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Anxiety (Iztirāb / Khauf / Waswās) in Unani Medicine: A Review in the Light of Classical and Modern Perspectives

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Abstract:

Anxiety disorders are among the most prevalent mental health conditions worldwide and constitute a substantial burden on individuals, families, and healthcare systems. Contemporary psychiatry conceptualizes anxiety as a spectrum of disorders characterized by excessive fear, worry, and autonomic disturbances. In contrast, the *Unani* system of medicine does not recognize anxiety as an independent nosological entity; rather, it describes anxiety-related manifestations under the concepts of *Iztirāb-e-Nafsānī, Khauf, Waswās,* and, in severe and chronic forms, *Malankholia.* These conditions are attributed to derangement of temperament *(Sue-Mizāj)*, imbalance of humours (*Akhlāṭ*), particularly *Saudā*, and dysfunction of psychic faculties involving the brain (*Dimāgh*), heart (*Qalb*), vital spirit (*Rūḥ*), and psyche (*Nafs*). The present review critically analyses the concept, etiopathogenesis, clinical features, and principles of management of anxiety in *Unani* medicine and correlates these classical concepts with contemporary scientific understanding. A comprehensive review of classical *Unani* literature, including *Al-Qānūn fi'l-Tibb, Al-Hāwī,* and *Zakhīra-e-Khwarazm Shāhī,* along with contemporary scientific literature indexed in PubMed, Google Scholar, and AYUSH-related databases, was undertaken to identify experimental, clinical, and pharmacological studies related to anxiety and *Unani* therapeutics. The review indicates that *Unani* medicine offers a holistic and individualized approach to anxiety management based on *Tādīl-e-Mizāj* (correction of deranged temperament), *Tanqiya-e-Akhlāṭ* (evacuation of morbid humours), *Taqwiyat-e-Dimāgh wa Qalb* (strengthening of the brain and heart), *Taskeen-e-Nafs* (psychological reassurance), and lifestyle modification. Several medicinal plants and

formulations, including *Withania somnifera, Glycyrrhiza glabra, Melissa officinalis,* and *Borago officinalis,* have demonstrated anxiolytic, sedative, and adaptogenic activities in experimental studies, thereby supporting classical therapeutic claims. The *Unani* system of medicine provides a comprehensive, integrative, and preventive framework for the management of anxiety by addressing its physical, psychological, and spiritual dimensions. Further well-designed experimental and clinical studies are warranted to scientifically validate these traditional concepts and strengthen the role of *Unani* medicine in evidence-based integrative mental healthcare.

Keywords: Anxiety; *Iztirāb-e-Nafsānī*; Unani Medicine; *Malankholia*.

Introduction

Anxiety is a complex emotional and psychological state characterized by excessive fear, apprehension, and persistent worry, often accompanied by somatic symptoms such as palpitations, sweating, tremors, gastrointestinal discomfort, and cognitive disturbances including impaired concentration and intrusive thoughts **(1).** While a certain degree of anxiety is considered a normal and adaptive response that enables individuals to cope with stress and perceived threats, excessive, prolonged, or disproportionate anxiety leads to functional impairment and is regarded as pathological **(2).**

According to the World Health Organization (WHO), anxiety disorders represent one of the most prevalent mental health conditions globally and are a leading contributor to years lived with disability **(3).** Recent epidemiological data suggest that approximately 301 million people worldwide were living with an anxiety disorder in 2019, with a marked increase observed during and after the COVID-19 pandemic **(3).** Global prevalence rates range between 3–7%, with higher occurrence among females and individuals exposed to chronic psychosocial stressors (4,5**).** In India, the National Mental Health Survey has reported anxiety disorders as a significant component of the overall mental health burden, affecting millions of individuals across various age groups **(6).**

