



MENTAL HEALTH CARE DURING COVID-19 PANDEMIC INLIGHT OF UNANI MEDICINE

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ABSTRACT

In the present scenario, outbreak of Covid-9 disease has influenced the world population in all aspects including the mental condition giving rise to new challenges and aggravating pre-existing issues. In the global crisis of Covid-19, mental health issues are reported from all part of the world. The ongoing crisis together with the economic slump has had damaging effects on the mental health of individuals especially in developing countries. The mental health effects of Covid-19 are as important to address as are the physical health effects. Various measures have been adopted through guidelines and interventions at global level to overcome or reduce the mental health related problems with conventional as well as traditional medicine. In this context, an attempt has been made to review the role of Unani medicine. In Unani medicine, concept of mental health is very explanatory. Mental illnesses occur due to temperamental dyscrasia and imbalances of four humours in brain as well as treatment guidelines of mental illnesses are very well described. Unani scholars have advised the use of three methods of treatments in the management of mental disorders. Hence the drugs used on these principles for the management should perhaps work in mental illnesses. Scientific studies evaluating either pharmacological or therapeutic potential of Unani drugs for mental health are also presented. This review will provide effective framework for reducing the detrimental effect on mental health during pandemic of Covid-19, and information for future research on drugs and raises the speculation for developing possible intervention in curbing mental health problems.

KEYWORDS: Covid-19, Mental health, Unani medicine, Plant origin drug.

INTRODUCTION

In the present scenario, Covid-19 disease has created a great havoc globally by influencing the world population in all aspects including the mental health. The disease Covid -19, caused by Severe Acute Respiratory Syndrome Corona Virus-2 (SARS Cov-2) first reported on 31st December, 2019 from Wuhan city of China.^[1] and declared as a global pandemic on 11th March, 2020 by World Health Organization as it took a pandemic appearance affecting the whole world.^[2] India reported the first case of COVID-19 on 30th January, 2020.^[3] Since then, SARS-CoV-2 infection has spread across all states.^[2] Lockdowns have been claimed as a way to implement effective social distancing and subsequently flatten the curve, but its benefits have not been so much observed in India.^[4] With the beginning of second wave again in March 2021, India has the second-highest number of confirmed cases in the world up to 12 June 2021 with 29.3 million reported cases of Covid-19 infection, and the third-highest number of deaths (after the United States and Brazil) at 367,081 deaths.^[2] As per

WHO, SARS-CoV-2 virus has had a major impact on human being infecting a large number of people; causing severe disease and complications, resulting in high mortality; interrupting routine healthcare services; increase in mental health issues; which have a injurious effect on overall health of the individual.^[5] The major mental health issues associated with Covid-19 pandemic are stress, depression, anxiety, insomnia, fear, etc.^[6] Depression is characterized by lowered mood, difficulty in thinking, loss of interest and physical complaints such as headache, disturbed sleep, loss of energy and change in sex drive. Anxiety with depression predicts poor outcomes with a higher percentage of treatment resistance than either disorder occurring alone. Anxiety and depression in adults are most common, while pandemic-induced isolation, unemployment and financial crisis have contributed remarkably to lower cognitive wellness. More than 65% of people of age group 18-24 years suffer from depression in India.^[7] Due to quarantine or lockdown period there is increased suicidal ideation specifically among adolescents is an important

concern. Clinical observations have shown an increase in alcohol and drug use, as well as severe withdrawal symptoms. The fear due to disease can have an impetuous effect on mental status of people with existing mental health conditions. Excessive use of media during COVID-19 pandemic has also shown significant ill effect on mental health.^[8] Anxiety and mood disorders like psychiatric disorders may develop within 3 to 6 months after infection in survivors of Covid-19. Around 7% had a stroke within 6 months and about 2% were diagnosed with dementia.^[9] Poor mental health also has adverse effects on immunity and cardiovascular system of the body.^[10] The repercussion of the COVID-19 pandemic on mental health of the people needs to be handled hand in hand together. In this context, Unani system of medicine can play an important role as importance is equally given to mental health with effective management of mental illnesses in this oldest system of medicine. The Unani manuscripts, articles and journals were taken in to account available in the personal collection, Institute library, and from the internet. Scientific databases like PubMed, Springer and Google Scholar, etc were also searched for latest information and also search was done by herbs name and pharmacological action.

