

Mania Treatment in Islamic Societies

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ABSTRACT

Cultural and medical anthropologists continue to highlight research on mental illness, but rarely integrate evolutionary, biological, and comparative perspectives.

Medieval physicians like al-Razi, considered to be one of the first practitioners of psychotherapy, is known for his many works on melancholia and madness. He believed that sadness emerged due to an attachment to perishable things, or having lost something that one had possessed, which affected the balance between body and soul.

Ibn-Sina linked the physiological and psychological illnesses together. The use of religious practices that included prayers and ritualistic prayers in affecting spiritual, psychological, physiological, and moral health, through listening to religious poetry and verses from the Qur'an, and supplication.

The use of medicinal plants was practiced in ancient and modern medicine, as well as in complementary and alternative medicine.

This paper will describe many methods, practices and techniques for treating madness in general, and **mania** specifically, using medicinal plants.

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Literature Review

Mania “is an emotional disorder characterized by euphoria or irritability, increased psychomotor activity, rapid speech, flight of ideas, decreased need for sleep, distractibility, grandiosity, and poor judgment; usually occurs in bipolar disorder” [1]. Cultural and medical anthropologists continue to highlight research on mental illness, but rarely integrate evolutionary, biological, and comparative perspectives. Manic symptoms-elevated mood, high energy, reduced need for sleep, and increased risk-taking are probably functional when “profitable” opportunities present themselves, but in bipolar disorder seem to onset regardless of such opportunities [2]. Bipolar disorder is characterized by rapid shifts between symptoms of mania and depression [3]. Bipolar disorder, is a mental health condition that causes extreme mood swings that include emotional highs - mania or hypomania - and lows (depression) [4].

Claims that patients manage their lives knowing that their chronic mental illness is part of who they are and will always be [1, 5]. States that “Under the title of different kinds of madness, we find mania [6]. Those who suffer from mania are in a state of excitation and attack anyone they come across, like beasts of prey. Both their anger and love are always excessive. They usually talk frantically and they have the looks of beast of prey. They are skinny”. Many modern scholars agree that phrenitis, mania and melancholy are the main three types of disease that cause madness [7, 8].

Mania was used as a general term for madness in many early medical texts, possibly because of its traditional use in other

genres [9]. Galen uses mania for both the manic disorder and for madness in general.

The development of the early Islamic hospital had coincided with the massive translation of early primarily Greek scientific works into Arabic. Insanity was a disturbance or dysfunction of the brain, which controlled mental activity and emotions. The physiological approach was further developed in the late antiquity and was directly inherited by Islamic physicians. Even passionate love “‘ishq” was considered by Islamic physicians as a mundane illness [10, 11].

Ibn-Sina always linked the physical and psychological illnesses together. He called melancholia (depression) a type of mood disorder in which the person may become suspicious and develop certain types of phobias. Also, he pointed to anger as a factor in the progression of melancholia to mania. He explained that humidity inside the head can contribute to mood disorders. This happens when the amount of breath changes. Happiness increases the breath, which leads to increased moisture inside the brain but if this moisture goes beyond its limits the brain will lose control over its rational thought leading to mental disorders. He also used psychological methods to treat his patients; he, also wrote about symptoms and treatment of love sickness, nightmare, epilepsy, and weak memory [12- 14].

In Islamic medicine, therapies included keeping the patient in an area with moist air scented with medicinal herbs, giving them oils and pleasant scents, bathing them in lukewarm water, massaging their limbs, cupping, using compresses, opium and cannabis, aromatherapy; and giving them a chamomile and poppy soporific

to induce sleep; shaving the head and poulticing the head with a mixture of mandrake and poppy seeds, along with different types of oil to induce sleep and suppress frenzy [15].

The Arabian-Islamic medicine was influenced by many cultures and civilizations, among them their neighbors and kindred; areas of contact included commerce and trade as well as political, military, religious, and intellectual fields (Judaism and Christianity) [16-18]. The history of any nation is equal to the sum of the history of a few of its distinguished individuals. At every stage in Arabic medical history, we find outstanding people whose greatest contributions and efforts cannot be underestimated [19]. Early Muslim scholars had a certain philosophy in their writing that encompassed all areas of human enquiry, including Islamic psychological sciences (Ilm-al nafsiat), that refers to the study of self or psyche (nafs) and is related to psychology, psychiatry and neurosciences [20].