In contemporary medicine, anxiety disorders are classified into distinct diagnostic entities such as generalized anxiety disorder, panic disorder, social anxiety disorder, phobias, and related conditions as per the Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR) and the International Classification of Diseases (ICD-11) (7,8**).** Neurobiological research has established that these disorders are associated with dysregulation of key neurotransmitters including gamma-aminobutyric acid (GABA), serotonin, and norepinephrine, along with functional and structural alterations in brain regions such as the amygdala, hippocampus, and prefrontal cortex **(9,10).** Chronic activation of the hypothalamic–pituitary–adrenal (HPA) axis and sustained cortisol secretion further contribute to the persistence of anxiety symptoms **(11,12).**

In contrast, the *Unani* system of medicine does not conceptualize anxiety as a single nosological entity; instead, anxiety-related manifestations are described under broader and interrelated concepts such as *Fikr* (excessive thinking), *Khauf* (fear), *Waswās* (obsessive ideation), and *Malankholia* (melancholia) **(13,14,15).** Classical *Unani* physicians including *Buqrāt* (Hippocrates), *Jālīnūs (*Galen), Ibn Sīnā (Avicenna), *Zakariya Rāzī,* and *Ismail Jurjānī* extensively discussed psychological disturbances within the framework of humoral theory and temperament **(16,17,18).** *Ibn Sīnā* emphasized that mental health depends upon the harmonious functioning of *Dimāgh* (brain), *Qalb* (heart), *Rūḥ* (vital spirit), and *Nafs* (psyche), and that imbalance of humours—particularly the predominance of *Saudā*—leads to fear, sadness, pessimism, and abnormal thought processes **(16).** *Unani* literature further recognizes that individuals with *Mizāj-e-Saudāwī* (melancholic temperament) are more susceptible to anxiety and related disorders, especially under conditions of chronic stress, insomnia, excessive mental exertion, and social isolation **(19).** The concept of *Infialāt-e-Nafsāniyya* described by *Unani* scholars explains anxiety as a result of abnormal psychic reactions involving inward movement of *Rūḥ*, producing coldness and dryness in the brain and thereby disturbing emotional equilibrium **(20).**

Thus, the *Unani* understanding of anxiety is inherently holistic and integrative, encompassing physical, psychological, emotional, spiritual, and environmental dimensions of health. By addressing temperament, humoural balance, lifestyle, and mental well-being simultaneously, *Unani* medicine offers a comprehensive framework for understanding and managing anxiety. The present review aims to provide a detailed exposition of anxiety from the *Unani* perspective, supported by classical textual evidence, while correlating these concepts with current scientific knowledge and epidemiological data from modern medicine.

Terminology of Anxiety in *Unani* Literature *Iztirāb-e-Nafsānī*:

This term denotes mental agitation, excessive worry, and inner restlessness. Classical Unani scholars described it as a manifestation of disturbed psychic equilibrium resulting from deranged temperament of the brain (*Sue-Mizāj Dimāgh*) and abnormal psychic reactions (*Infialāt-e-Nafsāniyya*) **(16,20).**

***Khauf*:**

Khauf refers to fear arising due to sudden inward movement of *Rūḥ* (vital spirit) toward the heart, leading to palpitations, mental shock, and apprehension. I*bn Sīnā* and *Rāzī* explained that repeated or prolonged *Khauf* produces coldness and dryness in the brain, thereby predisposing an individual to chronic anxiety states **(16,17,18).**

Waswās:

Waswās is characterized by persistent intrusive, repetitive, or obsessive thoughts that disturb mental tranquility. *Unani* physicians attributed *Waswās* to accumulation of morbid humours particularly *Saudā* in the brain, resulting in excessive ideation, doubt, and irrational fears **(19,20).**

***Malankholia*:**

Malankholia represents a severe and chronic psychic disorder marked by sadness, fear, suspicion, pessimism, and social withdrawal. Classical texts consistently identify predominance of *Saudā* as the principal etiological factor. *Ibn Sīnā* described *Malankholia* as an advanced stage of untreated anxiety and fear disorders, emphasizing its progressive nature **(16,17,19).**

Collectively, these conditions are classified under *Amrāz-e-Nafsāniyya* (psychic disorders) in *Unani* medicine, reflecting the comprehensive understanding of mental health disturbances as disorders of temperament, humours, and psychic faculties **(18,20,21).**

