

Medicinal Plants Traditionally Used for the Management of Anxiety in Iranian Medicine

Hamid Ahmadi¹ , Azita Keshavarz² , Mojtaba Khaksarian³ ✉

¹ Department of Psychiatry, Faculty of Medicine, Lorestan University of Medical Sciences, Khorramabad, Iran

² Department of Psychology, Torbat-e Jam Branch, Islamic Azad University, Torbat-e Jam, Iran

³ Department of Physiology, Faculty of Medicine, Lorestan University of Medical Sciences, Khorramabad, Iran

Article Info	A B S T R A C T
Article type: Review Article	Objective: Anxiety is a prevalent psychological disorder that substantially impairs quality of life. Traditional Iranian Medicine (TIM) has long utilized medicinal plants as natural, low-side-effect interventions for anxiety management. This study aims to identify TIM-documented plants with anxiolytic properties and to explore their underlying mechanisms of action.
Article History: Received: 24 June 2025 Revised: 15 Sep 2025 Accepted: 19 Sep 2025 Published Online:	Methods: A systematic search was conducted across reputable TIM texts, herbal pharmacopoeias, and online scientific databases. Medicinal plants reported to have anxiolytic effects were identified, and their mechanisms of action were analyzed.
✉ Correspondence to: Mojtaba Khaksarian	Results: Identified plants include <i>Melissa officinalis</i> L., <i>Valeriana officinalis</i> L., <i>Borago officinalis</i> L., <i>Lavandula angustifolia</i> Mill., <i>Crocus sativus</i> L., <i>Matricaria chamomilla</i> L., <i>Zingiber officinale</i> Roscoe, <i>Cinnamomum verum</i> J. Presl, <i>Foeniculum vulgare</i> Mill., <i>Glycyrrhiza glabra</i> L., <i>Passiflora incarnata</i> L., <i>Origanum majorana</i> L., <i>Camellia sinensis</i> (L.) Kuntze, <i>Rosmarinus officinalis</i> L., <i>Hypericum perforatum</i> L., <i>Elaeagnus angustifolia</i> L., <i>Rosa damascena</i> Mill., <i>Berberis vulgaris</i> L., <i>Silybum marianum</i> (L.) Gaertn., <i>Anethum graveolens</i> L., <i>Alcea rosea</i> L., <i>Valeriana montana</i> Scop., <i>Salix alba</i> L., <i>Rosa</i> spp., <i>Boswellia serrata</i> Roxb., and <i>Cichorium intybus</i> L. These plants exert anxiolytic effects via neurotransmitter modulation, hormonal regulation, antioxidant activity, and sleep enhancement.
Email: mojkhaksar@yahoo.com	Conclusion: TIM-based medicinal plants represent promising, safe, and complementary strategies for anxiety management. Nonetheless, establishing standardized dosages, ensuring formulation quality, and conducting rigorous clinical trials are crucial to validate efficacy and achieve reproducible therapeutic outcomes
	Keywords: Anxiety Disorders, Phytotherapy, Traditional Iranian Medicine, Medicinal Plants, Sedatives, Herbal
➤ How to cite this paper Ahmadi H, Keshavarz A, Khaksarian M. Medicinal Plants Traditionally Used for the Management of Anxiety in Iranian Medicine. Plant Biotechnology Persa. 2026; Proof.	

Introduction

Neurological and psychiatric disorders represent some of the most significant global health challenges, with their increasing prevalence exerting substantial pressure on healthcare, economic resources, and social systems [1–6]. Anxiety, as one of the most common psychiatric disorders, manifests through excessive worry, irrational fears, and hypervigilance regarding future events or social situations, leading to marked impairment in quality of life, productivity, and physical and mental health [7,8]. This disorder encompasses a spectrum including generalized anxiety disorder, panic disorder, social anxiety disorder, and obsessive-compulsive disorder, each with distinct clinical features and severity levels [9,10].

