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## Plants and Alternative Medicine in Palestine

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#### ABSTRACT

Anthropologists, and mainly medical anthropologists, among other fields, are interested in studying what we eat, how we eat, and why we eat what we eat. This paper will first examine several plants, analyze their properties and uses in alternative medicinal practices in the twenty-first century, within different communities, and according to their way of life in Palestine.

Secondly is to identify the wild plants and their uses for food, as well as medicine etc.

The third purpose is to document the ethno-botanic data on herbal remedies, that are traditionally used.

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#### Introduction

Arabic medicine in the Middle East was influenced by many cultures and civilizations, as a result of commerce and trade as well as political, military, religious, and intellectual influences these influences originated from Greece, Rome and Persia. The Greco-Roman system of medicine developed based primarily on the writing of Hippocrates, Dioscorides, and Galen.

The sayings (hadith) of the Prophet Muhammad on health and illness were systemized and became known as Medicine of the Prophet. One of the greatest and most well-known Islamic doctors was Ibn Sina, who compiled the Canon of Medicine. Another leading Islamic philosopher/physician was al-Razi, who compiled the Comprehensive Book on Medicine. The works of Ibn Sina and Rhazes were later translated into Latin, and continued to influence medical practice until as late as the nineteenth century [1-3].

The early Islamic hospitals provided patients with systematic treatments based upon humoral medicine. These included exercises, baths, dietary regimens, and a comprehensive materia medica, in addition to bone-setting, cauterizing, venesection, and eye surgery, as well as additional medical practices. The Arab medical tradition, established in the seventh century, was molded in the tenth century, developed in the eleventh and twelfth centuries, and reached its peak in the thirteenth to sixteenth centuries, then later declined in the seventh to nineteenth centuries [4,5].

#### Methodology

The paper is based on unstructured interviews, and the observation of participants were carried out in the informant homes. Most of the informants were in the age range of 20 to 80. This survey involved 100 people, 10 of whom are traditional healers who were interviewed about food and medicinal plants during the last ten years, among different communities in Palestine.

#### **Medicine of the Prophet**

Medicine of the Prophet (tib nabawi) is a combination of religious and medical information, providing advice and guidance on the two aims of medicine - the preservation and restoration of health - in careful conformity with the teachings of Islam as enshrined in the Qur'an and the hadith. This includes information on the customs and sayings of the Prophet, as well as on herbal and medical practices. It is a concise summary of how the Prophet's guidance and teaching can be followed, as well as how health, sickness and cures were viewed by Muslims. The original Arabic text offers an authoritative compendium of Islamic medicine and still enjoys much popularity in the Muslim world. Medicine of the Prophet will appeal not only to those interested in alternative systems of health and medicine, but also to people wishing to acquaint themselves with, or increase their knowledge of, hadith and the religion and culture of Islam [6,7].

#### **Islamic Beliefs**

Muslims in different parts of the globe respond to treating maladies by different ways and means. They beseech Allah, and seek relief through traditional and modern/western medicine. Such a response takes place as reflected in two well-known and accepted sentiments among Muslims: the first one is the well-known phrase in the Quran" Say: "Nothing will happen to us except what Allah has decreed for us: He is our Protector": and on Allah let the Believers put their trust"

There is the Prophet Muhammad's proclamation that "No disease Allah created, but that He created treatment" [8,9].

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#### **Middle East Healers**

Arab healers in Palestine, as well as in the Middle East use a range of techniques and medications in their work. Illnesses are cured by means of remedies taken from vegetables, minerals, and animals. In traditional and folk medicine, the Arab patient appeal not only to the herbalist, but also to the dervish, the khatib- the amulet writer, the cauterizer; the mujabbir (for setting broken or fractured bones); midwives; holy tombs (of ancestors or prophets); the sea, rivers, and the holy springs. The healers use techniques that stimulate physiological processes, including bathing, sweat-bathing, massage, cupping, emetics, burning/cauterizing, incision, and bloodletting as well as psychological treatment, spiritual rituals, charms and [10-16].