Psychological therapy (*al-'ilaj al-nafsi*) in Islamic medicine is equal to psychotherapy, as it deals with treatment of the soul and somatic mind. The psychiatric physician/ spiritual physician (*al-tabib al-ruhani*) are practiced mental hospitals [21]. At the dawn of Islam, hospitals were built for old people and the mentally ill, and psychiatric hospitals and insane asylums in many Arab cities [22]. Caretakers would wash patients, dress them in clean clothes, help them pray, and have special chanters with pleasant voices read them verses from the Quran. Sometimes the *Mu'adhdhin* (the announcer who calls the faithful to prayer in the minaret of the mosque) would recite prayers and supplications (*ibtihalat*), verses from the Quran, before sunrise to relieve patients of their insomnia and pain [23].

The custom of reading verses from the Quran for healing was practiced by the Prophet as part of the healing process for sick people who appealed to him for help [24]. Supplication to God must evoke physical and spiritual purity; the Hadith has religious obligations regarding sanitation and nutrition. In addition to the daily provision of song and instrumental music in the hospital, it was also customary to invite groups of dancers, singers, and entertainers to perform for the patients [25]. The Ottomans attributed the importance of music therapy, used both as a preventive and therapeutic tool in the hospitals, to be a model for human balance both in Greek and Muslim medicines.

Professional musicians were employed in Ottoman hospitals especially for the treatment of the insane. According to Dols, not the quality of music but the therapeutic value mattered in the hospitals.

Water was used as a therapeutic tool as well, apart from being used for general hygiene. Water was thought to restore humoral equilibrium for patients suffering from dry symptoms. Pure air as well was used as a treatment method and the hospital of Sultan Ahmed was primarily dedicated to the treatment of the insane due to purity of its air. According to Shefer-Mossensohn, religious devotion was also believed to have a healing power [26]. Ottoman hospitals were situated together with central mosques in grand imperial complexes. Religion was present in and around the institution; hence religious practices were amongst the hospital therapeutics in a non-formal way. Amulets consisted of sacred sayings and verses of Quran were also widely used [27].

The healing atmosphere was further enhanced by the burning of incense (*bakhkhar*), the floors of the hospital were strewn with branches of pomegranate (*rumman*), the mastic tree (*mustaka*), balsam of Mecca (*balsam Makka*), henna (*hinna*), and pleasant-smelling spice trees [28, 29].

According to Foucault's theory, medical institutions (such as hospitals, clinics, and mental asylums) were more relevant to exclusion and confinement than for medicine and health purposes [30]. It is worth noting that chaining and confining of the mentally ill in these institutional spaces did occur, it was limited to the most severely unwell "until their reason is restored to them" [31]. There was mental health treatment in dervish lodges, existing sources reveal that there were some dervish lodges offering treatment to the demented; demented in the Prince Islands of Istanbul were confined in monasteries; several mosques contained rooms for the demented [32, 33].

Almost all studies that examine religion and social support find a significant correlation between the two. Religious people have large support networks, and the quality of that social network is higher and may be more durable than secular sources of support when chronic illness strikes. It is worth noting, it is the patient's religious or spiritual beliefs that are to be supported and encouraged, not the beliefs of the doctor or other health professional [34].

A conflation of Islamic religion and culture can occur when attempting to understand mental health paradigms [35]. The distinct Islamic approaches to mental health were historically developed, alongside developments in the fields of medicine and public health during the Islamic Golden Age (8th-15th centuries). As Islam spread, Muslims came into contact with other civilizations. Works from these cultures were translated into Arabic. Islamic medicine began to emerge drawing on the prevailing framework of the time - that of Galen and the humoral theory of medicine, that postulated that the body is comprised of four humours: black bile, yellow bile, blood, and phlegm. These humours correspond to the four elements of: earth, fire, air, and water; and the four qualities of: dry-cold, dry-hot, moist-warm, and wet-cold. To be in proper health, it was believed that the four humours ought to be in equilibrium, and, subsequently, poor health was due to an imbalance [36-38].