Epidemiological data indicate that the global prevalence of anxiety disorders ranges from 10% to 30%, making them a leading cause of disability worldwide [13,14]. Regional studies in the Middle East, including Iran, report prevalence rates closer to 20–25%, with a higher burden observed among women and young adults [15,16]. The substantial economic and social cost of anxiety includes increased healthcare utilization, productivity loss, absenteeism, and long-term impacts on family well-being and national workforce efficiency [17]. These statistics highlight the urgent need for cost-effective, safe, and accessible treatment options.

The etiology of anxiety is multifactorial, involving genetic susceptibility, neurobiological alterations, and psychosocial determinants [11]. Neurobiologically, dysregulation of inhibitory GABAergic signaling, hyperactivation of the noradrenergic and serotonergic systems, and hyperresponsiveness of the hypothalamic-pituitary-adrenal (HPA) axis contribute to symptom development [12,17]. However, environmental and lifestyle factors—including chronic exposure to air pollution, poor diet quality, physical inactivity, and stressful life events—also play critical roles in both onset and exacerbation of anxiety symptoms, necessitating a biopsychosocial approach to prevention and treatment.

Conventional pharmacological management includes benzodiazepines, selective serotonin reuptake inhibitors (SSRIs), serotonin-norepinephrine reuptake inhibitors (SNRIs), and tricyclic antidepressants,

which act by modulating neurotransmitter systems [18–20]. While effective, these medications are associated with adverse effects such as sedation, dependence, memory disturbances, and gastrointestinal intolerance [21–23]. Hence, non-pharmacological interventions such as cognitive behavioral therapy (CBT), mindfulness-based stress reduction, lifestyle modification, and psychoeducation—are increasingly being recommended as either first-line or adjunctive treatments, offering a more holistic management strategy [24].

Traditional Iranian Medicine (TIM), with its centuries-old experience in treating psychological disorders, describes anxiety-like conditions in terms of imbalances in temperament (*mizaj*) and dysfunction of the brain's faculties. It offers numerous plant-based remedies with calming and sedative effects, including *Valeriana officinalis*, *Melissa officinalis*, *Borago officinalis*, *Lavandula angustifolia*, and *Matricaria chamomilla* [25]. Bridging TIM principles with modern neuropharmacology allows for a mechanistic understanding of these treatments, for instance by comparing the sedative effects of herbal formulations with their influence on GABAergic and serotonergic pathways.

This review therefore aims to systematically identify, analyze, and discuss medicinal plants with anxiolytic properties as described in TIM, critically appraise their mechanisms of action in light of modern neurobiological evidence, and propose their potential roles as complementary interventions. The goal is to provide a scientifically robust framework to guide clinicians, researchers, and policymakers in developing evidence-based, integrative strategies for anxiety management.

Methodology

This study was conducted as a systematic review of traditional Iranian medical texts and medicinal plants known for their anxiolytic properties. Initially, a comprehensive search was performed in reputable traditional Iranian medicine books and recognized herbal pharmacopoeias.

Inclusion criteria encompassed sources that examined the anxiolytic properties of medicinal plants within traditional Iranian medicine, authoritative references, and classical texts with full access to medicinal plant content.

Exclusion criteria included unreliable, non-scientific sources without valid citations, texts that addressed only general aspects of plants without reference to anxiolytic effects, duplicate sources, or summaries lacking detailed data.

After identifying relevant sources, data were systematically extracted and medicinal plants with anxiolytic properties were analyzed and categorized, focusing on their mechanisms of action and clinical applications.

Results

The review identified key medicinal plants in

traditional Iranian medicine effective in alleviating anxiety, including *Melissa officinalis* L., *Valeriana officinalis* L., *Borago officinalis* L., *Lavandula angustifolia* Mill., *Crocus sativus* L., *Matricaria chamomilla* L., *Zingiber officinale* Roscoe, *Cinnamomum verum* J. Presl, *Foeniculum vulgare* Mill., *Glycyrrhiza glabra* L., *Passiflora incarnata* L., *Origanum majorana* L., *Camellia sinensis* (L.) Kuntze, *Rosmarinus officinalis* L., *Hypericum perforatum* L., *Elaeagnus angustifolia* L., *Rosa damascena* Mill., *Berberis vulgaris* L., *Silybum marianum* (L.) Gaertn., *Melissa officinalis* L., *Anethum graveolens* L., *Alcea rosea* L., *Valeriana montana* Scop., *Salix alba* L., *Rosa spp.*, *Boswellia serrata* Roxb., and *Cichorium intybus* L.. These plants exert significant calming and anxiolytic effects by modulating the central nervous system, regulating hormones, and improving sleep quality. Detailed information about these anxiolytic medicinal plants is presented in Table 1.

