disease, Tumors, Asthma, Cough, Vomiting
Citrus maxima	Malta	Rutaceae	Fruit, Roots & Seeds	Used in Back pain, Ulcer, Cough; Used as Anti- oxidant, Anti-cancer, Anti-viral, Antidiabetic; Used in Vomiting, Nervous disorder, Antiallergic, Analgesic.
Datura alba	Burbaka	Solanaceae	Seeds, Fruit, Leaves & Bark	Used in Asthma, Muscle spasm, Whooping cough, Ulcer, Hemorrhoids, Rheumatism
Dodonaea viscose	Zerawana	Sapindaceae	Leaves & Bark	Used as Astringent, Diaphoretic, Toothache, Sore throat, Wounds, Skin rashes, Fever treatment.
Eriobotrya japonica	Alokat	Rosaceae	Leaves & Fruit	Used as Sedative, Used in Vomiting, Expectorant, Diarrhea, Depression
Fagonia cretica	Spelaghzii	Zygophyllaceae	Arial parts	Used in Stomach trouble, Small pox, Skin disease, Fever, Thirst, Vomiting, Urine problem
Ficus carica	Inzar	Moraceae	Fruit & Latex	Used as Laxative, Mouth cleaner, Bronchitis, Cough, Skin sagging
Lycopersicum esculentum	Tamatar	Solanaceae	Fruit	Used as Furuncles, Scorpion and other insect bite, Kidney and liver problem, Digestion

Melia azedarach	Bakana	Meliaceae	Bark, ripen fruit &Gum	Used for treating Burns, Gingivitis, Gonorrhea, Headache, Piles, Pyrexia, Diabetes, Spleen enlargement
Mentha sylvestris	Lewanae Vellana	Lamiaceae	WP, Oil & Powder	Used in Stomachache, Chest pain, Teeth whitening, Diuretic, Anti-pyretic, Insect bite
Mentha viridis	Vellana	Lamiaceae	WP	Used as Carminative, Antispasmodic, Stimulant, Scalding of urine, Suppressed urine, Painful hemorrhoids
Morus alba	Bedana toot	Moraceae	Leaves, Fruit, Root & Root bark	Used against food poisoning of Microorganism, Leukemia, Hypoglycemia, Neuro-protective, Dyspepsia, Cough
Nanorrhops richiana	Mazara	Arecaceae	Leaves	Used as Purgative, Diarrhea, Dysentery
Peganum harmala	Sponda/ Spellanii	Zygophylla ceae	Seeds	Used in Menstrual problems, Mental & nervous illness, Digestive, Diuretic, Narcotic Against tapeworm, Baldness, Ophthalmic, Stomach problem, Urinary & sexual Problem
Prunus domestica	Alocha	Rosaceae	Fruit & Bark	Used as Laxative, Used in Hypertension treatment Nausea, Asthma, Fever, Miscarriage, Vomiting, Headache.
Prunus arminiaca	Mandatha	Rosaceae	Seeds & Fruit	Used as Asthma, Used as Expectorant and Constipation
Psidium guajava	Amrood	Myrtaceae	Leaves, Fruit & Juice	Used in Diarrhea, Menstrual problem, Mouth ulcer, Active against amoeboid dysentery
Pyrus malus	ManRa	Rosaceae	Fruit	Used as Tonic, Used in Constipation,

				Used as Astringent, Reduce cholesterol level, Heart tonic, Laxative
Solanum nigrum	Gorgorii	Solanaceae	Leaves, Barries and Flower	Used in Fever, Skin problems, Tumor, Inflammation, Ulcer, Ring worm, Earache, Mouth wash, Hepatitis, Liver diseases
Spinacea oleracea L.	Palak	Chenopodiaceae	Leaves and stem	Used in Anemia, Used as Tonic and produce fresh blood
Phoenix sylvestris (L.) Roxb.	Khajoor	Palmae	Fruit, root and juice of tree	Used in Toothache, Used as Tonic, Laxative