#### **Herbalist Healers**

This traditional medicine is based on a practical knowledge of plants and treatments over centuries of practice. It should be noted that some plants are used similarly throughout the Middle East, while some plants have different uses in different countries in the region. One of the most famous medicines in use among the Arab in the Middle East, and mainly in Palestine, is the arba'yn, which consists of a mixture of forty different types of plants and is considered to be a cure for all aches and pains; usually it is bought from the 'attar – a local pharmacologist and vendor of medicinal spices. Various plant parts are used, including flowers, fruits, leaves, juices, roots, seeds, bulbs, tubers, and pulps [17]. Some of these plants are described below, with their properties and uses:

Hypericum Perforatum L: [Fam. Hypericaceae] Arabic Name: 'anas el-nafs, 'irn, hashishat el-qalb, English: St. John's Wort. Plant Parts: Aerial Parts, Flowers, Leaves and Roots.

**Chemical Constituents:** Hypericine, pseudo-hypericine, essential oil, tannin, resin, Vitamin C [18,19]. Hypericin, pseudohypericin, hyperforin, flavonoids, procyanidins, essential oil [20]. Adhyperforin, quercetin, hyperoside, campferol, myricetin, amentoflavone and choline [21-23].

**Properties and Ethno-Botanical Use:** In Palestine, used as Anthelmentic, Aphrodiasis, treat Anxiety, Muscle and joint inflammation [24].

In Jordan, it is a sedative, astringent, antispasmodic, treats intestine and bile disorders, a poisonous herb, stimulant, antiseptic, asthma, gout, rheumatism, wounds, burns and bruises, fatigue and weakness [25]. It improves blood system circulation, joint intrusion, frigidity, and impotency, digestive system disorder, wounds, burns and piles, ulcer, sunburn, mental disorder and insomnia [26].

In North Africa, the flowering summits are an astringent, cholagogue, diuretic and emmenagogue [27].

In Saudi Arabia, it is used in the treatment of jaundice, liver diseases, gall bladder stones, rheumatoid arthritis, and inflammatory conditions [28].

In Europe, the crude extract of Hypericum perforatum is now widely used as a drug for the treatment of depression [29]. The plant has proven photodynamic, antiviral, antiretroviral, and antitumor effects. The extracts of Hypericum also make using this plant in the treatment of Acquired Immune Deficiency Syndrome (AIDS) and cancer treatments [30]. It is an antidepressant, nervine tonic, treats depression, anxiety, emotional stress, neuralgia, sciatica, trigeminal neuralgia and insomnia [19]. It is a vulnerary, and

nervine; treats insomnia, nervous conditions, melancholy, colic, burns, wounds, sores and bruises [31].

In Canary Islands, it is also used for the treatment of several diseases, such as skin lesions, eczema, burns and microbial, inflammatory, and psychological disorders [32].

In Spain, the flowered aerial parts are used as herbal tea or for making liqueur [33]. Moreover, these parts are macerated or fried in olive oil, and used externally for injuries, burns and chaps [34].

In India, the whole plant is used as a detersive, diuretic, astringent, emmenagogue, anthelmintic and resolutive [35]. It is effective in treating depression and viral diseases, as well as improving cognitive functions, soothing and anti-anxiety. The active ingredient responsible for anti-depressant activity is hypericin, which is found in the leaves of the plant [36,37].

In China, it is an anodyne, antiseptic, astringent, nervine, sedative, and a vulnerary; used to treat insomnia, hysteria, nervous depression, neurasthenia, neuralgia, rabies, lungs and urinary passages [38].

Mandragora Autumnalis Bertol/ Mandragora Officinalis: [Family: Solanaceae]

Arabic: mjininih, yabruh, tuffah al-majanin English: Mandrake, Satan's apple Plant Parts: Ripe Fruit, and Roots.

**Chemical Constituents:** Roots contain alkaloids: scopolamine, hyoscine and atropine; Mandragorine and other alkaloids, atropine and scopolamine [39,40].

**Properties and Ethno-Botanical Use:** Natural products: atropine and scopolamine continue to hold an important role in medicine, especially in the Near East and the Arab World, as an aphrodisiac and analgesic, or the use for spasms of the gastrointestinal tract [40].

Arabs eat the ripe fruit twice a week to treat urinary infections, infertility, vaginal infections, evil eye; diseases of genital organs; increasing breast milk, and to gain weight.

In North Africa, the fumigated dry leaves possess chemical agents against diseases of genital organs by local application [27].

In Jordan, it is a narcotic, sedative, carminative, against cough, bronchitis, throat pain, and genital organ diseases; the roots are a strong emetic and purgative analgesic [25]. It is an ointment for external use [41,42].