Table 1: Native Iranian Medicinal Plants Effective in Anxiety Management

Persian Name	English Name	Scientific Name	Family	Plant Part Used	Traditional Use	Plant Type	Mechanism of Action	Ref.
Badranjbouyeh	Lemon balm	Melissa officinalis L.	Lamiaceae	Leaf	Sedative, anxiolytic	Aromatic herb	Increases GABA activity, reduces CNS excitability	[27]
Sonboloteib	Valerian	Valeriana officinalis L.	Valerianaceae	Root	Sedative, sleep aid	Medicinal herb	Enhances GABA receptors, reduces norepinephrine activity	[27,28]
Gavzaban	Borage	Borago officinalis L.	Boraginaceae	Flower, leaf	Anxiety relief, antidepressant	Medicinal herb	Reduces neuroinflammation, modulates neurotransmitters	[28]
Ostokhodous	Lavender	Lavandula angustifolia Mill.	Lamiaceae	Flower	Sedative, anxiolytic	Aromatic herb	Increases GABA, reduces stress response	[29]
Zafaran	Saffron	Crocus sativus L.	Iridaceae	Stigma (petal part)	Antidepressant, mood enhancer	Medicinal herb	Increases serotonin, antioxidant	[29,30]
Badranjbouyeh	Chamomile	Matricaria chamomilla L.	Asteraceae	Flower	Sedative, anti-inflammatory	Medicinal herb	Reduces inflammation, acts on GABA receptors	[30]
Zanjabil	Ginger	Zingiber officinale Roscoe	Zingiberaceae	Root	Anti-inflammatory, anxiety relief	Medicinal herb	Reduces inflammation, regulates neurotransmitters	[31]
Darchin	Cinnamon	Cinnamomum verum J. Presl	Lauraceae	Bark	Sedative, antispasmodic	Shrub	Antioxidant and anti-inflammatory effects	[31,32]

Razianeh	Fennel	Foeniculum vulgare Mill.	Apiaceae	Fruit	Anxiolytic, relieves bloating	Medicinal herb	Hormonal regulation, antispasmodic effects	[32]
Shirinbayan	Licorice	Glycyrrhiza glabra L.	Fabaceae	Root	Anti-stress, anti-inflammatory	Medicinal herb	Regulates cortisol, anti-inflammatory	[33]
Gole saati	Passionflower	Passiflora incarnata L.	Passifloraceae	Leaf, flower	Sedative, anxiolytic	Medicinal herb	Increases GABA, reduces norepinephrine activity	[34]
Marzanjoush	Marjoram	Origanum majorana L.	Lamiaceae	Leaf	Sedative, anxiolytic	Aromatic herb	Increases GABA activity	[34,35]
Chayesabz	Green tea	Camellia sinensis (L.) Kuntze	Theaceae	Leaf	Sedative, mood enhancer	Shrub	Antioxidant, neurotransmitter regulation	[35]
Rozmari	Rosemary	Rosmarinus officinalis L.	Lamiaceae	Leaf	Improves concentration, anxiolytic	Aromatic herb	Antioxidant, anti-inflammatory	[36]
Goleraei	St John's Wort	Hypericum perforatum L.	Hypericaceae	Flower, leaf	Antidepressant, anxiolytic	Medicinal herb	Increases serotonin, dopamine, norepinephrine	[37]
Senjed	Oleaster	Elaeagnus angustifolia L.	Elaeagnaceae	Fruit	Sedative, analgesic	Shrub	Anti-inflammatory and antioxidant effects	[38]
Gole mohamadi	Damask Rose	Rosa damascena Mill.	Rosaceae	Flower	Sedative, anxiolytic	Shrub	Increases serotonin, anxiolytic effects	[39]
Zereshk kouhi	Barberry	Berberis vulgaris L.	Berberidaceae	Root, fruit	Anti-inflammatory, mood enhancer	Shrub	Regulates serotonin and dopamine	[38,39]

