

STRESS: A COMPARATIVE ANALYSIS OF UNANI AND MODERN MEDICAL
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DOI: <https://doi.org/10.5281/zenodo.21294504>**How to cite this Article:** Rukhsar Aslam^{1*}, Mohd. Shahid², Mohd. Zubair³, Gulnaz Fatima⁴, Farha Luqman⁵. (2026). STRESS: A Comparative Analysis Of Unani And Modern Medical Perspectives. European Journal of Pharmaceutical and Medical Research, 13(7), 541-546.

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Article Received on 16/06/2026

Article Revised on 05/07/2026

Article Published on 10/07/2026

ABSTRACT

Stress is a pervasive and multifactorial condition that plays a pivotal role in the onset, progression, and outcome of numerous physical and psychological disorders. Both Unani medicine and modern biomedicine acknowledge the profound impact of stress on human health; however, they interpret its nature, mechanisms, and consequences through distinct theoretical paradigms. In Unani medicine, stress is viewed as a disturbance of mizaj (temperament) and imbalance of akhlat (humors), leading to impairment of quwa (vital, psychic, and natural faculties), particularly the quwwat-e-nafsaniya. Dysregulation of Asbab-e-Sitta Zaruriya, along with emotional and environmental factors, is considered central to the development of stress-related conditions. Conversely, modern medicine conceptualizes stress as a psychophysiological response to perceived stressors, mediated primarily through neuroendocrine pathways such as the hypothalamic-pituitary-adrenal axis and the autonomic nervous system, resulting in hormonal, metabolic, and immunological alterations. This review critically examines and compares the conceptual foundations, etiopathogenesis, and pathophysiological interpretations of stress in Unani and modern medical systems. By highlighting areas of convergence and divergence, the paper aims to provide a comprehensive and integrative understanding of stress, thereby supporting the development of holistic and evidence-informed strategies for stress prevention and management.

KEYWORDS: Stress, Mizaj, Quwa, Asbab-e-Sitta Zaruriya Autonomic Nervous system.**INTRODUCTION**

Stress is psychophysiological state that may arise when internal or external demands exceeds an individual's capacity to cope effectively. It is initiated by events that threaten, harm, or change an organism. According to World Health Organization, Stress may be described as a physiological and psychological state that arises when internal or external demands exceed an individual's ability to maintain homeostatic balance, thereby activating adaptive regulatory mechanisms.^[1]

In Unani Medicine -Stress is regarded as a condition that emerges when there is an imbalance (*Sue-Mizaj*) or a disruption in the harmony of *Tabiyat* (the innate healing power).^[2] This disturbance is often precipitated by *Asbab Ghair Zarooriya* (unnatural factors) such as excessive Fikr (worry), *Khauf* (fear), *Huzn* (grief), or Gham (sorrow). These emotional influences weaken the *Quwwa Nafsaniya* (psychic faculties), alter the *Mizaj* (temperament), and may eventually lead to both physical and psychological disorders.

Ibn Sina- describes how excessive mental engagement, grief, fear, and sudden joy can disturb the temperament, weaken the faculties, and impair the heart and brain, leading to both physical and mental illnesses.^[3]

Zakariya Razi- Mentions that prolonged sorrow or anger causes alteration in the temperament of the heart and brain, disrupting the humoral balance.^[4]

METHODOLOGY

A comprehensive literature search was performed using electronic databases including PubMed, Scopus, Google Scholar, and ResearchGate. Relevant articles published in English and Urdu were retrieved using keywords such as “stress,” “Autonomic nervous system,” “mental health,” “Unani medicine,” “Unani concept of stress,” “Quwwat-e- Nafsaniya,” “Asbab-e-Sitta Zarooriya,” “Ilaj-bit-Tadbeer,” and “Ilaj-bil-Dawa.”

Classical Unani literature was also extensively reviewed from the library of State Takmeel-ut-Tibb College and hospital Lucknow, including authoritative texts such as *Al-Qanoon fi al-Tibb* by Ibn Sina, *Al-Hawi* by Al-Razi, *Kamil-us-Sana'ah*, *Zakhira Khwarzam Shahi*, *Bayaz-e-kabeer*, *Khazainul Advia* and other standard books of Unani Medicine. Relevant information related to the etiology, pathogenesis, prevention, and management of stress was extracted.

Studies, review articles, books, and reports focusing on stress and its relationship with mental and physical health, as well as Unani concepts corresponding to stress and emotional disturbances, were included. Articles

lacking relevance to the objectives of the review, duplicate records, and studies with insufficient information were excluded.