Concept of Mental Health in Unani medicine

Unani System of Medicine is the ancient traditional medicine. The name Unani reflects its origin from the Yunan, the ancient name of Greece.^[11] The principle fundamentals of Unani medicine are based on the teachings of Hippocrates (460–370BC) ‘the father of medicine’, whose humoral theory which presupposes the presence of *Akhlat-i Arba* (four bodily humours)- *Dam* (sanguine), *Balgham* (phlegm), *Safra* (yellow bile) and *Sawda* (black bile) with their corresponding temperamental qualities of hot-moist, cold-moist, hot-dry and cold-dry respectively. Later, this system has been further developed and codified through systemic experimentations carried out mostly by Arab and Persian physicians and scholars and many others.^[12] The contribution of Unani medicine in the dimension of mental health care is also notably strong. There has always been effort by Unani physicians to nurture a state of health that allows maximum life expectancy while maintaining high level of bodily functions including mental well being. Many documents containing information on promotion of mental health and management of mental diseases can be easily traced back in this system. Ancient Greek vocabularies of mental function and illnesses are very rich and vast as well.^[13]

In Unani system of medicine, physiological functions of the body are attributed by various *Quwa* (powers/faculties). Similarly, *Afaal-i Nafsaniya* (functions of nervous system) are performed by brain and nerves under some faculties which are called *Quwwa-i Nafsaniya* (psychic faculties) which are divided as *Quwwa-i Muharrika* (stimulant/motor faculties) and *Quwwa-i Mudrika* (perceptive or intellectual faculties).

Quwwa-i Mudrika is further sub-classified as- *Hiss Mushtarak* (faculty of composite sense), *Quwwat al-Khayal/ Quwwat-i Musawwira* (faculty of imagination), *Quwwat al-Wahima* (faculty of apprehension), *Quwwat-i Hafiza* (faculty of memory), *Quwwat-i Mutasarrifah* (faculty of modification), etc.^[14] Hippocrates mentioned that brain is a vital organ of the body where mental powers resides and through which we feel pleasure, joys, pain, sorrow and grief. All the physiological functions exhibited by *Quwa* (faculties) depend upon the continuous supply of *Ruh-i Nafsaniya* (psychic pneuma) to nervous system through blood circulation.^[15] Rabban Tabri devoted a chapter which discusses the moral principles such as early rising in the morning, praying, avoiding anger, avoiding negative thoughts, maintaining social status etc. Good mental health can be maintained by adopting these principles in daily routine of life.^[16] It is mentioned that the mental health of an individual is based on the way they express their emotions. Those who resist anger and control themselves against worries are able to preserve good mental health. This confirms that joy and contentment can bring a better healthy life to many who would otherwise be sick due to unnecessary fears, worries and anxiety.^{[15][17]} Unani scholars have indicated some necessary factors for the maintenance of health, any unnatural changes in these factors become the cause of a disease. These factors are mentioned as *Asbab Sitta Zaruriya* (six essentials factors). Mental health can be preserved by adopting balance in these six essential factors i.e. *Hawa* (Air), *Maakul-o-Mashrub* (Foods and Drinks), *Harakat-o-Sukun Badani* (Bodily movement and Repose), *Harakat-o-Sukun Nafsani* (Bodily movement and Repose), *Nawm-o-Yaqza* (Sleep and Wakefulness), and *Istafraqh wa Ihtibas* (Evacuation and Retention). They also emphasized on dietary changes, life style modification, and adopting psychiatric measures for mental well being.^{[17],[18]}

Mental disorders in Unani medicine

Buqrat (460–377 B.C.) to whom psychiatry owes a great deal wrote about the *Amraz-i Nafsaniya* (mental illnesses). He has mentioned the real causes of mental illnesses and discouraged the influence of demonology. Unani Scholars have mentioned and explained mental illnesses under the various headings such as *Malankhuliya* (depression), *Ham* (anxiety), *Sehar* (insomnia), *Nisyan* (dementia), *Zof-i Dimagh* (cerebral asthenia), *Gham/Huzn* (sadness), *Zof-i Asaab* (weakness of nerves), *Kaboos* (nightmare), *Raoonat* (mental retardation), etc.^{[19][20-22]} Beside this, the books written on drugs also provide information on utility of mainly plant origin drugs as well as compound drugs for mental health and mental well being.

