SindhUniv. Res. Jour. (Sci. Ser.) Vol. 51 (04) 607-612 (2019)

http://doi.org/10.26692/sujo/2019.12.97

SINDH UNIVERSITY RESEARCH JOURNAL (SCIENCE SERIES)

An Ethnobotanical Survey of Rahim Yar Khan and Surrounding Areas, Punjab, Pakistan

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Received 11th December 2018 and Revised 26th August 2019

Abstract: A survey of plants used in the traditional popular medicine found in the Rahim Yar Khan district and surrounding areas Punjab, Pakistan, has been conducted. The data of medicinal use of 43 different plant species is provided which can be used to make proposal for the welfare of human beings, which are ecologically sound, economically visible as well as satisfying the needs of the human communities.

The present examination region is proposed to think about and archive the medicative plants, their medicinal use, and the customary information utilized every now and again by the inhabitants of the Rahim Yar Khan and Cholistan desert Punjab, Pakistan. The old regional cures of these zones are lessening because of the absence of subjective and mensurable research.

The investigation recorded a rundown of different medicative plants utilized as conventional prescriptions by natives. The examination uncovered that the neighborhood individuals of the study zones acquire a rich customary information however there is an extraordinary threat of losing this abundance of information sooner rather than later. Documentation of the information is from Rahim Yar Khan and surrounding areas, Pubjab, Pakistan is remarkable data in its temperament. The investigation shows the undocumented information worth acknowledgment that won't just help in the preservation of therapeutic plant species yet will feature the pharmacological limit with respect to improved human medicinal services in regards to normal afflictions.

Keywords: Medicinal plants, Ethnobotany, Ethnobotanical Study

1. INTRODUCTION

The ethnobotanical information of medicinal plants from Rahim Yar Khan district, was documented after a detailed survey. Medicinal plants are important source of drugs for the treatment of different diseases and maintenance of human health. The use of medicinal plants is very popular in rural areas, because they are less expensive and easily available. Rahim Yar Khan, district, has variety of climatic condition as it has Cholistan desert on one side and Indus river on the other. Due to different ecological conditions, the site area is rich in the wild plants of medicinal significance. So far, no scientific study has been carried out to explore the medicinal wealth of this area. As a matter of fact, the use of Yunani system of treatment is very popular in this area. This system is according to taste disposition and climatic conditions of the area. Remedies from plant sources have always been the prime tools of the trade in the fight against various forms of health problem in the developing regions. During the preliminary survey the efforts were made to find and collect the plant species which have traditional medicinal value. Different qualified Hakim and local people were contacted to give information about such plants. A wide variety of literature in the field was scanned for this purpose. The phytochemical properties of the plants cited in this study were also recorded from the available literature. Therapeutic of the plants was gathered from the qualified Hakims. Their utilization was also discussed with the drug dealer of this region. The present study reveals that utilization of herbal medical systems should serve the long-term objective of providing starting materials and the development of the future drugs. With economically feasible scientific studies it can also enhance our present capability to combat numerous diseases which are found in typical environment where modern drugs are either scarce or deteriorate very fast.

Medicative plants assume a noteworthy job in lives of its occupants as they are considered as an essential supply of treatment against numerous infections. They likewise fill in as a key revenue asset for poor laborers and individuals related with the production of herbal items. About 70% of the medicative plants are native. The conventional health maintenance expertise has been conveyed by and large orally for generations instead of as a composed archive, because of which the information is lessening bit by bit. Also, increment in urbanization, developing populace, living space misfortune, inaccurate documentation, misuse of some plant species, absence of execution of laws and inadequate information are the components adding to the loss of this legacy.

Numerous specialists have examined the monetary, ethno-botanic and medicative significance of plants yet adequate research is as yet required. In any case, during

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the previous decennium analysis has been done in a scope of foundations to set up the antimicrobial, anticancer, cell reinforcement, mitigating impacts of medicative plants. The floristic and ethno-botanic inventories were also made. The patients for the most part utilize allopathic, elective and conventional drugs one next to the other without the direction of enlisted experts. Progress to develop a framework and human asset to use medicative plants' treasure in a legitimate manner is restricted. The ethno-botanic practices are normal and have direct financial effects. Each of these features are encountered during this examination. Investigation of less analyzed desert locale of the area likewise appears to be indispensable. In current investigation we have embraced somewhat the information from our past examinations.