Treatments

According to traditional treatments show the importance of popular medicine and its compatibility with professional medicine [39]. In that regard popular and scientific medicines were indeed complimentary [40].

Historically, those who would now be labelled as "mentally ill" were often considered to be possessed by demons and spirits [41, 42]. This view indeed still underlines contemporary lay perceptions of mental ill-health amongst many Muslim communities. The Islamic perspective on mental health was a holistic one, in which positive mental health and good physical health were viewed as being interconnected. The 'preservation of intellect/mental capacity' is regarded as one of the five major objectives of Islamic legislation in general [43, 44].

Food and beverages were crucial therapeutic and preventive tools, hence used as first courses of action. Food and beverages were seen as illness preventive tools and a healthy regimen was considered as a protector of one's body and soul. The differentiation between gastronomy and pharmaceuticals was not so apparent [45]. Two of the popular medication forms mentioned in both scientific and non-scientific works were syrup (*şerbet*) and doughy paste (*ma'cun*). They were prepared in various ways and popular among the Ottomans. Syrup was a viscous juice mixture of fruits and plants. Doughy paste included more than forty different ingredients such as raisins, honey, almonds, aromatics, red and black pepper, ginger,

coriander, coconut, saffron, cinnamon, mustard, nigella, cardamom and so on. Both were used for nourishment and sometimes for medical purposes. Honey was assumed to be another popular preventive and curative; and rather the cheaper one. It was believed to have high nourishing value, and thus used for medical purposes.

Honey has religious importance since it was attributed to having healing quality by the Prophet [46, 47]. Narcotics such as opium, hashish, wine, coffee and tobacco were among the well-known curative drugs yet there were some religious and ethical debates and sometimes prohibitions on their usages. Despite the fact that opium was on the list of imperial kitchen purchase list and used for patients in Topkapı, it was not the prerogative of the upper stratum. It was as an easily found medicine and consumed rather by Ottomans from all strata as a cure to ache. The demand for it was high. Apart from curing aches, it was used for controlling and pacifying the insane [48].

Cupping (*hijama*) and cauterization (*kayy*, *'ilaj bi-nar*) were quite popular and practiced as well. Venesection has a religious legitimization since the Prophet approved it and also humoral reasoning [49, 50]. Bloodletting which supposedly had both curative and preventive function was thought to ensure the humoral equilibrium and cure illnesses caused by excess of blood or that of corruption. It was a regular treatment for aches and pains and operated through multiple methods even in Ottoman Turkish medicine.

Al-Razi (Rhazes 865-923) was the first known physician to describe psychotherapy [1]. Al-Razi's books (*El-Mansuri and al-Hawi*) formed landmarks for the description of mental illness in the 10th century and provided definitions, symptoms and treatments for problems related to mental health and mental illness. al-Razi, considered to be one of the first practitioners of psychotherapy, is known for his many works on melancholia and madness [51]. He believed that sadness emerged due to an attachment to perishable things, or having lost something that one had possessed, which affected the balance between body and soul. al-Razi has given a very brief description of mania (*manya*) defining it as "excited madness" (*al-Junun-al-hayej*).

The main difference between mania and phrenitis is that mania is mostly without fever. It is worth noting that the most important books are those from al-Hawi of which one entire book or volume is devoted to neuro. His treatise "On Spiritual Medicine" (*Kitab al-Tibb al-Ruhani*) discussed the importance of pure knowledge and the avoidance of "afflictions of the soul" (*'awarid al-nafs*), which lead to impaired mental states. Al-Razi believed that the symptoms of melancholia varied depending on where the excess black bile arose in the body.