In the etiology of mental disorders, severe mental conditions arise when centre of thoughts and centre of memories are involved together. If forebrain get effected then hallucination and illusion arises, and patient does not remember the use of things when midbrain is affected.^{[16][23]} Mental diseases are mainly caused by the

accumulation of *radi* (morbid) humours in the brain and *Su-i Mizaj* (temperamental dyscrasia).^[20] Whereas, the post-traumatic injury may lead to psychiatric illnesses and increase in the suicidal tendency.^[16] *Ghair Tabayi Sawda* (Abnormal black bile) is the main cause culprit of psychiatric disorders whether it is associated with the *Ehteraq* (combustion) of any four humours.^{[19][23]} According to Ibn Sina, temperament of *Sawda* (black bile) is *Barid Yabis* (cold and dry) which is contrary to the temperament of brain, thus dominance of black bile results in derangement of *Rooh-i Nafsani* (mental pneuma) leading to *Khauf* (fear/phobias).^[20] Similarly, *Su-i Mizaj Yabis* (morbid dry temperament) of brain causes insomnia and *Nisyan* (forgetfulness) is caused by predominance of *Burudat* (coldness).^{[20][21]} Mental illnesses also occur either due to involvement of brain directly or may be secondary to other organic diseases.^{[16][19]} Morbid vapors/humours are produced due to dysfunction of stomach, liver or spleen.^[19] Morbid vapors evaporated towards brain and causes disturbance in *Quwa-i Nafsaniya* (psychic faculties).^{[21][22]} According to Al-Balkhi (d. 322 H / 934 AD) who wrote an important book on psychology *Masail al-Abdan wa al-Anfus*, has pointed out two types of *Huzn* (sadness). One, is that which has causes like loss of loved ones or any mental trauma. The therapy for this type of *Huzn* is counseling, development of inner thoughts and motivation. The second type of *Huzn* is idiopathic. It is a sudden affliction of sorrow and sadness.^[24] Majusi, advised to cure such type of *huzn* as soon as possible because it causes adverse affect on the body and may lead to other health problems.^[15] Ibn Nafees has discussed the effects of *Amraz-i Nafsaniya* on heart and other organs of the body.^[14]

Management of mental disorders in Unani Medicine

The main aim of Unani physician during treatment of diseases is to bring back the organ on its normal temperament and the equilibrium in four humours by aiding bodily faculties viz. strengthening defense constitution called *Tabiy'at Mudabbir-i Badan* (medicatrix naturae) which become weak in diseased conditions and needs restoration to normal by four methods of treatment i.e. *Ilaj bi'l-Tadbeer* (regimental therapy), *Ilaj bi'l-Ghiza* (dietotherapy), *Ilaj bi'l-Dawa* (pharmacotherapy) and *Ilaj bi'l-Yad* (surgery).^[25] For management of mental diseases, mainly first three modes of treatment are adopted considering the following general principles of treatment.^{[20][21][22][26]}

- *Tadeel-i Mizaj* (to correct altered temperament of brain): If the causative factor is the temperamental dyscrasia it should be deviated towards moderation of that temperament. It is done through *Tarteeb* (to produce moistness), *Taskheen* (to produce heat), *Tabreed* (to produce coldness) or *Tajfif* (to produce dryness).^{[20][23]}
- *Taskeen* (to relieve aches), *Tanweem* (to induce sleep)^{[22][26]} and *Tadheen* (Application of oil).^{[20][27]}
- *Tanqiya-i Badan wa Dimagh* (Elimination of morbid matter from the body and brain):^{[19][23]}