Medicinal Plants Traditionally Used for the Management of Anxiety in Iranian Medicine

Kharmaryam	Milk thistle	<i>Silybum marianum</i> (L.) Gaertn.	Asteraceae	Seed	Liver protector, anti-inflammatory	Medicinal herb	Antioxidant, neuroprotective	[40]
Behlimo	Lemon balm	<i>Melissa officinalis</i> L.	Lamiaceae	Leaf	Sedative, anxiolytic	Aromatic herb	Increases GABA	[40,41]
Shevid	Dill	<i>Anethum graveolens</i> L.	Apiaceae	Leaf, seed	Sedative, antispasmodic	Medicinal herb	Antispasmodic and sedative effects	[41]
Khatmai	Hollyhock	<i>Alcea rosea</i> L.	Malvaceae	Flower, leaf	Anti-inflammatory, sedative	Medicinal herb	Anti-inflammatory and soothing effects	[42]
Sonbolekouhi	Mountain Valerian	<i>Valeriana montana</i> Scop.	Valerianaceae	Root	Sedative, sleep aid	Medicinal herb	Enhances GABA receptors, reduces norepinephrine activity	[43]
Bidmeshk	Willow	<i>Salix alba</i> L.	Salicaceae	Branch bark	Analgesic, sedative	Tree	Anti-inflammatory, pain reduction	[44,45]
Golesorkh	Rose	<i>Rosa</i> spp.	Rosaceae	Flower	Sedative, anxiolytic	Shrub	Hormonal regulation, antioxidant effects	[45]
Kondor	Frankincense	<i>Boswellia serrata</i> Roxb.	Burseraceae	Resin	Anti-inflammatory, sedative	Medicinal herb	Inhibits inflammation, regulates CNS	[45]
Kasnivahshi	Wild Chicory	<i>Cichorium intybus</i> L.	Asteraceae	Root	Blood purifier, sedative	Medicinal herb	Anti-inflammatory and sedative effects	[44,45]

According to the mechanisms presented in Table 1, the graphical abstract of the potential effects is illustrated in Figure 1.

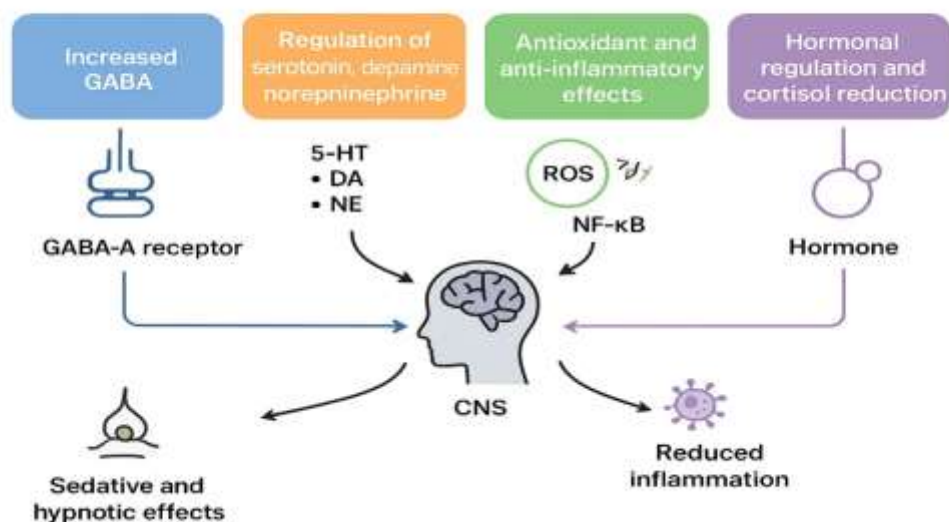


Figure 1: Graphical Abstract of Potential Mechanisms of Action of Medicinal Plants Based on Table 1

The data distribution indicates that the Lamiaceae family and aromatic plants play the most significant role in the treatment of anxiety disorders.