***Asbāb wa Marz* (Etiopathogenesis)**

According to *Unani* medicine, disease occurs due to derangement in one or more of the three fundamental factors: *Mizāj* (temperament), *Tarkīb* (structural integrity), and *Ittisāl* (continuity of tissues) **(19,20).** Anxiety primarily arises due to functional disturbances rather than gross structural abnormalities and is therefore categorized under disorders of temperament and *Amrāz-e-Mizāj wa Akhlāṭ* (humours) **(16).**

Role of *Mizāj* (Temperament)

The *Dimāgh* (brain) is considered the seat of *Quwwat-e-Nafsāniyya* (psychic faculty) and plays a central role in emotional regulation. Any alteration in its normal temperament, particularly toward *Barid-Yābis* (cold and dry), predisposes an individual to anxiety, fear, excessive thinking, and obsessive ideation **(16,18).** Classical *Unani* texts describe that individuals possessing *Mizāj-e-Saudāwī* (melancholic temperament) are inherently more vulnerable to anxiety-related disorders, especially under conditions of prolonged stress, insomnia, or excessive mental exertion **(17,20).**

Role of *Akhlāṭ* (Humours)

Unani scholars placed strong emphasis on humoural imbalance, particularly *Ghalba-e-Saudā* (predominance of black bile), in the genesis of anxiety. Excess or morbid *Saudā* is believed to induce fear, suspicion, pessimism, irrational thoughts, and persistent negative ideation **(19).** Ibn Sīnā noted that accumulation of abnormal *Saudā* in the cerebral vessels leads to psychic disturbances that may initially manifest as anxiety and, if left untreated, gradually progress to *Malankholia* **(17,18).**

***Infialāt-e-Nafsāniyya* (Psychic Reactions)**

Infialāt-e-Nafsāniyya refers to abnormal psychic reactions involving the movement of *Rūḥ* (vital spirit) and blood mediated by *Quwwat-e-Haywāniyya*. In *Khauf* (fear), there is a sudden inward movement of *Rūḥ*, whereas in *Fikr* and *Gham* (worry and grief), the movement is gradual and sustained **(16).** Persistent inward movement

leads to coldness and dryness of the brain, impairing emotional stability and aggravating anxiety **(19).** This classical explanation closely resembles modern concepts of stress-induced autonomic and neuroendocrine dysregulation.

Environmental and Psychological Factors

Unani literature also acknowledges the role of external and psychological factors in precipitating anxiety. Chronic stress, prolonged grief, *Sahar* (insomnia), social isolation, excessive intellectual exertion, and unhealthy lifestyle practices aggravate *Sue-Mizāj* and humoural imbalance, particularly of *Saudā* **(20,22).** These factors are recognized as both causative and perpetuating elements, highlighting the preventive orientation of *Unani* medicine.

***Alāmāt* (Clinical Features)**

The clinical manifestations of anxiety described in *Unani* literature closely parallel those recognized in modern psychiatry, reflecting the timeless observation of mind–body interaction. Unani physicians classified symptoms into *Alāmāt-e-Nafsāniyya* (psychological) and *Alāmāt-e-Jismāniyya* (physical) domains **(16).**

Psychological and Cognitive Features

Persistent *Khauf* (fear), *Fikr* (excessive worry), mental restlessness, inability to attain emotional calmness, intrusive and *Waswās* (repetitive thoughts), pessimism, suspiciousness, anticipatory fear, indecisiveness, irritability, emotional lability, and exaggerated startle response are commonly described **(17,18,19,20).** In severe or chronic cases, these features may overlap with *Malankholia*, presenting as profound sadness, hopelessness, social withdrawal, and fear of impending harm (16**).**

Somatic and Autonomic Features

Khafaqān (Palpitations), chest heaviness, tremors, internal restlessness, dryness of mouth, excessive thirst, altered bowel habits, fatigue, headache, and generalized weakness are emphasized in *Unani* texts **(22,23).** These correspond closely with modern autonomic symptoms such as tachycardia, sweating, tremors, gastrointestinal discomfort, nausea, and muscle tension attributed to sympathetic nervous system overactivity **(10,11,12).**

Sleep and Appetite Disturbances

Sahar (Disturbed sleep), difficulty initiating or maintaining sleep, frequent awakenings, and non-restorative sleep are considered central to anxiety in *Unani* medicine **(20).** Modern literature similarly recognizes insomnia as a core symptom and a perpetuating factor in anxiety disorders **(24).** Appetite

disturbances including anorexia, dyspepsia, constipation, or altered food cravings are also frequently reported.