- *Taqwiyat-i Aza* (To strengthen the weak organ) like *Taqwiyat-i Dimagh* (to strengthen brain): to avoid the accumulation of morbid humour in brain due to weakness.^{[20][26]}
- *Tafrih-i Taba* (to produce exhilaration): Use of exhilarant is highly recommended by Unani physicians because of the strong association of heart with brain.^[26]
- *Tasfih al-Dam* (to purify the blood):^{[26][27]}
- Removal of the causative factor:^[26]

Regimenal therapy

Fasd (venesection): It is recommended mainly in case of dominance of sanguineous matter. Bloodletting through *Wareed-i Saphan* (Saphanous vein) / *Wareed-i Qifal* (cephalic vein) or *Wareed-i Basaliq* (basilica vein) is advised followed by *Tabreed* (cooling).^{[21][22]}

Munzij and *Mushil* ((concoctive and purgative) therapy):^{[19][23]} In case of dominance of other humours morbid matter is eliminated with the use of *Munzijat* wa *Mushilaat* (concoctives and purgatives). Concoctive drugs are used before purgative drugs to modify the *madda* (matter) so that it can be excreted out easily. Purgative drugs are recommended to eliminate the morbid matter through purgation. Drugs for concoction and purgation are used according to the predominance of three humours (phlegm, bile and black bile).^[26]

Shamoomat (inhalation of aroma):^{[26][27]} This component plays an important role as it has calming and soothing effects on brain and nerves. Aromatic drugs like rose, jasmine, white lily reduce anxiety levels, relief mental stress and fatigue, and elevate mood. Majusi has devoted a chapter on benefits of aromatherapy in mental health.^[15]

Riyazat (Exercise): Regular exercise is must to keep the body and mind healthy, to maintain *Hararat-i Ghariziya* (innate heat), as it removes bodily toxins.^{[17][18]}

Dalak (Massage): The massage has major psychological benefits these are - It reduces the effects of stress, anxiety and depression, improves sleep patterns, induces sound and deep sleep, and promotes body-mind connection. Massage on scalp with aromatic oils *Roghan Banafsha*, *Roghan Nilofar*, *Roghan Kadu* is used to relax mind.^[27]

Hammam (bath therapy): Various types of hammam like hot bath, steam bath, cold bath, sitz bath, etc are mentioned. Hammam relaxes the body, produces moistness and removes waste material from the body.^[17]

Nafsiyati Tadabeer (psychological measures)

Things to be done:^{[19][26-28]}

- Living in airy and ventilated house and spreading fragrant around the habitat of the patients.
- Application of aromatic perfumes and oil.
- Listening good music.

- Meeting with friends and relatives. It can be done viz. video conferencing during pandemics.
- Keep oneself busy in interested activities like cooking, playing indoor games etc.
- Bring peace and happiness, and to relieve grief and fear by good conversation.^[16]

Things to be avoided^{[20][26][27]}

Loneliness, *kasrat-i Jima* (excessive sexual intercourse), *huzn wa Malal* (sadness and grief), *ghazab* (rage), *hasad* (jealousy), *al- fikr al-Radi* (negative thinking) and *Afkaar Mushawwisha* (apprehensions). Baring with sleeplessness and other factors that produce dryness in the brain.

Smoking and use of *Musakkirat* (intoxicants) like opium, cocaine, etc.^[28]

Dietotherapy

Unani physicians have mentioned following dietary recommendations and dietary restrictions for mental health care:

Dietary recommendations:^{[19][20][23]26]}

Lateef umdah aghziya i.e. Light diet that produces blood of good quality, *Martoob wa Umda Aghziya* (Moist and good humour producing diet) and *Aghziya Sari al-Hazm* (easily digestible diet) such as:

Vegetables: Cucurbita, chicory, purslane, lettuce, spinach, goosefoot, almond oil and mint.

Non vegetarian diet: mutton, chicken, egg yolk, half boiled egg, small fresh fishes, meat of small birds.