The collected data were critically analyzed and organized into thematic categories, including the modern concept of stress, historical background, physiological mechanisms, Unani understanding of psychological disturbances, role of temperament (Mizaj), influence of Asbab-e-Sitta Zarooriya, and therapeutic approaches in Unani medicine. The findings were then synthesized to provide a comprehensive overview of stress and its management within the framework of Unani medicine.

CONCEPTUALIZATION AND MECHANISMS OF STRESS IN MODERN MEDICINE

Stress activates two principal neuro-endocrine system that coordinate the body's adaptive response.

1. **Sympathetic-Adreno-Medullary (SAM) axis** → It is the neural pathway that facilitates the "fight-or-flight" response. It acts faster than the HPA (Hypothalamic-Pituitary-Adrenal) axis because it relies on direct nerve impulses rather than hormonal cascades.
2. **Hypothalamic-Pituitary-Adrenal (HPA) axis** → the HPA axis (Hypothalamic-Pituitary-Adrenal axis) is the primary system for managing chronic stress, acting through a slow, multi-step hormonal cascade. The process involves the hypothalamus releasing CRH to stimulate the anterior pituitary, which in turn releases ACTH to trigger cortisol secretion from the adrenal cortex.^[7]

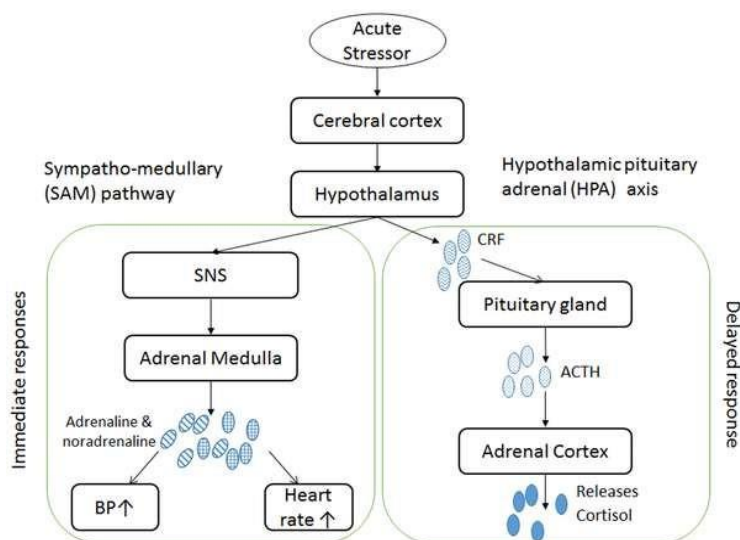


Fig. 1.

INFLUENCE OF MIZAJ (TEMPERAMENT) ON STRESS

In Unani medicine, *Mizaj* (temperament) is regarded as the fundamental determinant of an individual's physical, psychological, and emotional constitution. Stress is not viewed merely as a psychological

phenomenon but as a disturbance in the equilibrium of *Mizaj*, particularly affecting the *Quwa-e-Nafsaniyah* (psychic faculty).

1. CONCEPTUAL BASIS

According to Unani philosophy, health (*Sehat*)

depends upon the balance of *Akhlaṭ* (humours) and the preservation of an individual's innate *Mizaj*. Exposure to stressors (*Asbab-e-Sitta Zaruriya*, especially emotional and mental factors) disrupts this equilibrium, leading to *Su'-e-Mizaj* (deranged temperament), which manifests clinically as stress and stress-related disorders.

2. MIZAJ-SPECIFIC RESPONSE TO STRESS

Damwi Mizaj (Sanguine – Hot & Moist):

Individuals with *damwi* temperament *Mizāj* are generally optimistic sociable and emotionally stable. However, excessive stress may result in restlessness, irritability, over-excitability, and sleep disturbances, often attributed to increased heat and moisture within humoral framework.^[10]

Safrawi Mizaj (Choleric – Hot & Dry)

Individuals with *safrawi* temperament are highly susceptible to acute stress reactions. Stress commonly presents as anger, anxiety, irritability, headaches, palpitations, and impulsive behavior, reflecting an excess of heat and dryness affecting the brain (*Dimagh*).^[11]

Balghami Mizaj (Phlegmatic – Cold & Moist)

In Individuals with *balgami* temperament, stress tends to present leads to lethargy, diminish of motivation, sadness, excessive sleep, and impaired concentration. These manifestations are attributed to the predominance of coldness.^[12,13]