Ibn-Sina (Avicenna 980–1037), was also a pioneer of neuropsychiatry as he first described numerous neuropsychiatric conditions, including insomnia, mania, hallucinations, nightmare, dementia, epilepsy, stroke, paralysis, vertigo, melancholia and tremors [2, 52, 53]. Ibn-Sina, dedicated three chapters of his book to neuropsychiatric disorders. He defined madness as a mental disorder of reason in which reality is replaced by fantasy and he located its origin in the middle part of the brain [54, 55]. Also, he pointed to anger as a factor in the progression of melancholia to mania. The Arabic physicians gave a detailed description of the pharmacology of important narcotics such as opium, hyoscyamus and hashish. In a *Treatise on the Qanun of Medicine* by Avicenna (Ibn-Sina), a number of anesthetics are suggested: lignum aloes, darnel-water, opium, hyoscyamus, nutmeg, crude aloes-wood,

mandragora bark. Ibn-Sina, also includes various descriptions of mental disorders, such as insomnia, amnesia, mania, hydrophobia, melancholia, etc.

In his *Qanun*, **Ibn-Sina** refined the psychogenic theories of melancholia with the humoral theory and said that each humour leads to different susceptibilities to various mental disturbances: for example, black bile leads to anxiety, obsession, and melancholia; yellow bile results in irritation, inflammation, and delusions of fire; red bile leads to mental confusion, fevers, and epidemics; and phlegm leads to depression, sleepiness, obsessiveness, and delusions of being animals [56].

Ibn Sina states that mania is bestial madness (*al-junun as-sabu'z*). The cause of mania is burnt black or yellow bile in the brain. Mania may be naturally healed by the body's expelling of the burnt bile in the form of hemorrhoids and varicose veins or by the occurrence of dropsy, a moist illness, that counteracts the dryness of bilious humours. **Ibn Sina** recommends various forms of evacuation for the quantitative or qualitative changes of the body that have caused mania. After evacuation, the body of the maniac, especially the head, should be cooled and moistened. Sedatives may be necessary to calm the madman or to put him to sleep. According to Ibn-Sina, the purpose of diets, baths, and medicines was generally to increase the moisture of the body in opposition to the presumed drying effect of the black bile.

Ishaq Ibn 'Imran furthered this view by stating that madness could emerge from melancholia if there was severe depression due to a loss or separation [57]. He differentiated melancholia into three types. All these forms of melancholia involve fear, sadness, delusions, and hallucinations. Ibn 'Imran remarks, and denotes in fact not the illness itself but the immediate cause of the illness, that is the black bile. It is therefore a somatic illness; it can be defined as "a certain feeling of sadness and isolation which forms in the soul because of something which the patients think is real but which is in fact unreal". The cause of the illness lies in the fact that a vapor rises from the black bile, and this presses forward to the seat of reason, dimming its light and confusing it, thus destroying the power of apprehension.

Al- Balkhi (850-934) was also the first to discuss the interconnectivity between physical and mental wellbeing by linking illness with the nafs to the development of physical ailments. He postulated this early approach to holistic health [58], and developed cognitive and talking therapy. He was also notable for distinguishing between neuroses and psychosis, classifying neuroses into four categories: fear and anxiety, anger and aggression, sadness and depression, and obsessions. al-Balkhi was also aware of the role of environmental influences on mental health, discussing the importance of public health factors, such as environment, pure water, clean air, housing, nutrition, and exercise [59-61].

Treatments by Medicinal Plants:

Apium graveolans L: [Family: Umbelliferae (Apiaceae)]

Arabic: karafs, krafs, karafs barry

English: Celery, Celery, Marsh parsley, Smallage, Wild celery

Plant parts: Flowers, leaves, roots and seeds, completely young.

Preparation: Boil in water and drink

Active Constituents: essential oil, apiin, asparagin, limonene, coumarin, Vitamins C, B complex; Calcium, Chloride compounds, Magnesium, Phosphorus, potassium, Sodium and Iron. The seeds contain 2-3% of essential oils of which the main components

are limonen and apiol, flavonoids like apigenin and phthalide glycosides and oxalates [62, 63]. Flavonoids, coumarins and furanocoumarins.

Ethno-Botanical Uses: It is an appetizer, used as a tonic, sedative; remedy to cool the uterus, and respiratory and nervous systems.