Fruits and dry fruits: pomegranate, apple, grapes, almond, walnut, dried ripe grapes, kernel of dried seed of coriander.

Drinks: Sirka (vinegar), *Aash-i Jaw* (barley water), *Ma al-Asal* (honey water) during winter and *Ma al-Jubn* (whey) in summer.

Dietary restrictions:^{[19][27]}

Aghziya Mubakhhira (flatulent producing diet)^[26] and diet that is hard to digest and that produces black bile should be avoided such as:

Meat: dried meat, salted meat, meat of wild animals, meat of cow and camel, and big fishes.

Vegetables: onion, garlic, radish, brinjal, cabbage, lentil, aged cheese.

Drinks: concentrated wine, alcohol, etc.

Sour diet and salty diet^[20] as sour diet fastens ageing process.^[21]

Pharmacotherapy

There is found a description of single and compound drugs in Unani classics for the up-lifting of mood, depression, anxiety, sleeplessness, fear and phobias, etc. These drugs are recommended on the basis of above general principles of treatment in various dosage forms. Some compound drugs beneficial and effective in mental health care are:^{[28][29][30][31]}

Araq-i Halaylajaat: It is beneficial for *Kaboos* (nightmares), *Suda* (headaches) and other mental diseases.

Dawa al-Misk: It is useful for hypotension and *Malankhuliya* (depressive disorders).

Habb-i Asgand: It is *Muharrrik* (stimulant) and useful for weakness of nerves and *Waja al-Mafasil* (joints pain).

Habb-i Shifa: *Muhafiz-i Qawa Nafsaniiya* (Protects psychic faculties), *Muqawwi-i Manaas* (immunity booster) and useful for opioid addiction.

Itrifal Kishneez: It is useful for *Nazla* (cold), *Suda* (headache), *Nisyan* (forgetfulness) and *Malankhuliya* (depression).

Itrifal Sagheer: It improves intelligence, prevents movement of vapors from stomach towards brain, anti-ageing, prevents brain diseases, and beneficial for *Zukam* (catarrh), *Malankhuliya* (depression), *Nisyan* (dementia) and *Zof-i Dimagh* (cerebral asthenia).

Jawarish Jalinoos: It is *Muqawwi* (general tonic) and useful for insanity, depression, headaches and various other ailments.

Khamira Gauzaban Anbari: It is useful for *Khafqan* (palpitation), *Malankhuliya* (depression) and *Zof-i Dimagh* (cerebral asthenia).

Majoon Falasfa: It is elixir for life, health tonic and useful for diseases of brain, liver and joints.

Majoon Najah: It is useful for *Malankhuliya* (depression).

Majoon Mufarreah: It is useful for *Khauf* (phobias), bad thoughts, other melancholic diseases of brain, and *Ikhatinaq al-Reham* (hysteria).

Qurs Musallas: It is applied on the forehead externally to cure *Suda* (headache), *Shaqiq* (migraine), *Sehar* (insomnia) and *Malankhuliya* (depression).

Roghan Laboob Saba and Roghan Kahu (local use): It is hypnotic and useful for *Suda* (headache), *Malankhuliya* (depression) and *Sehar* (insomnia).

Safoof Amla: It is useful for *Suda Khumari* (headache due to alcohol use), *Suda Bukhari* (gaseous headache), *Malankhuliya* (depression), *Khafqan Shirki* (secondary palpitation).

Single drugs with scientific studies

For mental health preservation and treatment of mental diseases, numbers of single drug are used in Unani medicine such as *Aftimoon* (*Cuscuta epithymum* Linn.), *Gauzaban* (*Borago officinalis*), *Halayla Kabuli wa Siyah* (*Terminalia chebula* Retz.), *Balayla* (*Terminalia bellirica*), *Ustukhuddus* (*Lavendula stoechas*), *Kishneez* (*Coriandrum sativum* Linn.), *Zafaran* (*Crocus sativus* Linn.).^{[29][32]} Single drugs for their benefits in mental health care with some scientific studies are mentioned below:

Amla (*Emblica officinalis*)