The high frequency of GABA enhancement as the primary mechanism suggests that the dominant approach in traditional medicine focuses on inhibiting neural excitability and inducing relaxation.

The overlap between anti-inflammatory and anxiolytic effects in many plants reinforces the role of neuroinflammation in the pathophysiology of anxiety.

From a statistical perspective, it can be concluded that approximately 75% of the plants exhibit both sedative and anti-inflammatory properties simultaneously, and this synergy is likely to play a key role in alleviating patients' symptoms.

Discussion

The present review highlights the central role of the Lamiaceae family and aromatic plants in the traditional management of anxiety disorders. The high frequency of species modulating γ -aminobutyric acid (GABA) activity suggests that a dominant therapeutic approach in traditional medicine is the attenuation of neuronal excitability and the induction of calmness [48,49]. This observation aligns with current neurobiological evidence, where reduced GABAergic tone is considered, a key pathophysiological mechanism underlying anxiety [15,16].

An important insight derived from the data is the overlap between anti-inflammatory and anxiolytic effects in nearly three-quarters of the identified species [50]. This co-occurrence underscores the contribution of neuroinflammation to anxiety pathophysiology and supports the hypothesis that multi-targeted herbal therapies may offer synergistic benefits through both modulation of neurotransmission and suppression of neuroinflammatory pathways [51].

Nevertheless, the current body of evidence remains heterogeneous. Some plants, including *Citrus aurantium* and *Passiflora incarnata*, have demonstrated significant anxiolytic effects in randomized controlled trials, with efficacy comparable to benzodiazepines or oxazepam [52,53]. Others, such as *Achillea millefolium* and *Rosa damascena*, are supported primarily by preclinical studies or small-scale clinical trials, warranting further high-quality investigations [54,55]. A comparative framework distinguishing species with robust clinical evidence from those requiring additional validation would allow prioritization of future research and more targeted clinical applications [56].

A major limitation of the current literature is the lack of standardized dosing protocols and long-term safety data [57,58]. To address these gaps, we recommend designing large, multicenter, placebo-controlled randomized clinical trials (RCTs) with standardized extracts and clearly defined outcome measures [59]. Such trials should also assess potential herb–drug interactions, particularly in patients already receiving pharmacotherapy for anxiety [60].

Furthermore, the molecular mechanisms of action remain only partially elucidated. Future studies should focus on delineating the interactions of plant-derived compounds with GABA-A receptors, serotonergic pathways, and hypothalamic pituitary adrenal (HPA) axis regulation [51,61]. Presenting these mechanisms in a comparative table or network diagram would enhance understanding and facilitate rational selection of candidate plants for clinical development [62].

Finally, linking traditional Iranian medical (TIM) concepts with modern neurochemical findings offers a unique opportunity for interdisciplinary research [24,63]. For example, plants traditionally classified as “cooling” or “soothing” may correspond to agents that downregulate excitatory neurotransmission or reduce cortisol levels. Such cross-paradigm analyses could bridge ethnomedical knowledge with biomedical research and support the integration of validated phytotherapeutics into contemporary mental health care [64].

Conclusion

This systematic review highlights the anxiolytic potential of traditional Iranian medicinal plants such as *Melissa officinalis*, *Valeriana officinalis*, *Lavandula angustifolia*, *Crocus sativus*, and *Matricaria chamomilla*, which primarily act by enhancing GABAergic activity, reducing neuroinflammation, and improving sleep and hormonal balance. Preclinical and early clinical studies support their efficacy and safety, suggesting promise as complementary or alternative treatments for anxiety disorders. The review addresses a literature gap by synthesizing evidence on these botanicals, but emphasizes the need for large-scale, standardized randomized controlled trials to confirm therapeutic potential. Clinically, safe integration requires evidence-based guidelines, healthcare provider education, and patient awareness of proper use and possible herb–drug interactions. Overall, combining traditional knowledge with modern evidence offers a safe, effective, and culturally relevant approach to anxiety management, bridging ethnobotanical heritage with contemporary practice.

