

## Plants used in Iraqi traditional medicine in Erbil - Kurdistan region

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### Abstract

**Background and objective:** Herbal medicine is a traditional or folk medicine practice based on the use of plants' seeds, berries, roots, leaves, barks, flowers and plant extracts for medicinal purposes. This survey highlights the traditional phytotherapy practices by traditional healers of Erbil-Kurdistan region in the treatment of various disorders.

**Methods:** An ethnobotanical survey was undertaken to collect information from traditional healers on the use of medicinal plants in Erbil-Kurdistan region. The indigenous knowledge of local traditional healers and the native plants used for medicinal purposes were collected through questionnaire and personal interviews.

**Results:** The investigation revealed that the traditional healers were not professionally authorized and 32 plants belonging to 23 families were used to treat various diseases in traditional medicine. The plants reported have been identified and presented in a table with the vernacular names, useful parts, dosage preparations and medicinal uses.

**Conclusion:** Many recorded species of plants are used in Erbil- Kurdistan region in traditional medicine but lack phyto-therapeutic evidence. Most indigenous plants remain to be studied which may yield many exciting data for further investigation.

**Keywords:** Survey, medicinal plants, Erbil, Kurdistan.

### Introduction

Herbal medicine is a traditional or folk medicine practice based on the use of plants' seeds, berries, roots, leaves, bark, flowers and plant extracts for medicinal purposes.<sup>1</sup> Plants are important sources of medicine for thousands of years and are the most important source of life saving drugs for majority of the worlds' population.<sup>2</sup> Herbal remedies are widely used for the treatment and prevention of various diseases that contain highly active pharmacological compounds.<sup>3</sup> The knowledge about medicinal plant among the people of Iraq is based on hundreds of years of belief, observations, and a rich medicinal history.<sup>4-6</sup> This survey highlights the phytotherapy practices by traditional medicine in the treatment of various disorders in Erbil-Kurdistan region.

### Methods

The study was performed during the period

from June 1<sup>st</sup>, 2011 to June 1<sup>st</sup>, 2012. The Survey included 10 traditional healers in Erbil, Kurdistan region, Iraq. The formulary of the survey included two lists of questionnaires.<sup>7</sup> The first one included information about the traditional healers including the address, age, sex, duration of practicing herbal medicine and educational level. The second questionnaire included information about using medicinal plants by traditional healers including plant botanical and vernacular name, part used, form of use and therapeutical use. Anonymity of the participants was ensured. After compilation of all the data, plant materials were collected. Determination of the botanical names of the plants was done in collaboration with Biology Department, College of Education, Salahaddin University. A voucher specimen of each plant has been deposited at the Department of Pharmacognosy, College of Pharmacy, Hawler Medical University.

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**Results**

The traditional healers participated in this survey were males between 34 and 46 years old. The duration of their experience as traditional healers using medicinal plants varied between 10 and 25 years. Neither any one of the traditional healers was found to be graduated from specialized academic institutions of herbal medicine nor having participated in training courses prepared by authorized institutions

of herbal medicine. The educational level of the traditional healers varied as Bachelor of art holders, diploma from institute for preparation of imams and preachers, and primary school certificate holders. Furthermore, no traditional healer location in which they were practicing herbal treatment was authorized by an official health authority. Additionally, the information collected in the questionnaire about dispensing herbal drugs were recorded and tabulated (Table 1).