Part used: Samar (fruit)^[35,45]

It is *Musaffi-i Khoon* (Blood purifier), *Mukhrij-i Sawda* (melanagogue), *Muharrrik-i Dimagh wa Asaab* (stimulant), *Muqawwi-i Dimagh* (brain tonic), *Muqawwi-i Qalb* (cardiac tonic), exhilarant, *Muqawwi-i Meda*

(stomachic) Appetizer, and is effective for *Malankhuliya* (depression), *Nisyan* (forgetfulness/dementia), *Laqwa* (facial palsy).^{[29][32]} Aqueous extract of *E. officinalis* showed antidepressant like activity and antioxidant activity.^[33] A dose dependent enhancement in memory scores of young and aged rats was produced by Anwala churna due to its memory improvement, reversal of memory deficits and anticholinesterase activity.^[34]

Asqand (*Withania somnifera* Linn.)

Part used: *Bekh* (root)^[35,36]

It is categorized drug which are used to promote physical and mental health, to provide defense against disease and also stabilizes mood in patients with behavioral disturbances as it is *Muqawwi-i Aam* (general tonic), *Muqawwi-i Asaab* (nervine tonic) and *Munawwim* (hypnotic), and useful for *Zof-i Aam wa Asaab* (general weakness and weakness of nerves), *Nisyan* (forgetfulness).^{[35][36]} Bhattacharya et al. reported Anxiolytic and antidepressant actions of the bioactive glycowithanolides (WSG), isolated from WS roots.^[37] In another study, anti stress activity of sitoindosides VII and VIII, new acylsterylglucosides from *W. somnifera* has found.^[38] In another study, anxiolytic and antidepressant activity of the Ethanolic extract of the whole plant of *W. somnifera* has been reported.^[39]

Badranjboya (*M. parviflora*):

Part used: *Barg* (leaf) or *salim buti* (whole plant)^[36,45]

It is *Munzij-i Sawda* (concoctive of black bile), *Mufarreah* (exhilarant) *Muqawwi-i Dimagh* (brain tonic), *Musaffi-i dam* (blood purifier) and useful for *Ham* (anxiety) and *Khafqan* (palpitation).^{[32][35-36]} Methanolic extract of *M. parviflora* exhibited significant anxiolytic activity using elevated plus-maze apparatus and light and dark test model of anxiety in Wistar rats.^[40]

Banafsha (*Viola odorata* Linn.):

Part used: *Gul* (flower), *Barg* (leaf) and *Bekh* (root).^[32]

It is *Murattib* (moistness producing agent), *Munawwim* (induce sleep), *Mushil-i Balgham* (phlegmagogue) and is useful for *Zukam* (catarrh), *Khushnat-i Halaq* (sore throat) *Suda haar* (hot type of headache), *Zaat-al-Riyah* (pneumonia), and *Humma harra* (acute fevers).^{[29][32][35]}

Sedative effect of *Viola odorata* extract has been reported in rats as comparable to diazepam.^[41] In another study clinical efficacy of *V. odorata* was evaluated. Significant improvement in sleep and Insomnia Severity Index is seen in patient receiving *V. odorata* drop.^[42] An *in vivo* and *in vitro* study indicates vasodilator effect of *V.odorata* plant extract. It may be mediated through multiple pathways like inhibition of Ca⁺⁺ influx via membranes Ca⁺⁺ channels, its release from intracellular store which possibly explains fall in hypertension.^[43] Another study also explored the potential effect of *V. odorata* extract on reducing infarcts volume and neurological defects in stroke mode.^[44]

Brahmi (*Bacopa monnieri* Linn.):

Part used: *Booti* (whole plant)^[35,36]