Behavioral, Social, and Panic-like Features

Avoidance behavior reduced social interaction, preference for solitude, decreased occupational or academic performance, and episodes resembling panic attacks characterized by sudden intense fear, breathlessness, chest tightness, dizziness, and fear of death are described under acute *Khauf* and *Khafaqān* **(16,17,18,25).** These features closely correspond to panic and anxiety syndromes recognized in contemporary psychiatry.

Overall, the striking similarity between clinical features described in *Unani* and modern literature underscores the depth and clinical relevance of classical observations. Early recognition of these features allows timely intervention and prevents progression to severe anxiety states.

Usūl-e-Ilāj (Principles of Management)

The management of *Iztirāb-e-Nafsānī* (anxiety) in *Unani* medicine is holistic, individualized, and etiological, aiming to restore disturbed psychic and humoural equilibrium rather than providing only symptomatic relief **(13,14).** Classical *Unani* scholars emphasized that anxiety arises due to *Sue-Mizāj* (derangement of temperament), accumulation of morbid humours particularly *Saudā* and *Infialāt-e-Nafsāniyya* (abnormal psychic reactions). Therefore, treatment must be directed toward correcting these underlying factors **(18,20).**

The fundamental principles include *Tādīl-e-Mizāj* (correction of altered temperament), especially of the *Dimāgh* (brain) and *Qalb* (heart), as these organs govern emotional and cognitive functions **(16).** *Tanqiya-e-Akhlāṭ* (evacuation of morbid humours), particularly excess *Saudā*, is essential to prevent chronicity and progression to *Malankholia* **(17,19).** *Taqwiyat-e-Qalb wa Dimāgh* (strengthening of the heart and brain) enhances emotional resilience and stress tolerance, while *Taskeen-e-Nafs* (calming of the psyche) reduces fear, restlessness, and intrusive thoughts **(20).** *Islāh-e-Nawm* (Restoration of sleep) is considered indispensable, as insomnia aggravates humoural imbalance and psychic instability **(22).**

Unani physicians consistently emphasized that long-term recovery from anxiety requires attention to physical health, mental state, lifestyle regulation, emotional environment, and spiritual well-being, ensuring sustainable relief and prevention of relapse **(14,26)**

Correlation with Modern Concept of Anxiety

Modern neuroscience explains anxiety as a disorder of emotional regulation involving hyperactivity of the amygdala, reduced inhibitory control of the prefrontal cortex, dysregulation of neurotransmitters such as GABA, serotonin, and norepinephrine, and chronic activation of the hypothalamic–pituitary–adrenal axis **(9,10,27).** These mechanisms closely parallel the *Unani* explanation of anxiety, where deranged brain temperament, abnormal psychic movements, and humoural imbalance are central to pathogenesis.

The *Unani* emphasis on *Taskeen-e-Nafs*, strengthening of *Dimāgh* and *Qalb*, correction of temperament, and evacuation of morbid humours aligns with modern therapeutic strategies aimed at restoring neurochemical balance and stress regulation **(28).** Several *Unani* drugs have demonstrated anxiolytic and adaptogenic effects in experimental and clinical studies. *Withania somnifera* has been shown to reduce cortisol levels and improve stress tolerance, while *Melissa officinalis* exhibits GABA-modulating, anxiolytic, and calming effects **(29,30,31,32).**

These findings substantiate the scientific plausibility and contemporary relevance of *Unani* therapeutics in anxiety management.