In Lebanon, used as a tonic, aphrodisiac, aperitif, treats postnatal depression. In Arabia, to treat liver and spleen disorders, jaundice [64]. It is considered a potential therapeutic candidate for diseases of the central nervous system, the route of administration used to deliver the drug to the brain is an important consideration [65].

Bacopa Monniera L. Hay and Mat.: [Family: Scrophulariaceae]:

Arabic: farfahaina barriya, wattwatt

English: Bacopa - Brahmi, Thyme leaved water hyssop, Thyme leaved gratiola

Plant parts: Aerial parts, the whole herb.

Active Constituents: Alkaloid, linarin, acids. Dammarane-type saponins, and flavonoids. Brahmine, bacosides-a, nicotine, herpestine, d-mannitol, and hersaponin.

Ethno-Botanical use: treats Alzheimer's disease, in Yemen, treats epilepsy, hysteria, madness, asthenia, and weariness [66]. In Jordan, it is used as a sedative, to treat hysteria, mania, and it is useful in epilepsy [67].

Citrulus Colocynthis Schrader: [Family: Cucurbitaceae]

Arabic: handhal, handal

English: Colocynth, bitter apple, Bitter gourd desert squash,

Plant Parts: fruit.

Active Constituents: Colocynthidin, alkaloids, resin, gum, minerals; glucoside, colocynthin; contain cucurbitacin B and E, glycoside, colocynthin, volatile oil, sterols, alkaloids.

Ethno-Botanical Uses: useful in biliary diseases, cathartic, anthelmintic, anti-diabetic, large doses are poisonous. Treats liver diseases, and muscle relaxation.

In Palestine, to pour water or olive oil or milk on the fruit and to drink or to smear the anus, used to treat piles; Anti-HIV, treat jaundice, cancer, diabetes, antitumor.

Treats depression and mania.

Curcuma Longa: [fam. Zingiberaceae]

Arabic: kurkum, uruq al-sabbaghin

English: curcuma, turmeric

Plant Parts: rhizome

Active Constituents: Curcuminoids (curcumin, bisdemethoxycurcumin, demethoxycurcumin), phenolic volatile oils, camphene, limonene, terpinene, caryophyllene, curcumene, linalool, borneol, isoborneol, eugenol, cineole, curdione, curzerenone, curlone, campesterol, stigmasterol, b-sitosterol, cholesterol and fatty acids [68-70]. Essential oil, curcuminoids (curcumin).

Ethno-Botanical Use: rhizome stimulant, treats cancer and tumors. Curcumin is the active component in turmeric, can prevent different cancers, decreases blood cholesterol, suppress myocardial infraction, suppresses the proliferation of various tumor cells, including prostate, breast, acute myelogenous leukemia, and induces apoptosis [71-75]. Rhizome, treat Alzheimers, psoriasis, inflammation, and cancer. Rhizome used to treat hepatocellular carcinoma. Treats prostate cancer. Treats jaundice, liver problems, gall bladder disorders, and arthritis. Facial massage, arthritis pain,

spice, antiviral and anticancer agent [76].

According to Ibn-Sina, turmeric in cosmetics application, clears complexion; treats nerves and saves joints against injury, toothaches; improves eyesight, and clears water covering the pupil of the eye and corneal opacity; treats jaundice, and mania.

Cynodon Dactylon (L) Pers. [Family: Gramineae]

Arabic: najil baladi, nijil, negeila

English: Bermuda grass, Dog's-tooth-grass, Scotch-grass.

Plant parts: root-stock, rhizomes and leaves. The whole herb, and rhizome

Preparation: boil in water and drink

Active Constituents: Cynodin, saponin, minerals; triterpenoids, glucose, fructose, sucrose and starch, alum, and saponins.

Ethno-Botanical Use: It is a diuretic, fluid retention, healing wounds, and urinary disorders. Emollient, for cough, renal and urinary troubles, to treat urinary continence, venereal diseases, piles.

In Egypt and North Africa, decoction of rhizomes for renal and urinary troubles, emmenagogue and diuretic. Treats gastritis, ulcer, urinary tract infection, hypertension, fever, and prostatitis. An extract of the whole *Cynodon dactylon*, helps cure madness and epilepsy [77, 78].