The herbal medications in particular locales are supported over the allopathic ones for their modest price and less reactions. The most significant goal of this examination is the protection of nearby plant information. Disappearance of the domestic information is a risk to the poor rustic economies. It was, in this way, regarded crucial to report the ethnobotany.

The area lies between 27°40'- 29°16' north scopes and 60°45'- 70°01' east longitudes. The riverain zone of the area lies near eastern bank of the waterway Indus and Panjnad. The Rahim Yar Khan District is limited on the north by Muzaffargarh District, on the east by Bahawalpur District, on the south by Jaisalmer locale (India) and Ghotki District of Sindh region, and on the west by Rajanpur District.

This region is separated into three principle physical highlights: (a) Riverside territory, b) channel watered region, and (c) desert region which is called Cholistan. The Riverside zone of the region lies close on the southern side of the Indus waterway primarily falling in the stream bed. The channel inundated region lies on the south and is isolated by principle Minchan Bund. The estimated tallness of the watered zone is 150 to 200 meters (490 to 655 ft) above ocean level. The third piece of the zone, called Cholistan, lies in the south of the watered tract up to the Indo-Pak fringe. The outside of the desert comprises of a progression of sand hills ascending at spots to a tallness of 150 meters (492 ft) and secured with the vegetation curious to sandy tracts.

2. REVIEW OF LITERATURE:

Life and diseases go together where there is life, diseases are bound to exist. These diseases finally cured by plants. Dependency and food sustainability of man and animal life has been revolving around Plants through their uses as food, fiber and shelter. Plants have been used to ease diseases, therefore the use of plants as medicines is an ancient and reliable practice (Arshad and Rao 2001). Cure[2] of diseases through medicinal plants has always been a salient feature of Islamic teaching and preaching.

Islamic medicine started from Hazrat Adam (A.S) and was completed at Hazrat Muhammad (S.A.W) but research and compiling of these medicines is still continuing throughout the world (Nasr 1976). It has been a century ago that Hershberger (1896) coined the term "Ethnobotany". Yet the concept is still in controversy. Basically, ethnobotany deals with man and his social, cultural and religious links with plants. The interests of ethnobotanists include a wide range of subjects like indigenous healing herbal medicines, plants used in religious rituals, cultural activities and musical instruments.

3. MATERIALS AND METHODS

The plants cite in this study were collected from Rahim Yar Khan Ditrict, including some area of Cholistan. Plants were identified with the help of Flora of Pakistan and other available literature. Some species were identified by matching with already identified material lodged at the herbarium of Karachi University.

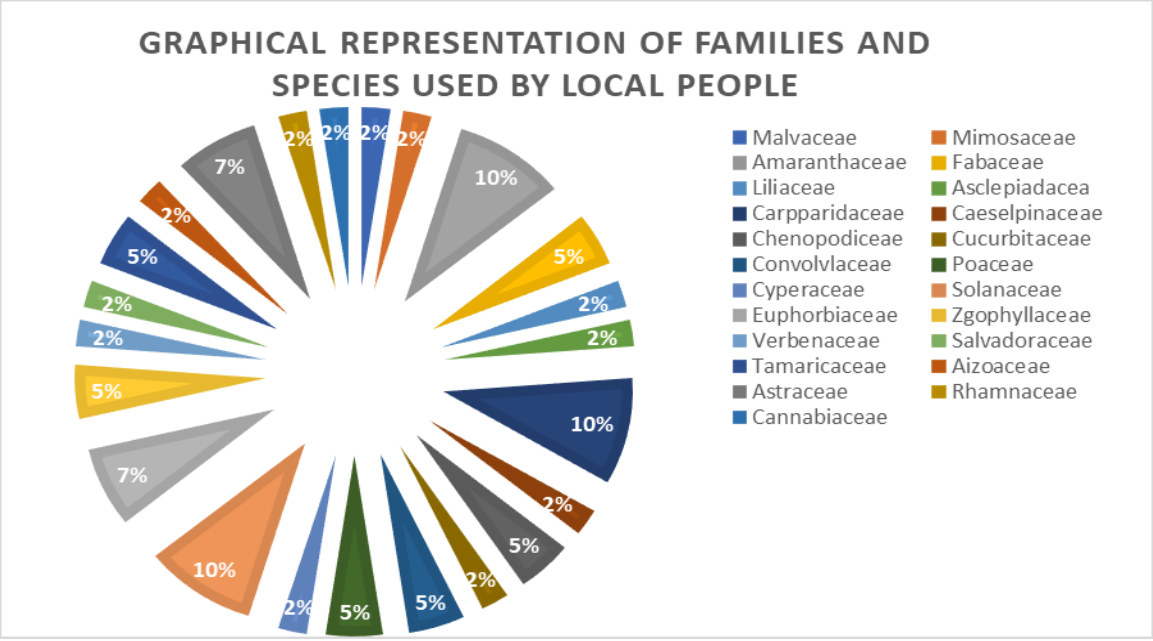
The herbarium sheets of plants species collected from Rahim Yar Khan were prepared following the standard technique. The specimens are lodged at Sindh University herbarium. The nomenclature of the plants used according to Nasir and S. I. Ali's work (1970-1990), and Ali and Qasim (1991- 2012)