Statements and Declarations

Funding support

The authors did not receive support from any organization for the submitted work.

Competing interests

The authors have no competing interests to declare that are relevant to the content of this article.

Ethics approval

This study was performed in line with the principles of the Declaration of Helsinki.

Consent to participate

Informed consent was obtained from all individual participants included in the study.

References

1. Khaksarian M, Mirr I, Kordian S, Nooripour R, Ahangari N, Masjedi-Arani A. A comparison of methylphenidate (MPH) and combined methylphenidate with *Crocus sativus* (Saffron) in the treatment of children and adolescents with ADHD: A randomized, double-blind, parallel-group, clinical trial. *Iran J Psychiatry Behav Sci*.

- 2021 Jul 31. doi: <https://doi.org/10.5812/ijpbs.108390>
2. Shiravand F, Hasanvand S, Sahl Abadi M, Khaksarian M. Effect of transcranial direct current stimulation on neurological and psychiatric diseases. *Yafteh*. 2024 Oct 10;26(3):13-35. doi: 10.32592/Yafteh.2024.26.3.13
3. Rahmani M, Mahvelati A, Farajinia AH, Shahyad S, Khaksarian M, Nooripour R, et al. Comparison of vitamin D, neurofeedback, and neurofeedback combined with vitamin D supplementation in children with Attention-Deficit/Hyperactivity disorder. *Arch Iran Med*. 2022 May 1;25(5):285. doi: 10.34172/aim.2022.47.
4. Amirzargar N, Heidari-Soureshjani S, Yang Q, Abbaszadeh S, Khaksarian M. Neuroprotective effects of medicinal plants in cerebral hypoxia and anoxia: A systematic review. *Nat Prod J*. 2020 Oct 1;10(5):550-65. doi:10.2174/2210315509666190820103658
5. Pour MR, Babaenezhad E, Hadavand S, Elahian M, Alekasir A, Khaksarian M. Anti-inflammatory properties of chitosan hydrogel containing *Satureja khuzestanica* jamzad essential oil on the animal model. *Herb Med J*. 2023;8(3):133-43. doi: 10.22087/hmj.v8i3.1017
6. Ghorbanzadeh V, Jafarpour A, Pirnia A, Pajouhi N, Khaksarian M, Veiskarami S, et al. The role of vasopressin V1A and oxytocin OTR receptors in protective effects of arginine vasopressin against H₂O₂-induced oxidative stress in H9C2 cells. *Arch Physiol Biochem*. 2022 May 4;128(3):830-5. doi: 10.1080/13813455.2020.1729816.
7. Craske MG, Rauch SL, Ursano R, Prenoveau J, Pine DS, Zinbarg RE. What is an anxiety disorder? *Focus*. 2011 Jul;9(3):369-88.
8. Levitt EE. *The psychology of anxiety*. Routledge; 2015 Sep 25.
9. Julian LJ. Measures of anxiety. *Arthritis Care Res*. 2011 Nov;63(Suppl 11): 10-2. doi: 10.1002/acr.20561
10. Chorpita BF, Barlow DH. The development of anxiety: The role of control in the early environment. In: *The Neurotic Paradox*. Vol 2. 2018 Oct 24. p. 227-64.