Table 1: Plants used in traditional medicine in Erbil- Kurdistan region

Botanical and Vernacular Names	Part used	Preparation	Medicinal Indications
<i>Adiantum capillus- veneris</i> (Adiantaceae), Kaetaran	LE	Decoction	Nephritis, Renal stone, Allergy, Preventing hair loss, Hypertension
<i>Allium cepa</i> (Liliaceae), Pewaz	BU	Decoction	Antioxidant, Enhancing immune defense, Reduce risk of infection
<i>Allium sativum</i> (Liliaceae), Seer	BU	Decoction	Hypertension , Hypercholesterolemia, Common cold, Antibacterial, Anticancer, Enhancing immunity
<i>Andropogon sorghum</i> (Gramineae ), Reshale Ganmashame	Corn silk	Decoction	Cystitis, Nephritis
<i>Anethum graveolens</i> (Umbelliferae), Shweet	LE	Decoction, Powdered in capsule	Hypercholesterolemia
<i>Anthemis nobilis</i> (Asteraceae), Gula Hajela	FL	Infusion, Inhalation, soap	Common cold, Antitussive, Reducing body temperature, Bronchitis, sinusitis, Sore throat, Hair tonic, Cleaning and opening pores of skin, healing of wounds, Acne
<i>Artemisia campestris</i> (Compositae), Sheeh	AP	Decoction, powdered in capsule	Hypercholesterolemia, Hypoglycemic Tonic for body, Analgesic Anthelmintic
<i>Calendula officinalis</i> (Asteraceae), Hamish Baha	LE	Decoction	Peptic ulcer, Appetizer, Regulation of menstrual cycle
<i>Cassia acutifolia</i> (Fabaceae), Senamake	LE	Infusion	Hemorrhoid, Laxative
<i>Cichorium intybus</i> (Compositae), Jakjaka	AP	Decoction	Blood purification, Hypercholesterolemia, Hypoglycemic, Hypertension, Allergy, UTI
<i>Cinnamomum zeylanicum</i> (Lauraceae), Darjeen	BA	Decoction	Antibacterial , General tonic, Diuretic, Renal failure, Anemia, Sexual tonic for men
<i>Citrus aurantifolia</i> (Rutaceae), Lemo Basre	FR	Decoction	Tonic , Useful for kidney, liver, spleen and heart diseases, Diuretic
<i>Citrus limonum</i> (Rotaceae), Lemo	FR	Decoction	Renal stone
<i>Commiphora myrrha</i> (Burseraceae), Bneshta tal	Gum	Decoction	Peptic ulcer, Laxative
<i>Corcus sativus</i> (Iridaceae), Zafaran	FL	Infusion	Dyspepsia, Delaying menstrual cycle, Arthritis

**Table (1) Continued**

Botanical and Vernacular Names	Part used	Preparation	Medicinal Indications
<i>Coriandrum sativum</i> (Umbelliferae), Kazbara	FR	Decoction	GIT and UT diseases
<i>Cuminum cyminum</i> (Apiaceae), Zeera	SD	Decoction, Powdered in capsules	Colitis, Regulating of menstrual cycle, Hairsutism, Promote lactation, Carminative
<i>Cyperus rotundus</i> (Cyperaceae), Sotka	RO	Decoction, ointment	Flatulence, Nausea and vomiting, Regulating hormones (prolactin), Tonic, Hypoglycemic, Diuretic, Hemorrhoid and anal fissure
<i>Dianthus caryophyllus</i> (Myrtaceae), Karanfl	AP	Decoction	General tonic, Sexual tonic, Local anesthetic
<i>Eurca sativa</i> (Brassicaceae), Jarjer	AP	Decoction, ointment	Hypoglycemic, Skin diseases, Prevent baldness
<i>Glycyrrhiza glabra</i> (Fabaceae), Balak	RO	Decoction	Rheumatic disorder, Allergy, Dyspepsia, Peptic ulcer, General tonic, Cough and bronchitis, Hypoglycemia, Laxative, Asthma
<i>Lavender angustifolia</i> (Lamiaceae), Khuzame	FL	Infusion	Asthma, bronchitis, indigestion, Hypertension, Hypercholesterolemia
<i>Nigella sativa</i> (Ranunculaceae), Rashka	SD	Decoction	Repelling gases, Antibacterial, Antiviral, Sexual tonic, Enhance memory, Tonic, Al- lergy, Enhance immune system, Bronchitis, asthma
<i>Pimpinella anisum</i> (Umbelliferae), Yansun	SD	Decoction	Flu, cough, Diuretic, Analgesic, Indigestion , flatulence, Anxiety
<i>Punica granatum</i> (Punicaceae), Hanar	FP	Decoction	Inflammation of oral cavity, Inflammation of skin, Peptic ulcer, Antifungal
<i>Quercus persica</i> (Fagaceae), Baru	FR	Decoction	General tonic, Constipation , Colitis, Severe diarrhea , Gastritis, Hemorrhoid
<i>Rheum ribes</i> (Polygonaceae), Rewas	RO	Powdered in capsule	Hypertension, hypoglycemic
<i>Rubia tinctorium</i> (Rubiaceae), Fua	RO	Decoction	Diuretic, Tonic for the hair, Liver and urinary tract diseases
<i>Salvia officinalis</i> ( Lamiaceae), Gula Mariam	FL	Decoction	Regulate menstrual cycle, Hypoglycemic, Hypercholesterolemia, Flatulence, Antibacterial, Fever
<i>Thymus vulgaris</i> (Lamiaceae), Jatra	LE	Infusion	Gingivitis, Dyspepsia, Appetizer, Abdominal cramps, Antifungal, Anthelmintic, Expecto- rant, Tonic, Enhance immune system, Cys- titis and nephritis
<i>Trigonella foenum-graecum</i> (Leguminosae), Shmle	SD	Decoction, ointment	Inflammation of skin, Irritable bowel Appetizer, Hypoglycemic, Diuretic, Stimulate lactation, Sexual tonic in women, UTI , Renal stone
<i>Zingiber officinale</i> ( Zingiberaceae), Zanjafel	RH	Decoction, ointment	Hypercholesterolemia, Sexual tonic, Regulate blood circulation, Hemorrhoid Stomach and respiratory problems