In Palestine, eating ripe fruit is considered to increase male sexual passions and to increase fertility in women [43]. Among, the Arab-Bedouin of the Negev, Sinai and Palestine Fellahin, they eat the ripe fruit for enhancing potency, and to treat women infertility.

In ancient Egypt, the roots are used as an aphrodisiac, and love potions. The fruit have a symbolic erotic significance in pharaonic times [44].

In Lebanon, it is used as an adjuvant; it treats palsy and demon possession-schizophrenia [45].

The leaves, unripe seeds, and fruit of mandrake are poisonous. In cases of accidental ingestion, vomiting is induced, milk or olive oil

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is administered orally, and rest is recommended. The Bedouin of Southern Sinai give the patient sweet tea to drink, while those of the Negev make the patient gargle with tea made from Matricaria aurea (babunaj); induce vomiting with a tablespoon of salt in lukewarm water; or administer a laxative to induce diarrhea; in order to cleanse the stomach and bowels of the remnants of the poisoned food [46-48].

Origanum Majorana L: [Family: Labiatae (Lamiaceae)] Arabic: Mardagoush, Rayhan Dawoud English: Sweet Marjoram, knotted Marjoram Plant parts: Leaves and Flowers.

**Chemical Constituents:** ethanolic essential oil, linalool, and terpinen. Tannins thymol [17,49,50].

**Properties and Ethno-Botanical Uses:** used as an aphrodisiac, tonic, emmenagogue, hemorrhoid treatment, carminative, diuretic, and stimulant [27]. It is also used in the treatment of kidney stones, genitourinary tract infections, skin diseases, prostate, tumors and cancer as well as to strengthen the body and act as an appetizer [16]. Among the Arabs, marjoram with olive oil is a favorite condiment [16]. Marjoram has been found to have potential anticancer (breast, colon, lung, pancreas, prostate) effects [51].

A comparative study between Arabs and Jews in Israel and Palestine, reveals that the striking differences in cancer prevalence are the result of different dietary patterns, which may include nutritional factors (like marjoram and olive oil) that serve as cancer-inducing or cancer-protective mechanisms. Steam-distilled volatile oil from marjoram has been evaluated for its antibacterial and antifungal activities [52].

In Lebanon, pellets of crushed fresh leaves are packed into the rectum for hemorrhoids, and suppositories are sometimes made of dried powdered leaves with tragacanth or other gums and resins; treats migraine, epilepsy, insomnia, rheumatism, neck pain and intrusion, ascites [17,45, 53].

In Palestine, it is a menstruation regulator, treats migraine and nervous system and cancer digestive, anticoagulant, mouthwash; for the treatment of respiratory disorders, migraines; for the control of menstruation; and for the nervous system. It is an emmenagogue, diuretic, anti-decay, anti-poison, catarrh, treats insomnia, dysmenorrhea, anuria, an appetizer, treats liver, renal and gastric problems, and scorpion sting.

In Saudi Arabia, it is analgesic, treats headaches, asthma, cough, and rheumatism [54].

Portulaca oleracea: [Family: Portulaceae] Arabic: farfahina, rijleh, baqla English: Purslane Plant parts: Fresh Leaves and Stalks, Young Shoots.

**Chemical Constituents:** Mucilage, potassium oxalate, minerals Calcium, phosphorus and iron leaves contain beta-cystosterol, alpha-linolenic acid the plant is rich in calcium, iron, and potassium salts; contains oxalic acids, malic and citric acids; alkaloids, coumarins, flavonoids, cardiac and anthraquinone glycosides; and mucilage; alkaloids, beta-carotene, beta-sitosterol, caffeic acid, catechol, chlorophyll, coumarins, ferulic acid, flavonoids, saponins, and tannin [25,31,39,51]. Flavonols (kaempferol, quercetin), flavones (apigenin, luteolin).

**Properties and Ethno-Botanical Use:** Crush, soak in water and drink; eat as raw salad, or cooked to treat burns; diuretic, urinary tract infections and retention, cystitis. Crush the leaves and the stalks, to be soaked in water and drink two cups a day in the morning and evening, to treat urinary infections and retention. Eat some leaves as a raw salad; to treat urinary tract disease or stones. The plant is used as a vegetable. The whole plant is emollient, calmative, refreshing agent and vermifuge, used for maturing abscesses, for constipation, bleeding, spleen problems, digestive system inflammations, gum inflammations, fever, stomach ulcer, piles, warts, and skin diseases, for urinary inflammations and treating burns [17,18,25,42,55].