Saudawi Mizaj (Melancholic – Cold & Dry)

The *saudawi* temperament is considered particularly vulnerable to chronic stress. Individuals may develop, persistent fear, obsessive thoughts, and insomnia, as dryness and coldness profoundly disturb emotional stability and mental equilibrium.^[14]

ASBABE SITTA ZAROORIYA AS ETIOLOGICAL FACTORS AND THERAPEUTIC MODALITY IN STRESS

In the *Unani system of medicine*, the six essential determinants of health (*Asbab-e-Sitta Zarooriya*) play a crucial role in stress management. Among those *Harkat wa Sukoon e Nafsania* (psychic movement and repose) directly addresses mental and emotional states. However, all six factors—air, food and drink, movement and rest, psychic influences, sleep and wakefulness, and retention and elimination— function synergistically to maintain a balance that reduces stress and prevents lifestyle diseases by influencing overall physical and mental well-being.

Hawa (Air)

Air plays a crucial role in sustaining the *ruh* (vital spirit) and maintaining optimal cerebral function. Exposure to polluted, stagnant, or extreme environmental conditions adversely affects mental tranquility. Impaired air quality disturbs *ruh*, leading to

irritability, cognitive fatigue, and heightened stress susceptibility.

Makul wa Mashrub (Food and Drink)

Dietary intake determines the quality and balance of humors. Excessive or temperament-incompatible foods leads to *fasad-e-akhlat*, which negatively affects cerebral nourishment. Faulty dietary habits lead to humoral imbalance, leading to emotional instability and heightened stress.

Harakat wa Sukun-e-Badani (Physical Activity and Rest)

Balanced physical activity supports circulation and prevents accumulation of morbid matter, whereas inactivity or excessive weakens the nervous system. Disturbed pattern of physical activity reduces stress tolerance and contributes to mental exhaustion.

Harakat wa Sukun-e-Nafsānī (Mental and Emotional Activity and Rest)

Emotional states such as grief, fear, anger, and excessive worry directly influence mental health and play a central in the pathogenesis of stress. Emotional imbalance disrupts both cardiac and cerebral functions, thereby precipitating stress.

Nawm wa Yaqzah (Sleep and Wakefulness)

Sleep is essential for restoration of mental faculties. Irregular or insufficient sleep increases dryness and heat in the brain. Disturbed sleep patterns impair emotional regulation and intensify stress responses.

Ihtibas wa Istifragh (Retention and Evacuation)

Proper retention of essential substances and timely elimination of waste products are crucial for maintaining internal balance. Suppression of natural urges or excessive evacuation disturbs humoral harmony. Faulty retention and evacuation may lead to accumulation of morbid matter, contributing to mental discomfort and stress.

From an *Unani* perspective, stress is a multifactorial outcome resulting from disturbance in *Asbab-e-Sitta Zaruriya*. Proper regulation of these essential determinants preserves *mizaj*, stabilizes *nafsani* functions, and enhances the individual's resilience adaptability to stressors.^[15]

APPROACHES TO STRESS MANAGEMENT

Effective management of stress involves pharmacological, psychotherapeutic and Life-Style based interventions aimed at reducing symptoms and improving coping.

A. PHARMACOLOGICAL APPROACHES

1- **Anxiolytics & Sedatives:** Benzodiazepines such as diazepam, lorazepam) are commonly used for short-term relief.

Antidepressants: Selective Serotonin Reuptake inhibitors (SSRIs) (fluoxetine, sertraline).

Serotonin And Norepinephrine Reuptake Inhibitor (SNRIs): (venlafaxine) for chronic stress-related disorders such as depression and generalized anxiety disorder.

- 2- **Beta-blockers:** Propranolol for physical manifestation of stress including palpitations, tremors.^[16]

1- **Cognitive Behavioural Therapy (CBT):** CBT is a structured psychotherapeutic interaction that helps individuals' identity and modify negative thought patterns thereby improving coping strategies and emotional regulation.

2- **Mindfulness-Based Stress Reduction (MBSR):** MBSR, incorporates meditation, breathing exercise and relaxation technique to enhance awareness, reduce psychological distress and improve overall well-being.