Study Type	Model / Assay	Experimental System	Parameters Evaluated	Anxiolytic Relevance/ Mechanism	**Key References**
In Vitro	GABA receptor radioligand binding assay	Rat brain synaptosomal membranes/ recombinant cells	Binding affinity (IC_{50})	Confirms interaction with benzodiazepine/ GABA site	**(33)**
In Vitro	Patch-clamp electro physiology	Neuronal cell lines	Ion channel currents	Direct evidence of GABA receptor modulation	**(34)**
In Vitro	Antioxidant assays (DPPH, FRAP)	Cell-free / neuronal models	Free-radical scavenging	Oxidative stress contributes to anxiety	**(35)**
In Vivo	Elevated Plus Maze (EPM)	Mice / Rats	Open-arm time & entries	Gold-standard anxiolytic screening model	**(36)**
In Vivo	Open Field Test (OFT)	Rodents	Center exploration, locomotion	Reduced thigmotaxis reflects anxiolysis	**(37)**
In Vivo	Light–Dark Box Test	Rodents	Time in light compartment	Validated anxiety-avoidance paradigm	**(38)**
In Vivo	Hole-Board Test	Rodents	Head-dip frequency	Exploratory behavior anxiolytic effect	**(39)**
In Vivo	Marble-Burying Test	Mice	Number of marbles buried	Measures anxiety-compulsive behavior	**(40)**
In Vivo	Social Interaction Test	Rats	Duration of social contact	Sensitive to benzodiazepines	**(41)**
In Vivo	Vogel Conflict Test	Rats	Punished drinking behavior	GABA-mediated anxiolysis	**(42)**
In Vivo	Novelty-Suppressed Feeding Test	Rodents	Latency to feed	Anxiety-related conflict behavior	**(43)**
In Vivo	Fear-Potentiated Startle	Rodents	Startle amplitude	Amygdala-dependent anxiety response	**(25)**

In vivo	Elevated Plus Maze, Light–Dark Box	Rats	Open-arm entries, open-arm time, time spent in light compartment	Significant increase in open-arm time and entries; anxiolytic effect comparable to diazepam at higher dose	**(44)**
In vivo	Elevated Plus Maze	Mice	Open-arm entries, grooming behavior, fecal bolus count	Increased open-arm entries and reduced emotionality parameters	**(45)**
In vivo	Elevated Plus Maze, Open Field Test	Mice	Open-arm time, rearing, ambulation, center activity	Significant anxiolytic activity comparable to diazepam	**(46)**
In vivo	Open Field Test, Novelty Suppressed Feeding	Rats	Locomotor activity, latency to feed, exploratory behavior	Reduced anxiety-like behavior; increased Exploratory activity	**(47)**
In vivo	Elevated Plus Maze, Social Interaction Test	Rats	Open-arm activity, duration of social interaction, stress indices	Significant anxiolytic and stress-reducing effects	**(29)**
In vivo	Elevated Plus Maze, Hole-Board Test	Rats	Head-dipping behavior, open-Arm entries, rearing	Enhanced head-dipping and open-arm activity	**(48)**
In vitro	Antioxidant assays (DPPH, ABTS), neuroprotection models		Free-radical scavenging, neuronal cell viability	Strong antioxidant and neuroprotective activity supporting anxiolytic mechanisms	**(45)**
In vitro	Antioxidant, anti-inflammatory assays		TNF-α,IL-6, oxidative stress markers	Reduced oxidative stress and neuro inflammation linked to anxiolysis	**(21)**

Discussion

The present review comprehensively elucidates the concept of anxiety as described in *Unani* medicine under the terminologies *Iztirāb-e-Nafsānī*, *Khauf*, and *Waswās*, highlighting its multifactorial nature and deep philosophical grounding. Unlike the reductionist biomedical model, which primarily focuses on neurochemical imbalances and discrete diagnostic categories, *Unani* medicine conceptualizes anxiety as a disorder arising from disturbed harmony between the body, mind, and environment. This

integrative understanding allows for a broader clinical perspective that addresses not only symptoms but also predisposing, precipitating, and perpetuating factors, consistent with the holistic ethos of *Unani* medicine.