Table1. Check List of Medicinally Important Flora of Mithakhel (Karak).
Note: WP = whole plant; B&L = Bulb and leaves

Discussion

The study revealed that 45 medicinal Plants belonging to 24 families were identified in the research area. The plants were found both wild types as well as cultivated. The plants examined include Abelmoschus esculentus Moench, Acacia modesta Wall, Acacia nilotica L, Albezzia lebbeck (L)Benth, Allium cepa L, Allium sativum L, Amaranthus viridus L, Aspodelus tenuifolius Caven, Avena sativa L, Brassica compestris L, Brassica rapa L, Brassica oleracea L, Calotropis procera Willd, Cannabis sativa L, Cynodon dectylon L, Dalbergia sisso Roxb, Eruca sativa Mill, Saccharum arundinacium, Morus nigra L, Morus leavigata L, Morus alba L, Tamarix aphylla, Withnia coagulans, Caralluma edulis, Citrus limon, Citrus maxima, Datura alba, Dodonaea viscose, Eriobotrya japonica, Fagonia cretica, Ficus carica, Lycopersicum esculentum, Melia azedarach, Mentha sylvestris, Mentha viridis, Morus alba, Nanorrhops richiana, Peganum

harmala, Prunus domestica, Prunus arminiaca, Psidium guajava, Pyrus malus, Solanum nigrum, Spinacea oleracea L, Phoenix sylvestris (L.) Roxb. The present study brought some interesting medicinal plants to the screen like Acacia modesta wall the whole plant is use for diarrhea and dysentery. Similarly Calotropis procera wild is use in bandage for rheumatic joints and swelling. Some common plants have common uses like Pyrus malus reduce cholesterol level and also use in constipation. The fruits of Morus Nigra L are extensively use in curing diabetes and also use to reduce sugar Level. Its leaves are used for feeding silk worm. Similarly Datura alba is used for hemorrhoids and whooping cough. Morus alba L its leaves are used to feed cattle for milk production, fruits are edible used for making wine and also used to cure several disease like sore throat and Dyspepsia, seed are used for making jam. Leaves of Cannabis Sativa L are used as cooling agent and to cure urinogenital disease. The fruit of citrus maxima are edible. All members of community in the area use medicinal plants. Some wild plants like Peganum harmala seed are used in menstrual problem and mental nervousness. Caralluma edulis arial part and flower are used for prevention of aging and Alzheimer. Various parts of the plants are used in curing different ailments. During the research project it was noted that the wealth of medicinal flora of Village Mithakhel District Karak are not fully exploited. Some medicinally important plant species are fast dwindling, which are mainly due to human interference. So, the area needs proper protection for the conservation and survival bioresources. The medicinal plants can be protected by the conservation program of local people. Regularly chemical screening of medicinal plants and their useful parts collected from the fields in different seasons may be activated. The oil bearing medicinal plants should be fenced for chemical and biological investigation, as well as for preventing overgrazing,

cutting and use as a fuel (wood).