Treats inflamed breasts; hemorrhoids, and also an aphrodisiac. The plant is used as a vegetable, nutritive, raw salad, or cooked. In folk medicine, the cataplasm of fresh leaves is used for maturing abscesses; an aphrodisiac and diuretic [27].

In Jordan, leaves and young shoots used as raw, green salad, sautéed with oil.

In Palestine, the sap is squeezed from the pounded leaves and stems, to drink for treatment of urinary tract disease, and skin diseases, treats cancer, kidney stones and sun stroke, an antiseptic, and diuretic in urinary disorders, a febrifuge, and in the treatment of dysentery, carbuncles, snake bite and against sores [43]. Treats headache, urinary bladder pain, vermifuge, ulcer, hemostatic, suppresses bile, ophthalmic, fevers, hemorrhoids, and diarrhea. Treats gonorrhea, allergies, and uterus contractions; and has anticancer activities (breast, colon, stomach, liver and skin) [51]. The seeds are used to treat hepatocellular carcinoma, nipple and mouth ulcers. Also for liver disorders, gastrointestinal problems and inflammatory disorders [28].

Sisymbrium irio L: [Family: Cruciferae] Arabic: kibs, fijl el-jamal, , hwirah, harrah English: London Rocket Plant parts: Leaves and Flowers

**Chemical Constituents:** essential oils: Palmitic acid, n-Heptadecanol, Menthol, 2-Hexyl-1-decanol, Hexatriacontane, Pentacosane, Oxirane, dodecyl, 2-Hexyl-1-decanol, Nonadecano, Oxirane, tetradecyl; Volatile compounds in particular nitriles and isothiocyanates from the aerial parts [56]. Leaves contain biologically active molecules, especially flavonoids and phenols [54].

**Properties and Ethno-Botanical Use:** to treat continuous pains during menstruation, bleeding, infection of urinary tract, and internal bleeding. Eat the leaves and flowers twice a day for three weeks, to treat urinary tract infections and retention; sore throat, and cold.

In Palestine, the soaked leaves in water is drank, to treat continuous pains during menstruation, bleeding, infection of urinary tract, and internal bleeding [43].

In the Middle Eastern countries, as well as in Palestine, Sisymbrium irio is utilized as folkloric food and for treatment of rheumatism, cold symptoms, diabetes, and for the detoxification of the liver and spleen [54].

In the Negev and Sinai, the boiled seeds are used as an expectorant and as a febrifuge. The Bedouin in the Negev and Sinai eat the stems, flowers and leaves as a fresh food; and use the dried leaves as a tobacco substitute. **Citation:** Aref Abu Rabia (2023) Plants and Alternative Medicine in Palestine. Journal of Clinical Case Studies Reviews & Reports. SRC/JCCSR-240. DOI: doi.org/10.47363/JCCSR/2023(5)267

In Syria/Lebanon/North Arabia, the Bedouin Ruwalla also eat it.

In Egypt, the antimicrobial activity of Sisymbrium irio extract is used against Multi-Drug Resistant Bacteria and Candida albicans [55].

In Jordan, the plant is a rich source of flavoinoids and glucosinolates. It has a sharp flavor and can be used in salads. The plant is used in folk medicine as a febrifuge, a stimulating poultice, treating asthma and for infections of the throat and chest [56,57].

#### Results

Throughout the survey, information about food and medicinal plants used by different Arab communities was recorded and analyzed. This information included names of plants, parts used, which were obtained from 100 people, 10 of whom were healers. This survey is a unique research work, which collected information about food and medicinal plants, in Palestine.

The paper shows that peoples use various parts of the plants in a host of manners as both food and medicine. These plants parts are used fresh and soft, cooked or dried. Furthermore, these plants may be picked in the wild or bought in specialty shops as well as from herbalists ('attarin). The dosages for patients with the same diseases or disorders may vary, according to the ages and the structures of the patients' bodies.

#### Conclusion

Adult and senior persons have a wide range of herbs used for their diseases as well as for food and diet.

The rich variety of approaches employed by different healers to treat or prevent diseases is indicative of the depth and breadth of indigenous medicine practiced among the Arab of Palestine in the twentieth and twenty first centuries.

The wild Palestinian plants contain a host of other biologically active compounds besides nutrients. These topics are of relevance for future research in terms of improving our understanding of human nutritional and medical requirements of the people in the Middle East with emphasis in the rich flora in Palestine and the whole regions.

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