Classical *Unani* scholars emphasized the pivotal role of *Sūʾ-e-Mizāj-e-Dimāgh* and *Ghalba-e-Saudā* in the genesis of anxiety. These descriptions remarkably correspond with modern neuroscientific evidence suggesting altered brain circuitry, limbic system hyperactivity, and dysregulation of the hypothalamic–pituitary–adrenal (HPA) axis in anxiety disorders. The *Unani* doctrine of *Infialāt-e-Nafsāniyya*, involving inward movement of *Rūḥ* during fear and worry, may be interpreted as an early conceptualization of stress-induced autonomic and neuroendocrine responses. Such correlations underscore the enduring relevance of *Unani* theoretical constructs when examined through the lens of contemporary neuroscience.

From a therapeutic standpoint, *Unani* medicine offers a rational and multidimensional treatment strategy. The principles of *Tādīl-e-Mizāj* and *Tanqiya-e-Akhlāṭ* focus on correcting the root pathology rather than providing transient symptomatic relief. Strengthening measures aimed at *Qalb* and *Dimāgh* enhance emotional stability and psychological resilience, which is particularly relevant in chronic and recurrent anxiety states. The use of *Mufarrihāt*, *Muqawwiyāt*, and *Musakkināt* reflects a balanced pharmacological approach that calms the psyche while simultaneously supporting vital and nervous functions, minimizing the risk of dependency often associated with conventional anxiolytics.

The growing body of modern scientific evidence supporting the anxiolytic, adaptogenic, and neuroprotective effects of *Unani* drugs such as *Asrol* (Rauvolfia serpentina) *Asgandh* (Withania somnifera), *Badranjboya* (Melissa officinalis), and *Gul-e-Gaozaban* (Borago officinalis) lends further credibility to classical therapeutic claims. These agents have demonstrated modulation of stress hormones, GABAergic and serotonergic neurotransmission, antioxidant defense, and neuroinflammatory pathways, aligning well with *Unani* concepts of restoring psychic equilibrium and humoural balance.

Dietotherapy and regimental therapy, which form the backbone of preventive medicine in Unani practice, play a crucial role in sustaining mental health. Regulation of diet, sleep, physical activity, and daily routine contributes to stabilization of temperament and prevention of relapse. Furthermore, *Ilāj-e-Nafsānī*, encompassing counselling, reassurance, social engagement, and spiritual practices, represents a comprehensive psychotherapeutic framework comparable to modern cognitive-behavioral, supportive, and mindfulness-based therapies. This reflects the *Unani* emphasis on emotional moderation, social connectedness, and spiritual well-being as essential determinants of mental health.

Despite its holistic strengths, the integration of *Unani* medicine into mainstream mental healthcare necessitates further scientific exploration. Well-designed randomized clinical trials, pharmacological standardization of formulations, and outcome-based research are essential to establish evidence-based guidelines. An integrative model combining Unani principles with modern psychiatric care may offer a more comprehensive, culturally sensitive, and patient-centered approach to anxiety management.

Conclusion

Anxiety, as understood in *Unani* medicine, is a manifestation of disturbed psychic and humoural equilibrium resulting from deranged temperament, predominance of morbid humours, and dysfunctional interaction between *Dimāgh*, *Qalb*, and *Nafs*. The *Unani* system provides a holistic, individualized, and sustainable approach to anxiety management through clearly defined principles encompassing *Ilāj bil Ghizā* (dietotherapy), *Ilāj bil Dawā* (pharmacotherapy), *Ilāj bil Tadbeer*r (egimental therapy), and *Ilāj-e-Nafsānī* (psychotherapy).

By addressing underlying etiological factors rather than merely suppressing symptoms, *Unani* medicine emphasizes long-term mental well-being, emotional resilience, and prevention of recurrence. The close conceptual parallels between Unani descriptions and modern neurobiological insights into anxiety disorders highlight the enduring scientific relevance of classical *Unani* knowledge.