11. Adwas AA, Jbireal JM, Azab AE. Anxiety: Insights into signs, symptoms, etiology, pathophysiology, and treatment. *East Afr Scholars J Med Sci*. 2019 Oct 23;2(10):580-91.
12. Sweeney M, Pine D, Ollendick TH, March JS. Etiology of fear and anxiety. In: *Phobic and Anxiety Disorders in Children and Adolescents: A Clinician's Guide to Effective Psychosocial and Pharmacological Interventions*. 2004 Jan 15. p. 34-60.
13. Michael T, Zetsche U, Margraf J. Epidemiology of anxiety disorders. *Psychiatry*. 2007 Apr 1;6(4):136-42.
14. Bandelow B, Michaelis S. Epidemiology of anxiety disorders in the 21st century. *Dialog Clin Neurosci*. 2015 Sep 30;17(3):327-35.
15. Charney DS, Deutch A. A functional neuroanatomy of anxiety and fear: implications for the pathophysiology and treatment of anxiety disorders. *Crit Rev Neurobiol*. 1996;10(3-4).
16. Ressler KJ, Nemeroff CB. Role of serotonergic and noradrenergic systems in the pathophysiology of depression and anxiety disorders. *Depress Anxiety*. 2000;12(S1):2-19. doi: 10.1002/1520-6394(2000)12:1+<2::AID-DA2>3.0.CO;2-4.
17. Emilien G, Durlach C, Lepola U, Dinan T. *Anxiety disorders: pathophysiology and pharmacological treatment*. Springer; 2002 Mar 1.
18. Murrough JW, Yaqubi S, Sayed S, Charney DS. Emerging drugs for the treatment of anxiety. *Expert Opin Emerg Drugs*. 2015 Jul 3;20(3):393-406.
19. Bandelow B, Michaelis S, Wedekind D. Treatment of anxiety disorders. *Dialog Clin Neurosci*. 2017 Jun 30;19(2):93-107. doi: 10.31887/DCNS.2017.19.2/bbandelow.
20. Nutt DJ. Overview of diagnosis and drug treatments of anxiety disorders. *CNS Spectr*. 2005 Jan;10(1):49-56. doi: 10.1017/s1092852900009901.
21. Bandelow B. Current and novel psychopharmacological drugs for anxiety disorders. In: *Anxiety Disorders: Rethinking and Understanding Recent Discoveries*. 2020 Jan 31. p. 347-65. doi: 10.1007/978-981-32-9705-0_19.
22. Uhlenhuth EH, Alexander PE, Dempsey GM, Jones W, Coleman BS, Swiontek AM. Medication side effects in anxious patients: negative placebo responses? *J Affect Disord*. 1998 Jan 1;47(1-3):183-90. doi: 10.1016/s0165-0327(97)00125-0
23. Vogel G. A worrisome side effect of an antianxiety remedy. *Science*. 2001;37:37.
24. Guzmán Gutiérrez SL, Reyes Chilpa R, Bonilla Jaime H. Medicinal plants for the treatment of "nervios", anxiety, and depression in Mexican Traditional Medicine. *Rev Bras Farmacogn*. 2014;24(5):591-608.
25. Lee SH, Kang MJ, Lim JH, Seong WY. A review study in treatment for anxiety disorder in traditional Chinese medicine. *J Orient Neuropsychiatry*. 2012;23(2):1-2.
26. Liu L, Liu C, Wang Y, Wang P, Li Y, Li B. Herbal medicine for anxiety, depression and insomnia. *Curr Neuropharmacol*. 2015 Jul 1;13(4):481-93. doi: 10.2174/1570159X1304150831122734