Ephedra alta Decaisne: [Family: Ephedraceae]:

Arabic: efeedra, 'alanda

English: Ephedra, joint pine

Plant parts: The whole herb

Chemical constituents: Ephedrine, pseudoephedrine (Karim and Qura'an 1986: 41).

Properties and Ethno-Botanical Use: Asthma, cardiac and nervous stimulant, and bronchodilator; depurative, sympathomimetic, astringent, for miscarriage; In Egypt and North Africa, the plant is a depurative, sympathomimetic, and astringent. Branches cooked in butter and eaten by women for miscarriage, asthma, influenza, chest allergy, and expectorant. The Campylopoda, for asthma, bronchodilator. In Palestine, boiled stems/stalks in water, and *tahbila*, used to treat venereal diseases. In Lebanon, they use the smoke to treat "nervousness". Ashes of this plant are mixed in pastes of wax of fats and applied to herpes. The Ephedra foemina fresh stems contain cyclopropylglycine and methanoproline amino acids, flavanols and tannins [79]. Treats asthma, bronchodilator, treat venereal diseases, herpes, and nervousness. It is an abortive, treats stomachache, eye inflammations, asthma, chest pain and coughing, as well as cancer. Laboratory testing did not find any toxic components (i.e., ephedra alkaloids) in the preparation. However, in vitro exposure to Ephedra foemina led to a reduced cytotoxic effect of chemotherapy on breast cancer cell cultures [80]. To treat Mania.

Ficus Carica L: [Family: Moraceae].

Arabic: tein, taynih, taynah

Plant Part: Fruits, bark, roots, leaves, twigs, young shoots, and latex.

Chemical Constituents: Vitamin A, sugar, pectin, resin, gum, latex; Vitamins B1, B2, and B complex; Calcium, magnesium, sulfur, phosphorus, potassium and iron; it is a source of carbohydrates; latex contains a proteolytic enzyme ficin; fruit contain glucose sugar, vitamins A, B, C, and D; leaves have protease, lipase and diastase enzymes, furocoumarin, ficusin; phenolics.

Properties and Ethno-Botanical Use: The fruit is a laxative and diuretic, digestive, nutritive food; useful in measles, constipation, increases blood circulation, tonic. Natural and synthetic compounds showed inhibitory effects on proliferation of various cancer cells [81]. In Palestine, it is used to treat cancer. It is a purgative, bad for the stomach, and the milk-juice closes wounds and treats swellings. The decoction of the fruits is used against cough and catarrh of the chest. *Ficus religiosa* extract of branches cures madness [82, 83].

Hypericum Perforatum (St. John's wort): [Fam. Hypericaceae]

Arabic name: dadhi, hashishat el-qalb

English name: St. John's wort.

Plant parts: aerial parts, flowers, leaves.

Active Constituents: Hypericine, pseudo-hypericine, essential oil, tannin, resin, Vitamin C. Adhyperforin, quercetin, hyperoside, campferol, myricetin, amentoflavone [84, 85]. Hypericin, pseudohypericin, hyperforin, flavonoids, procyanidins, and essential oil [86]; hyperoside, hyperforin, tannins, Flavonoid compounds, quercetin, and choline [87].

Ethno-Botanical Use: In North Africa, flowering summits astringent, chologogue, diuretic and emmenagogue. In Jordan, it is a sedative, astringent, treats intestine and bile disorders, fatigue and weakness.

Improves blood system circulation, joint intrusion, frigidity, and treats mental disorder and insomnia (Hammad and Rajai 1990: 190; Qubaysi 1998: 327). It is used for the treatment of several diseases, such as skin lesions, eczema, burns and microbial, inflammatory, and psychological disorders [88]. The crude extract of *Hypericum perforatum* is now widely used in Europe as a drug for the treatment of depression [89]. Proven photodynamic, antiviral, antiretroviral, and antitumor effects of *Hypericum* extracts also suggest using this plant in the case of Acquired Immune Deficiency Syndrome (AIDS) and cancer treatments [90]. Treats jaundice, and liver diseases. It is effective in the treatment of depression and viral diseases, as well as improves cognitive functions, is relaxing and anti-anxiety. The active ingredient responsible for the anti-depressant activity is called hypericin.