References:

1. Sadock BJ, Sadock VA, Ruiz P. Kaplan & Sadock's Synopsis of Psychiatry. 11th ed. Philadelphia: Wolters Kluwer; 2015.
2. World Health Organization. Depression and other common mental disorders. Geneva: World Health Organization; 2017.
3. World Health Organization. World mental health report. Geneva: World Health Organization; 2022.
4. Baldwin DS, Stein DJ, Dolberg OT, Gex-Fabry M. How long should patients with anxiety disorders continue treatment? CNS Drugs. 2001;15(4):299-314. doi:10.2165/00023210-200115040-00004.
5. Kessler RC, Angermeyer M, Anthony JC, et al. Lifetime prevalence and age-of-onset distributions of mental disorders. World Psychiatry. 2007;6(3):168-176.
6. Gururaj G, Varghese M, Benegal V, et al. National Mental Health Survey of India, 2015-16. Bengaluru: NIMHANS; 2016.
7. American Psychiatric Association. DSM-5-TR: Diagnostic and statistical manual of mental disorders. Washington (DC): American Psychiatric Association; 2022.
8. World Health Organization. ICD-11: International classification of diseases. Geneva: World Health Organization; 2019.
9. LeDoux JE. Emotion circuits in the brain. Annu Rev Neurosci. 2000; 23:155-184. doi: 10.1146/annurev.neuro.23.1.155.
10. Ressler KJ, Nemeroff CB. Serotonergic systems in anxiety. Depress Anxiety. 2000;12(S1):2-19.
11. Chrousos GP. Stress and disorders of the stress system. Nat Rev Endocrinol. 2009;5(7):374-381. doi:10.1038/nrendo.2009.106.
12. McEwen BS. Stress, adaptation, and disease. Ann N Y Acad Sci. 1998;840:33-44. doi:10.1111/j.1749-6632.1998.tb09546.x.
13. Siddiqui U, Jamali AH, Amir M. Izterab-i-Nafsani. World J Pharm Res. 2020;9(8):1202-1217.
14. Ara I, Yaqoob S, Maqbool M. Managing anxiety disorders in Unani system of medicine. Int J Mod Pharm Res. 2020;4(1):143-148.
15. Nazir A, Mir UY, Wani UH. Anxiety disorders in conventional and Unani medicine. Int J Res Publ Rev. 2023;4(10):103-107.
16. Ibn Sina. Al-Qanun fi al-Tibb. Vol. 1. New Delhi: Jamia Hamdard; 1993.
17. Razi Z. Al-Hawi fi al-Tibb. Hyderabad: Osmania University Press; 1968.
18. Jurjani I. Zakhira-e-Khwarazm Shahi. Lucknow: Munshi Nawal Kishore; 1903.

19. Majusi AIA. Kamil al-Sana'ah al-Tibbiyyah. Beirut: Dar al-Kutub al-Ilmiyyah; 2005.

20. Kabiruddin M. Kulliyat-e-Qanun. New Delhi: Aijaz Publishing House; 2006.

21. Ahmad S, Ansari SH, Ahmad A. Managing anxiety disorders in Unani system of medicine: pharmacological and therapeutic perspectives. J Ayurveda Integr Med. 2019;10(4):256-263. doi:10.1016/j.jaim.2018.05.003.

22. Ajmal Khan H. Hazique. New Delhi: Idara Kitab-ul-Shifa; 1983.

23. Azam Khan M. Akseer-e-Azam. New Delhi: Idara Kitab-ul-Shifa; 2011.

24. Stein MB, Sareen J. Generalized anxiety disorder. N Engl J Med. 2015;373(21):2059-2068. doi:10.1056/NEJMcp1502514.

25. Davis M. The role of the amygdala in fear and anxiety. Annu Rev Neurosci. 1992;15:353-375. doi:10.1146/annurev.ne.15.030192.002033.

26. Sarris J, Moylan S, Camfield DA, et al. Complementary medicine for anxiety disorders. Nutrients. 2012;4(10):1479-1510. doi:10.3390/nu4101479.

27. Arnsten AFT. Stress signalling pathways that impair prefrontal cortex structure and function. Nat Rev Neurosci. 2009;10(6):410-422. doi:10.1038/nrn2648.