**AP, aerial part; LE, leave; FL, flower; FR, fruit; SD, seed; RH, rhizome; RO, root; BU, bulb; BA, bark**

**Discussion**

The survey work has yielded 32 plants belonging to 23 families which are used by the traditional healers as medicinal plants in Erbil-Kurdistan region. The study revealed that the educational levels of the herbal practitioners were variable, most of their scientific backgrounds did not have relation to their jobs as traditional healers but got their information either through reading books about herbal medicine or they learned the work through their ancestors. It seems that many popular plants have been used long time for internal disorders like *Allium sativum*, *Anthemis nobilis*, and *Pimpinella anisum* for treating of common cold, *Cuminum cyminum* and *Thymus vulgaris* as a carminative remedy. However, many other uses seem to be reported for the first time. Some of plants indicated by the traditional healers were approved scientifically, for instance *Glycyrrhiza glabra* with anti allergic properties. It has been suggested that the anti allergic effects are mainly due to glycyrrhizin, 18  $\beta$ -glycyrrhetic acid, and liquiritigenin which can relieve IgE-induced allergic diseases such as dermatitis and asthma.<sup>8</sup> The anti-inflammatory and anti-arthritis has also been recorded previously.<sup>9</sup> In the same time, some indications were not in agreement with that in the literature such as using *Glycyrrhiza glabra* for treating of hypoglycemia. Literature review on *Nigella sativa* has showed that the plant is used for allergy conditions, asthma, strengthening the immune system, and it has antiviral and antibacterial action.<sup>10</sup> These indications were compatible with what the practitioner indicated. In the same time, *Trigonella foenum-graecum* seed is scientifically approved to be used to reduce blood glucose level and cholesterol level, it also stimulates lactation.<sup>11-12</sup> The traditional use of *Corcus sativus* for the treatment of arthritis is supported by research studies that recorded the antioxidant, antinociceptive and anti-inflammatory activities of aqueous and ethanolic extracts of *Corcus sativus* stigma and petal.<sup>13-14</sup>

**Conclusion**

There are medicinal plant remedies to treat a wide range of illnesses, as curatives or palliatives to many health problems. Many recorded species of plants are used in Erbil - Kurdistan region in traditional medicine but lack phyto-therapeutic evidence. It is necessary to perform more phytochemical and pharmacological studies to explore the potentiality of plants used for medicinal purposes.

**Conflicts of interest**

The author reports no conflicts of interest.

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