Peganum harmala L: [Family: Zygophyllaceae]

Arabic: harmal, harjal

English: Wild rue

Plant parts: Seeds, root, and leaves.

Active Constituents: Harmine, harmalin, fixed oil, alkaloid; alkaloids: harmine and harmidine, the mixture of the two known as harmaline. Seeds and roots contain Harman alkaloids, Harman, harmaline, harmalol, peganine and quinazoline alkaloids (vasicine and vasiinone).

Ethno-Botanical use: Poisonous, stimulant, aphrodisiac, lactagogue, antiperiodic fever, astringent, and febrifuge; Among the Bedouin, to prevent evil eye, evil demons and jinns to hurt the newborn or the mother. Some of them use it in betrothal and marriage rites, to prevent evil eye and to inspire joy and "fantasy" situation and sexual stimulus; to treat menstrual difficulties, melancholic, and aphrodisiac, nervous system disorder; in cases of mental problems/disorder - in addition to smoking the dried seeds, a decoction from the seeds in olive oil is spread/massaged on the body of the patient for relief and treatment of mental illnesses. In Arabia, used in traditional medicine. Treats Jaundice, digestive disorders, liver disease, and arthritis.

In Jordan, used as a sedative, anticonvulsive, relaxants, tranquilizer. In Jordan, seeds used for hypertension, nervousity/anxiety, and arthritis. In Palestine, the seeds contain harmaline, which is investigated in connection with mental illnesses and meningitis; harmaline is used to alleviate spasms in cases of Parkinson's disease; treats nervous system; leaves are analgesic, treats depression, and cancer. Seeds supposed to suppress mania, to help a pain that accompanies depression and gloom. In Lebanon, used to treat melancholia. In Yemen, seeds treat Parkinson's, cerebral palsy, paralysis and facial paralysis.

Punica Granatum [Family:Punicaceae]

Arabic: rumman, jullanar

English: Pomegranate

Plant Parts: flowers, fruit, bark, roots, and leaves, dried rind of the fruit.

Active Constituents: Punicine, granatonine, granatin, tannin; rind contains tannin and pigments. Stems and roots contain tannin, alkaloids pellettierine and isopelletierine. Fruits contain free sugars (fructose, glucose and raffinose), pectic substances, hemicellulose A&B and water-soluble polysaccharides. Tannins (ellagitannins), flavonols (quercetin), phenolic acids (gallic acid, chlorogenic acid).

Ethno-Botanical Use: Anti-dysentery, antispasmodic, astringent; hemostatic. Antioxidant activity, chemoprevention of cancer, treats diabetes and stroke [91, 92]. Treats anxiety and mental disorder. Leaves and rose flowers are cooked in water and concentrated to cure madness [93, 94]. Its flower: flavor is strongly astringent, and its faculty is desiccative and cooling. Pomegranate is mentioned three times in the Holy Quran.

Zizyphus spina-christi (L.) Willd.: [Family: Rhamnaceae]

Arabic: sedr, sidrih, sidr, down; dawm

English: Christ's thorn, Christ thorn jujube

Plant Parts: leaves, barks, fruit: nabaq

Active Constituents: Zizyphic acid, tannin, mucilage, sugar saponin; glucosides, octacosanol, octacosanyl behenate, betulic acid, ceanothic acid, tannins, leucocyanindin, free sugars: fructose, glucose, raffinose and sucrose; alkaloids, amphibine A, E and F, and mauritine C. Flavonoids [95], volatile oil, saponin, hormones, and zizyphic acid.

Ethno-Botanical Use: eat the fruits, soak leaves in water and drink. Fruit-laxative, pictorial, nutritive; Bark-to cure toothache; leaves-astringent. Treat female demon the woman bathes in dried leaves of Christ's thorn mixed with water [96]. The family may make a pilgrimage to locate Christ's thorn, and verses from the Quran are read at the site in order to expel jinns from the afflicted person [97].

Mentioned twice in the Quran, Muslim tradition relates Christ's thorn in connection with Mohammad's rise to Heaven [98].

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