28. Baldwin DS, Anderson IM, Nutt DJ, et al. Evidence-based pharmacological treatment of anxiety disorders. Int J Neuropsychopharmacol. 2014;17(3):403-439. doi:10.1017/S146114571300098X.

29. Bhattacharya SK, Muruganandam AV. Adaptogenic activity of Withania somnifera. Indian J Exp Biol. 2003;41(6):646-652.

30. Chandrasekhar K, Kapoor J, Anishetty S. A prospective randomized double-blind placebo-controlled study of Ashwagandha in reducing stress and anxiety. Indian J Psychol Med. 2012;34(3):255-262. doi:10.4103/0253-7176.106022.

31. Kennedy DO, Little W, Scholey AB. Attenuation of laboratory-induced stress after acute administration of Melissa officinalis. Psychosom Med. 2004;66(4):607-613. doi:10.1097/01.psy.0000132873.72833.71.

32. Perry R, Terry R, Watson KA, Ernst E. Melissa officinalis for anxiety. J Ethnopharmacol. 2012;140(3):529-535. doi:10.1016/j.jep.2012.01.043.

33. Olsen RW, Sieghart W. GABAA receptor subtypes. Pharmacol Rev. 2008;60(3):243-260. doi:10.1124/pr.108.00505.

34. Möhler H. The GABA system in anxiety and depression. Neuropharmacology. 2012;62(1):42-53. doi:10.1016/j.neuropharm.2011.08.040.

35. Bouayed J, Rammal H, Soulimani R. Oxidative stress and anxiety. Oxid Med Cell Longev. 2009;2(2):63-67. doi:10.4161/oxim.2.2.7944.

36. Pellow S, Chopin P, File SE, Briley M. Validation of open:closed arm entries. J Neurosci Methods. 1985;14(3):149-167. doi:10.1016/0165-0270(85)90031-7.

37. Prut L, Belzung C. The open field as a paradigm. Eur J Pharmacol. 2003;463(1-3):3-33. doi:10.1016/S0014-2999(03)01272-X.

38. Bourin M, Hascoët M. The mouse light/dark box test. Eur J Pharmacol. 2003;463(1-3):55-65. doi:10.1016/S0014-2999(03)01274-3.

39. File SE. The use of social interaction as a method for detecting anxiolytic activity. J Neurosci Methods. 1980;2(3):219-238. doi:10.1016/0165-0270(80)90022-7.

40. Njung'e KU, Handley SL. Evaluation of marble-burying behavior. Pharmacol Biochem Behav. 1991;38(1):63-67. doi:10.1016/0091-3057(91)90519-S.

41. File SE, Wardill AG. The reliability of the hole-board apparatus. Psychopharmacologia. 1975;44(1):47-51. doi:10.1007/BF00421164.

42. Vogel JR, Beer B, Clody DE. Conflict procedure for anti-anxiety agents. Psychopharmacologia. 1971;21(1):1-7. doi:10.1007/BF00403989.

43. Dulawa SC, Hen R. Novelty-induced hypophagia test. Neurosci Biobehav Rev. 2005;29(4-5):771-783. doi:10.1016/j.neubiorev.2005.03.018.

44. Tabassum B, Dar PA, Ahmad A, Perwaz A. Inula racemosa. J Pharmacogn Phytochem. 2021;10(5):323-329.

45. Venuprasad MP, Kandikattu HK, Razack S, Khanum F. Ocimum gratissimum. S Afr J Bot. 2014;92:151-158. doi:10.1016/j.sajb.2014.02.010.

46. Chattopadhyay RR. Anxiolytic activity of Ocimum sanctum leaf extract. Anc Sci Life. 1994;14(1-2):108-111.

47. Qureshi MA, Husain GM, Urooj M, et al. Sufoof Jawahar Mohra. Adv Integr Med. 2021;8(2):114-121. doi:10.1016/j.aimed.2020.09.002.

48. Houghton PJ. The scientific basis for the reputed activity of Valerian. J Pharm Pharmacol. 1999;51(5):505-512. doi:10.1211/0022357991772772.