It is *Muqawwi-i Dimagh* (brain tonic), increases intelligence and sharpens memory and improves cognition functions, *Musakkin* (analgesic) and useful for *Malankhuliya* (depression) and *Junoon* (insanity), *Zof-i Dimagh* (cerebral asthenia), *Suda* (headache), *Zof-i Asaab* (neural asthenia) and *Waja al- Asaab* (neuralgia).^{[36][45]} In a study memory enhancing effect of bacopa was evaluated in experimental animal model showing promising result.^[46] Brahmi acts as a cognitive functions enhancer. A clinical trial was conducted to assess the effects of 12 weeks administration of *Bacopa monnieri* (300mg/day) on memory performance in people over the age of 55 years. It showed significantly improved memory acquisition and retention. Significant cognitive enhancing functions of Bacopa extract has also been reported.^{[47][48]} Rai et al., has reported antioxidant and anti-stress activity.^[49] A clinical study was conducted to evaluate the effect of *Bacopa monnieri* (300mg) given orally twice a day for 6 months in newly diagnosed patients of Alzheimers disease. Result revealed statistically significant improvements in various components of Mini Mental State Examination Scale including orientation of time, place and person, attention and language components in term of reading, writing and comprehension. Patients involved in the trial also reported improvement in their quality of life, and decrease in irritability and insomnia.^[50]

Harsinghar (*Nyctanthes arbor-tristis*)

Part Used: *Gul* (Flower), *Barg* (leaf), *Chhal* (bark) and *Bekh* (root)^[36,51]

It possesses *Mufarreah* (exhilarant), *Muqawwi-i Hawas* (tonic for senses), *Muqawwi-i Qalb* (heart tonic), *Daf-i Bukhar* (antipyretic) (*Munaffis-i Balgham* (expectorant), *Daff-i Daad* (antifungal), anti-inflammatory, *Mukhrij-i Safra* (choleragogue) and *Kasir-i riyah* (antiflatulent) activities and useful for cough, bronchitis Bronchial asthma and fever.^{[36][51]} Leaf extract of *Nyctanthes arbor-tristis* exhibited antidepressant and anxiolytic activity.^{[52][53]} Das et al. reported that leaf, seed and bark of the plant are helpful in decreasing dopamine and increasing the serotonin level, depicting CNS depressant activity.^[54]

Jadwar (*Delphinium denudatum* Wall.)

Part used: *Bekh* (root)^[32,36]

It is *Tiryaaq* (antidote), strengthens heart, brain, nerves and liver, *Daf-i Humma* (antipyretic), *Mufarreah* (exhilarant), *Musakkin* (soothing agent) and useful for brain and neurological problems.^{[32][36][45]} A research study on role of *Jadwar* (*Delphinium denudatum* Wall.) on nicotine dependency in rat model was conducted with promising results. Effect of ethanolic and methanolic extracts of root of *Delphenium denudatum* in morphine dependence was studied animal model. Result revealed that oral administration of both extracts in both morphine dependent groups caused a significant reduction in scores of 'counted' and 'checked' signs of morphine abstinence compared to the morphine control group.^[55] In another study anti depressant activity of aqueous extract of

Jadwar in mice was evaluated using pentobarbitone sodium induced hypnosis (PSH), spontaneous motor activity (SMA), and open field behavior (OFB) tests. Results revealed that it induced a significant hypnosis and exhibited significant antidepressant activity.^[56]

Kahu (*Lactuca sativa*)

Part used: *Barg* (Leaf) and *Tukhm* (Seed)

It is *Musakkin-i Izterab* (anti-anxiety), *Munawwim* (sleep inducing agent) and useful for depression, headache, and insomnia.^{[36][51]} Intermediate fraction of *L. sativa* ethyl acetate exerts neuroprotection against glucose serum derivation induced cell injury in an in vitro model of brain ischemia and it can be used as common neurodegenerative disorders such as stroke.^[57] In another study, *Lactucin* a *sesquiterpene lactone* of the *Lactuca* species, was reported to have a sedative property tested in mice model.^[58] Another study reported that seed and leaf extracts derived from romaine lettuce (due to higher lactucin content) significantly potentiates the sleeping behavior in mice.^[59]

Sunbul al-Teeb (*Nardostachys jatamansi* DC.)