B. PSYCHOTHERAPEUTIC APPROACHES

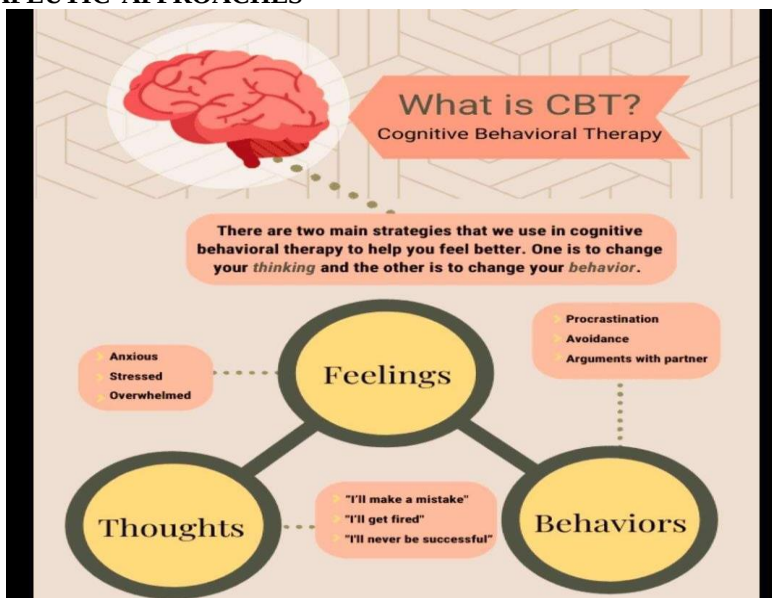


Fig. 2.

C. LIFESTYLE & BEHAVIORAL INTERVENTIONS

Exercise: Regular aerobic and resistance training reduces cortisol and improves mood.

- 1- **Diet:** Balanced nutrition enhances stress resilience diet rich in omega-3 fatty acids, antioxidants support neurological health and help moderate stress responses.
- 2- **Sleep Hygiene:** Adequate and regular is essential for maintaining proper regulation of the hypothalamic-Pituitary Adrenal Axis and cortisol levels.
- 3- **Time Management & Relaxation Techniques:** Practises such as Yoga, breathing exercises, helps in reducing stress and progressive muscle relaxation^[17].

D. SOCIAL & OCCUPATIONAL INTERVENTIONS

Supportive counseling & group therapy help enhance psychological resilience and coping capacity. Workplace stress management programs have been shown to improve mental well-being and increase productivity.^[18]

UNANI INTERVENTIONS FOR STRESS MANAGEMENT

1. ILAJ BIL-GHIZA (DIETOTHERAPY)

Diet plays a crucial role in stress management within the Unani System of Medicine.

Foods promoting calmness (Maintenance of Mizaj):

Milk, barley water, almond, apple, pomegranate, cucumber, watermelon.^[19]

Brain tonics (Muqawwi Dimagh): Almond, walnuts, raisins, khurma (dates), pistachios.^[20]

Avoid: Excessive spices, heavy/oily food, stimulants like strong tea or coffee which may aggravate humoral imbalance and intensify stress.

2. ILAJ BIL-DAWA (PHARMACOTHERAPY)

Several medicinal herbs and classical Unani formulations are recommended to strengthen the nervous system, heart, and brain thereby helping to alleviate stress and anxiety.

Mufrad Drugs ^[21,22]	Phytochemicals	Functions
1. Asgandh (<i>Withania somnifera</i>)	Withanolides	Adaptogen, Reduces cortisol levels.
2. Banafsha (<i>Viola odorata</i>)	Flavonoids, saponins, Glucosides, Emetine, Violin	Soothing, mild antidepressant and anxiolytic effects.
3. Ustukhuddus (<i>Lavandula stoechas</i>)	Terpenes/Terpenoids	Neuroprotective effects, improves cognitive and nervous system.
4. Badranjboya (<i>Melissa officinalis</i>)	Hydroxycinnamic acid	Anti-anxiety effect and calming effect.
5. Tagar (<i>Valeriana</i>)	Valeric acid	Reduces insomnia, restlessness and nervous system
6. Asrol/Sarpgandha (<i>Rauwolfia serpentina</i>),	Reserpine, Ajmaleen	Sedative, calms the nervous system, and reduce hypotension.
7. Balchar (<i>Nardostachys Jatamansi</i>)	Jatamansone	Improves sleep quality, reduces anxiety.
8. Saad kufi (<i>Cyperus Rotundus</i> Linn.)	Polyphenols, Flavonol, Glycosides, etc	Antioxidant, analgesic.