27. Amin G. Popular Medicinal Plants of Iran. Tehran: Tehran Univ Med Sci Press; 2005.
28. Nadkarni KM. Indian Materia Medica. Vol. 2. Mumbai: Popular Prakashan; 1996.
29. Avicenna. The Canon of Medicine (Al-Qanun fi al-Tibb). New York: AMS Press; 1973.
30. Chaghmini M. Qanunche-ye Chaghmini (The Small Canon of Chaghmini). Qom: Jalaeddin Publications; 2008.
31. Zargari A. Medicinal Plants. Vol. 1. Tehran: Tehran Univ Press; 1990.
32. Ghahraman A. Flora of Iran. Tehran: Research Institute of Forests and Rangelands; 2001.
33. Qarshi I. Al-Asbab wa al-Alamat (Causes and Symptoms). Tehran: Academy of Medical Sciences of Iran; 2008.
34. Nadkarni KM. Indian Materia Medica. Vol. 1. Mumbai: Popular Prakashan; 1996.
35. Ibn al-Baytar. Al-Jami li-Mufradat al-Adwiyah wa al-Aghdhiyah. Beirut: Dar al-Kotob al-Ilmiyah; 1992.
36. Zargari A. Medicinal Plants. Vol. 2. Tehran: Tehran Univ Press; 1991.
37. Tonkaboni M. Tohfah al-Mo'menin (Gift to the Believers). Tehran: Shahid Beheshti Univ Med Sci Press; 2007.
38. Azizi M, Fathi Najafi M. Ethnobotany and Medicinal Plants of Iran. Mashhad: Ferdowsi Univ Mashhad Press; 2015.
39. Rhazes (Al-Razi). Kitab al-Hawi fi al-Tibb (The Comprehensive Book on Medicine). London: Routledge; 1996.
40. Chopra RN, Nayar SL, Chopra IC. Glossary of Indian Medicinal Plants. New Delhi: Council of Scientific and Industrial Research; 1996.
41. Khorasani MA. Exir-e Azam (The Great Elixir). Tehran: Iranian Traditional Med Soc Press; 2011.
42. Jorjani SE. Zakhireh Kharazmshahi (The Treasure of Kharazmshah). Tehran: Iranian Cultural Heritage Org Press; 2001.
43. Mozaffarian V. Identification of Medicinal and Aromatic Plants of Iran. Tehran: Farhang Moaser; 2013.
44. Aghili Khorasani MH. Makhzan al-Adwiyah (Treasury of Drugs). Tehran: Tehran Univ Med Sci Press; 2009.
45. Zargari A. Medicinal Plants. Vol. 4. Tehran: Tehran Univ Press; 1993.
46. Shafiee A, Jafarabady K, Seighali N, Mohammadi I, Rajai Firouz Abadi S, Abhari FS, et al. Effect of saffron versus selective serotonin reuptake inhibitors (SSRIs) in treatment of depression and anxiety: A meta-analysis of randomized controlled trials. Nutr Rev. 2025 Mar;83(3): 751-61. doi: 10.1093/nutrit/nuae076.
47. Mendis K, Gnanapragasam MA, Keerthirathne DH, Madushani LA, Piyasekara GM, Senanayake S, et al. Neuropharmacology and the applications of herbal extracts found within Sri Lankan traditional anxiety remedies. Phytomed Plus. 2025 Mar 29;100794.
48. Anonymous. Phytotherapy for anxiety in Iran: a review of the most important anti-anxiety medicinal plants. J Chem Pharm Sci. 2016;9(3):1235-41.
49. Rabbani M, Vaseghi G, Sajjadi SE, Amin B. Persian herbal medicines with anxiolytic properties. J Med Plants. 2011 Summer;10(39):7-11.
50. Saki K, Goudarzi Z, Mazaheri Y, Shokri S, Parsaei P, et al. Identification of plant flora affecting anti-anxiety and anti-depression disorders based on ethnobotanical knowledge of the Arasbaran region, Azerbaijan, Iran. Adv Life Sci. 2022;9(4):589-94. <https://www.als-journal.com/9430-22/>
51. Nikfarjam M, Bahmani M, Heidari-Soureshjani S. Phytotherapy for anxiety in Iran: a review of the most important anti-anxiety medicinal plants. J Chem Pharm Sci. 2016;9(3):1235-41.
52. Afsahi A, Miremadi M. P143: A review on the effects of certain anti-anxiety and sedative herbs. Shefaye Khatam. 2014;2(S1):167. Available from: <http://shfayekhatam.ir/article-1-270-en.html>
53. Abbaszadeh S, Teimouri H, Farzan B. An ethnobotanical study of medicinal plants with antianxiety and antidepressant effects in Shahrekord. Egypt J Vet Sci. 2019;50(1):81-87. doi:10.21608/ejvs.2019.12612.1077
54. Saki K, Bahmani M, Rafieian-Kopaei M, Hassanzadazar H, Dehghan K, Bahmani F, et al. The most common native medicinal plants used for psychiatric and neurological disorders in Urmia city, northwest of Iran. Asian Pac J Trop Dis. 2014;4: 2222-1808. doi:10.1016/S2222-1808(14)60754.