The information about medicinal uses of plants found in study area and on the methods of their use were also gathered from qualified Hakims, local inhabitants' analysis and other concerned literature.

Detail of Medicinal Plants and Their Ethnobotanical Uses

Botanical Name	Local Name	Family	Part used	Ethnobotanical uses
*Abutilionindicum*Linn.	PeeliBooti	Malvaceae	Roots and seeds	Infusion from roots is used as cooling remedy for fevers and leprosy. Plant have soothing effect and are used for cough. Y. S. Ahmed (1956). Seeds are used for piles.
Accacianilotic Linn.	Babul, Kikar, Umme Mughelan	Mimosaceae	Bark and leaves	Decoction of bark used in diarrhea, dysentery and gargles for spongy gums. Leaves are used for washing ulcers and wounds. Used for skin treatment. Gum of acacia is demulcent and prescribed for cough and chest complaints. Dastur, J.F (1962)
Achyranthesaspera Linn.	Puth Kanda	Amaranthaceae	Roots and leaves	Decoction is used as diuretic. The ash is antacid with honey, it is given in cough and asthma. A paste of fresh leaves is applied for insect bites. A paste of roots is applied in ophthalmia. Dastur, J.F (1962)
Aervajavanica (Burn.f) ex J.A. Schultes.	Boikalan	Amaranthaceae	Roots	Plant is used as diuretic and considered to be of great value in lithiasis. The root decoction is used in painful and drop by drop discharge of urine. Decoction of plant is administered to remove swelling. Atta-u-Rehman Saeed, Hakim and Vaqaruddin Ahmed. (1986).
*Alhajimauroru m*Medic	Jawasa, Camel thorn	Fabaceae	Leaves	An extract is obtained by evaporating a decoction is used as demulcent in cough. The fresh juice is used as diuretic. An oil is prepared with the leaves and applied externally in rheumatism. William Dymock C.J.H. Warden and David Hopper (1972).
Aloe barbedensis Mill.	Ghee Kuwar	Liliaceae	Leaves	The leaves are considered to be correct disordered process of nutrition, leaves are also aphrodisiac, antidotal, anthelmintic and hepatic stimulant. Halwa–i-Gheekwar is prepared by mixing pulp, ghee, milk, kernels of dried fruit and sugar which is useful for relieving pain of rheumatism, lumbago and gout. Pulp is useful for sciatica lumbago and rheumatic pain. Dastur, J.F. (1962).
*Amaranthisviridis*Linn.	Cholai	Amaranthaceae	Leaves	Plant is used for urinary calculus and cardiovascular diseases. It is also used in calcium deficiency. Leaves of plant lessen the irritation of skin and reduce the swelling and pain. Atta-ur-Rehman, Muhammad Saeed, Hakim and Vaqaruddin Ahmed. (1986)
*Calatropisprocera*Linn.	Ak, Milk weed	Asclepiadacea	Roots, leaves, flower and stem	Powered bark is used in dysentery. Stem is used as tooth brush for curing toothache. Y.S. Ahmed (1956). Leaves are used as cure for worms and fever. The flowers are used in cough, asthma and as digestive restorative. The white milky latex is used to cure skin diseases. Oil is used for paralyzed parts.
Capparis decidua edgow.	Kareer, Kinal	Carpparidaceae	Leaves and fruits	The Tender shot and young leaves relieve toothache when chewed. Roots used in affection of liver Ahmed and spleen. Y.S (1956)
Capparisspinosa Linn.	Kerariber, Kalvari,	Capparidaceae	All parts	Bark is used to regulate menstrual period. The juice of fresh plant is dropped into the ear to kill the worms.
Cassia fistula Linn.	Amaltas	Caeselpinaceae	Leaves, fruits and seeds	The Leaves are used as laxative. Fruit is also used as emollient. The pulp of the fruit is considerable therapeutic importance. The pulp is useful for relieving thoracic abstraction and heat of blood. Dastur, J.F. (1962)
*Chenopodium album*Linn.	Bathu or Bathva, Goose foot	Chenopodiceae	Seeds	It is laxative, diuretic and sedative. Seeds are used for jaundice and dropsy. Also used in inflammation and fevers. The plant is used in enlarged spleen. The herb is noted for its anthelmintic properties. Muzaffar Awan Hakim (1983).
Citrulluscolocynthis Linn.	Kor-Tumma, Indrayn, Trooh.	Cucurbitaceae	Fruit, root and seeds	The fruit of this plant is very purgative, and its seed oil is used as a gastrointestinal restorative. It is also used in jaundice and disease of stomach and liver. The fruit and roots are useful for biliousness fever, worms, enlargement of abdominal viscera, urinary disease, boils, pimples, dropsy colic, menstrual problems. Chaudhry M.S and Muhammad Arshad (1987). Muzaffar Awan Hakim (1983).
Cleome brachycarpa Vahl ex Dc.	Ponwar, Kasturi	Capparidaceae	Leaves	Plant is considered as useful for persons suffering from heat. Kritikar, K.R, B.D. Basu. I.C.S (1935).
Cleome viscose Linn.	Wild mustard, HurhurBazarulBanj	Capparidaceae	Leaves and seeds	It is used in skin disease, itching ulcers and leprosy. Kritikar, K.R, B.D. Basu. I.C.S (1935).
Convolvulus arvensis Linn.	Hiranpad, HiranKhuri, Lylabooti.	Convolvlaceae	Roots	The root is used for purgative tonic for brain and purifies blood.
CressaCritica Linn.	Bokari	Convolvulaceae	Whole plant	Plant is used as aphrodisiac. Also used for the removal of bronchial secretions. William Dymock C.J.H. Warden and David Hopper (1972).