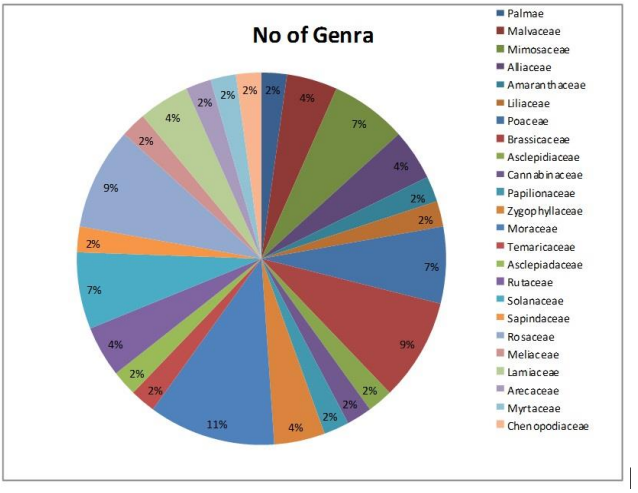

Fig 1: **Distribution of genra among different families**

S.NO	Family name	No of genra
1.	Palmae	1
2.	Malvaceae	2
3.	Mimosaceae	3
4.	Alliaceae	2
5.	Amaranthaceae	1
6.	Liliaceae	1
7.	Poaceae	3
8.	Brassicaceae	4
9.	Asclepidiaceae	1
10.	Cannabinaceae	1
11.	Papilionaceae	1
12.	Zygophyllaceae	2
13.	Moraceae	5
14.	Temaricaceae	1
15.	Asclepiadaceae	1
16.	Rutaceae	2
17.	Solanaceae	3
18.	Sapindaceae	1
19.	Rosaceae	4

20.	Meliaceae	1
21.	Lamiaceae	2
22.	Arecaceae	1
23.	Myrtaceae	1
24.	Chenopodiaceae	1

Table 2: List of Families having number of genra

Conclusion:

During session 2013, the research study was conducted in Mithakhel (Karak) which showed that the plant species are less as compared to the total area .This is due to scattered population, scanty rainfall and no proper irrigation system. As there are no advanced facilities in the area, most of the people use these plants for medicinal purpose for treating different diseases. The older people of this area knew the medicinal importance of these plants and they impart this knowledge to their Youngers. In this research the medicinally important plants were identified, classified and collected. The results showed that this area contain a valuable plant species which need conservation and proper management.

BIBLIOGRAPHY:

Ali, S.I. 2008. "The significance of flora with special reference to Pakistan." *Pak J Bot* 30:967–971 [10]

Bako, S.P., Bakfur, M.J., John, I., and Bala, E.I. 2005. "Ethnomedicinal and phytochemical profile of some savanna plant species in Nigeria." *Int J Bot* 1:147–150. [2]

Hocking, G.M. 1958. "Pakistan medicinal plants." *Qualitas Plantarium Ethnobotanical Material Vegetablies* 5:145–153. [7]

Ibrar, M., Hussain, F., and Sultan, A. 2007. "Ethnobotanical studies on plant resources of Ranyal Hills, District

Shangla, Pakistan." *Pak J Bot* 2:329–337. [8]

Khan, Saad Ullah, Rehman Ullah, Sultan Mehmood, Ihsan Ullah, and Manzoor Ullah. 2013. "Biodiversity of Prominent Indigenous Medicinal Plants of Village Khujaki, District Karak, KPK." *Pakistan Journal of Medicinal Plants Studies* 1(4): 87-92. [1]

Qureshi, R. 2004. *Floristic and ethno botanical study of Desert-Nara Region, Sindh.* Shah Abdul Latif University, Pakistan Research Repository 454. [6]

Sandya, B., Thomas, S., and Isabel, W. 2006. "Ethnomedicinal plants used by the Valaiyan community of Piranmalai hills (reserved forest), Tamilnadu, India." *Afr J Tradit Complement* 3:104–114. [5]

Shinwari, Z.K., Gilani, S.S., and Akhlas, M. 2003. "Sustainable Harvest of Medicinal Plants at Bar and Shinaki Valleys, Gilgit (Northern Pakistan)." WWF-P, Gilgit: Consultancy Report; 2003. [9]

Ullah, R., Hussain, Z., Iqbal, Z., Hussain, J., Khan, U.F., Khan, N., Muhammad, Z., and Ayaz, Ahmad S. 2010. "Traditional uses of medicinal plants in Dara Adam KhelNWFP Pakistan." *J Med Plants Res* 17:1815–1821. [4]

Walter, W. and Hamilton, A. 1993. *The vital wealth of plants.* UK: Bates and Sons Ltd. [3]