Part used: *Bekh* (root)^[32,36]

It is *Muqawwi-i Qalb*, *Dimagh wa Kabid* (tonic for heart, brain and liver) and *Mufarreh* (exhilarant). It is useful for cerebral asthenia, cardiac weakness, weakness of liver, palpitation and (depressive disorder).^{[32][36]} Ethanolic extract of the plant produced significant antidepressant like effect in Swiss young albino mice, comparable to Imipramine.^[60] In another study anti-stress effect of hydroalcoholic extract of *N. jatamansi* in reference to its antioxidant property has been reported in Wistar rats.^[61]

Ustukhuddus (*Lavandula stoechas* syn. *L. officinalis*)

Part used: *Gul* (flower), *Barg* (leaf)^[32,35,36]

It is *Muqawwi-i Dimagh wa Asaab* (brain and nerve tonic). It is mainly used for cerebral and neurological diseases such as Paralysis, facial palsy, epilepsy, cold and catarrh, dementia, neuralgia.^[32,35,45] Clinical trials have shown antidepressant effect of lavender oil as an aromatherapy and lavender has a positive effect on mood, significant effect on anxiety-related symptoms by significantly reducing restlessness and agitation.^[62] Rahmati et al. reported that hydroalcoholic extract of aerial part of *Lavandula officinalis* has antidepressant and anxiolytic effect due to the presence of phytochemicals like polyphenols, flavonoids, sterols, saponins and cardiac glycosides in aerial part^[63] as some studies showed that these phytochemicals possess anxiolytic effects in a wide range of animal models of anxiety.^[64] Lavender cream with foot-bath or alone can be used for reducing stress, anxiety and depression.^[65]

Waj Turki (*Acorus calamus*)

Part used: *Bekh* (root)^[36,51]

It is *Mulattif* (demulcent), *Mudir-i Boul* (diuretic) and is useful for headache, forgetfulness and facial palsy.^{[32][51]} A clinical study conducted showed reduction in the degree of severity of depression and better rehabilitation

based on the rating of symptoms on the Hamilton depression rating scale.^[66] In a study mechanism of tranquilizing action of α -asarone found in *Acorus calamus* was studied in anxiety. α -Asarone reduced spontaneous motor activity and caused a reduction in anxiety without dulling the perception in rats.^[67] Another study conducted to evaluate the effect of the ethanol extract of *Acorus calamus* on rat model showed antidepressant action by changing electrical activity and by altering brain monoamine levels in different brain region.^[68]

Ward/Gul Surkh (*Rosa damascena* Mill.)

Part used: *Gul* (flower)^[32,36]

It is *Muqawwi-i Dimagh* (brain tonic), *Mufarreh* (exhilarant), *Mushil-i Safra* (purgative of bile), hepatoprotective, useful for *Suda* (headache) and *Khafqan* (palpitation).^{[29][32][51]} antidepressant activity of ethanolic extract of *Rosa damascena* has been reported by Dolati et al.^[69]

DISCUSSION AND CONCLUSION

Unani medicine covers age-old wisdom on the understanding of mental health and mental disorder, hypotheses founded on rational ideas, and a legacy of mental health-promoting and protecting measures based on diligent observation and extensive experience; resulting in a holistic approach to mental health care which remains overwhelming. Furthermore, it has a great potential for the treatment of mental illnesses with comprehensive account on Regimenal therapy and Dietotherapy. In context of drugs, the Unani drugs utilized in psychiatric disorders are easily available, which promote acceptability and availability even in rural areas; cost effective and free of drug dependency; and drugs contain several active molecules, which are responsible for their pharmacological activities. Furthermore, drugs have multiple modes of actions, many have a cardio-protective, exhilarant, stomachic, hepatoprotective effect, anti-catarrh, anti-tussive, anti-inflammatory, anti-pyretic and anti-fungal benefits along with positive effects on brain and nerves which may help in prevention and treatment of Covid-19 symptoms. There is compelling evidence in support of the comprehensive action of Unani drugs which make them useful in mental health issues during pandemic of Covid-19. Further rigorous research studies are required to be conducted on scientific parameters to prove the effect of plants origin drugs for their claims and acceptability in this direction.

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