Botanical Name	Local Name	Family	Part used	Ethnobotanical uses
Cymbopoganjaarancusa(Jones) Schult.	Khavi (urdu) Karan cusa (Punjabi) Rosa grass (Eng)	Poaceae	Leaves	It is good appetizer, used in treatment of strangury, vomiting, blood and skin diseases, it is hot and dry. Chaudhry M.S and Muhammad Arshad (1987).
Cyprus rotundus Linn.	Nagar Mooh (urdu), Suad koofi (Arab)	Cyperaceae	Roots	The roots are useful in urinary disorders, leprosy, thirst and blood diseases. Dastur, J.F. (1962).
Cynodondactylon Linn.	Drabh	Poaceae	The whole plant	The whole plant is used medicinally. A cold infusion of the herb with milk is prescribed for bleeding piles. Dastur, J.F. (1962).
Datura metal Linn.	Datura	Solanaceae	All parts of the plant are toxic	The dried leaves and stems are smoked as an antispasmodic on asthama. Dastur, J.F. (1962).
Digeriamuricata(Linn) Mart.	Tandala	Amaranthceae	The whole plant	The whole plant is laxative in large dosages. Flowers and seeds are recommended in urinary disorders. Kritikar, K.R, B.D. Basu. I.C.S (1935).
Euphorbia hirta Linn.	Dudhi, Milk weed.	Euphorbiaceae	Root and leaves	It is used in deficiency of breast milk in nursing mothers, headache, and genitourinary tract. Kritikar, K.R, B.D. Basu. I.C.S (1935).
*Euphorbia indica*Linn.	Khirol (Sindh). Hazardani (Panjab)	Euphorbiaceae	Leaves	Leaf juice is used to remove warts. Kritikar, K.R, B.D. Basu. I.C.S (1935).
Fagoniaindica Burn.	Dhaman	Zgophyllaceae	Leaves	The juice of the plant when applied for open wounds it prevents suppuration. It is also considered as a remedy for cancer. Chaudhry M.S and Muhammad Arshad (1987).
Lippianodiflora Linn.	Buikkan	Verbenaceae	Leaves	Decoction of the leaves is useful in phlegmatic fevers. Chaudhry M.S and Muhammad Arshad (1987).
				chronic fever, dysentery and dyspepsia. Dastur, J.F. (1962).
Physalis minima Linn.	kakanj	Solanaceae	Leaves, fruit	This plant is used as an ingredient of medicinal oil which is given for spleen disorders.
Ricinuscommunis Linn.	Arind, Bedanjir	Euphorbiaceae	Root and stem	Castor oil is used in medicine as a valuable laxative. It is useful for all cold diseases. Muzaffar Awan Hakim (1983).
Rhynchosia minima Linn.		Fabaceae.	Leaves	The leaves are used for promoting the abortions. Kritikar, K.R, B.D. Basu. I.C.S (1935).
Salvadoraoleoides Decene.	Pilu, Jhal	Salvadoraceae	Friut, leaves and roots	Short pieces of the root are used as a tooth brush to clean the teeth and prevent the gum diseases. Kritikar, K.R, B.D. Basu. I.C.S (1935).
*Solanumnigrum*Linn.	Mako	Solanaceae	Leaves, fruit	The berries of the plant are reported to have tonic, diuretic and alternative properties. Dastur, J.F. (1962).
*Solanumsurratense*Burm. F.	Kandiari	Solanaceae	Stem, flower, fruit and seeds.	It is used in rheumatism and gonorrhea. Dastur, J.F. (1962).
Suaedafruiticosa Linn.		Chinopodiaceae	Stem and leaves	Used to sores on the back of camels. Kritikar, K.R, B.D. Basu. I.C.S (1935).
Tamarixaphylla Linn.	LalJhave	Tamaricaceae	Stem	Used in skin diseases. Dastur, J.F. (1962).
Tamarixtroupii Hole.	Tamarix, lai.	Tamaricaceae	Stem, leaves and fruit.	Fruit is used for spleen disorders and eye diseases. Stem and leaves are good for piles, ulcers and wounds. Kritikar, K.R, B.D. Basu. I.C.S (1935).
Trianthemaportulacastrum Linn.	It sit.	Aizoaceae	Root	The root applied to the eye cures, ulcers, itching, dimness of sight and night blindness. Muhammad Abdullah Hakim. (1975).
Tribulusterrestris Linn.	Gokhru	Zgophyllaceae	Fruit, seed	It is used in urinary disorders and impotency. Kritikar, K.R, B.D. Basu. I.C.S (1935).
Vernoniacineria Less.	Sadodi	Astraceae	Seed and leaves	Used for the treatment of piles and skin diseases. Dastur, J.F. (1962).
Withaniasomnifera Linn.	Asgand, Axin.	Solanaceae	Leaves and root	A fomentation of the leaves is used for sore eyes, boils and swollen hands feet. Atta-u-Rehman Saeed, Hakim and Vaqaruddin Ahmed. (1986).
Ziziphusjujuba Mill	Beri, Singli, Unnab.	Rhamnaceae	Stem, leaves, root and fruit.	It is used for the treatment of fever and dysentery.
Cannabis Sativa L.	Bhang	Cannabiaceae	Leaves, flowers	Indigestion, sexually transmitted diseases, also used as sedative, narcotic and antidote against poison
Carthamus Oxycantha Bieb	Pohli	Asteraceae	Seeds	Oil is used against itching
Echinops Exchinatus Roxb.	Unt-Katara	Asteraceae	Complete plant and roots	Jaundice, inappropriate eating habits, indigestion, chronic livers diseases and sexual weakness