Murakkab Drugs ^[23,24]	Functions
➤ Majoon Falasfa	➤ Brain and nerve tonic.
➤ Majoon Barshasha	➤ Helps relieve insomnia and anxiety.
➤ Itrifal Ustukhuddus	➤ Strengthens the brain and reduces tension.
➤ Khamira Gaozaban Ambari Jawaharwala	➤ Acts as muqawwi qalb o dimagh (cardiac & nervine tonic).
➤ Jawahar Mohra	➤ Useful in palpitation, anxiety, and nervous debility.

TAQWIYAT-E-DIMAGH WA QALB (STRENGTHENING THE BRAIN AND HEART)

Since stress disturbs both dimagh (brain) and qalb (heart), Unani physicians emphasize using tonics (Muqawwiat) to stabilize emotions and mental well-being.

3- ILAJ BIL-TADBEER (REGIMENTAL THERAPY)^[25,26]

These are lifestyle based and non-pharmacological interventions aimed at restoring humoral equilibrium and improving psychological resilience.

S. NO.	Tadabeer	Effects
1.	Riyazat (exercise)	Light to moderate physical activity helps relieve mental strain and improve overall well-being.
2.	Hammam (Bath/Steam Bath)	When used with medicated oils it induces relaxation and improve circulation.
3.	Dalk (Massage)	Massage with oil such as Roghan Banafsha, Roghan Kadoo, or Roghan Gul helps the nervous system and relieve stress.
4.	Taleeq Leeching) / Hijamat (Cupping)/Fasd	Usually used when stress is linked to excess humours imbalance.
5.	Nutool (Irrigation)	Commonly used for nervous system disorders.
6.	Abzan (Sitz bath)	Cause vasodilation, increase capillary permeability, and improve circulation.
7.	Takmeed (Fomentation)	Improve circulation, relax muscles, and can be combined with massage to enhance its therapeutic effects in stress related conditions.
8.	Aeromotherapy (Shamoomat)	Help in mood enhancement, pain relief, improvement of cognitive function and management of insomnia, fatigue and depression.

4- ILAJ BIL NAFSIYAT

Unani Medicine emphasizes the importance of mental and spiritual well-being in maintaining overall health.

Key Approaches include:

- Psychological counselling and emotional support.
- Spiritual Practice such as dua, zikr, Tilawat, and guided meditation to promote inner calmness.
- Cultivation of balance *Akhlat* (moral conduct) including, justice, wisdom, patience, and moderation, which help maintain psychological stability.

DISCUSSION

The management strategies of the two systems also demonstrate both differences and complementarities. Modern medicine emphasizes psychological interventions, lifestyle modification, stress management techniques, and pharmacotherapy when indicated. Evidence-based approaches such as cognitive behavioural therapy, mindfulness-based interventions, relaxation techniques, and antidepressant or anxiolytic medications have shown effectiveness in reducing stress and preventing its complications. However, pharmacological treatment may be associated with

adverse effects, dependence, or relapse after discontinuation in some patients.

Unani medicine adopts a holistic approach that addresses the individual rather than the disease alone. Treatment includes Ilaj bil Ghiza (dietotherapy), Ilaj bil Tadbeer (regimenal therapy), Ilaj bil Dawa (pharmacotherapy), and lifestyle modification aimed at restoring the balance of temperament and strengthening the body's natural healing capacity. Regimenal therapies such as massage (Dalak), exercise (Riyazat), bathing (Hammam), and adequate sleep are recommended to improve mental and physical health. Several Unani herbal formulations possessing anxiolytic, adaptogenic, and neuroprotective properties have been traditionally used, although further well-designed clinical trials are needed to establish their efficacy and safety according to contemporary research standards.

CONCLUSION

Stress-related disorders arise from a complex interaction between emotional, psychological, and bodily responses. Modern medical science explains these conditions through neuroendocrine dysregulation, particularly the persistent activation of stress pathways such as Hypothalamic -Pituitary Axis and sympathetic nervous system.

Unani medicine, although based on a traditional holistic framework, presents a comparable understanding by attributing stress to disturbances in Mizaj, imbalance of Akhlat, and weakening of the body's Quwa. Both systems recognize that unmanaged emotions and loss of internal balance are central to the development of stress-related illnesses. This comparative evaluation reveals that integrating modern scientific insights with Unani principles can provide a more comprehensive and patient-centred approach to managing stress. Such a unified perspective not only enhances clinical understanding but also supports preventive, holistic, and individualized care for stress-related conditions.

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