4. RESUTLS AND DISCUSSION

Rahim Yar Khan District and surrounding areasare blessed with immense wealth of medicinal plants. A preliminary survey of medicinal plants of District Rahim Yar Khan and surrounding areas was under taken, eighty different plants species were collected from the site area, out of which Ethnobotanical use of 43 species belonging to 24 families which were common in Rahim Yar Khan district and surrounding areas, are provided.

Besides the medicinal use of these plants. Information about local names is also given.

Aloe Barbadensia, Calatropisprocera, Citrullus Colocynthus, Datura Metel and Salvadora Oleides are considered to have immense medicinal value. These species have multipurpose use in the variety of diseases. The efficacy of these species is determined by the local inhabitants of the area and results were satisfactory. The above five species are most commonly used for the treatment of various diseases in the study area.

Every year a huge amount of foreign exchange is involved in the importing the medicinal plants. It can be minimized by domestication and utilization of these indigenous plants, some of the plant species of *Citrullus*, *Calotropis* and *Datura* are also used in homeopathic medicine.

Different compounds are prepared from these medicinal plants which have sound results in combating the diseases. Moreover, these have no side or after effects. Personal encouragement and keen interest are required in this field.

Continuous supervision of Govt: with regard to photochemical research and preparation of standard compounds in the pharmaceutical industries will solve the health problems of the country.

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