



Yoga for Anxiety Disorders: A Critical Bridge between Classical Practice and Modern Psychiatry

Dr. Nurjahan Tajoddin Mujawar¹, Dr. Prashant Chandrakant Sarade², Dr. Prafull Vasantrao Kotalwar³

¹ Associate Professor, Department of Swasthavritta & Yoga, Sai Ayurved College, Hospital & Research Centre, Sasure-Vairag, Solapur, Maharashtra, India. Email: noorjahanmujawar@gmail.com

² Associate Professor, Department of Swasthavritta & Yoga, BOS Member, Para Clinical Board, Pravara Institute of Medical Sciences, Pravara Rural Ayurveda College, Loni BK, Taluka Rahata, Dist. Ahilyanagar, Maharashtra, India. Email: drprashantsarade@gmail.com

³ Assistant Professor, Department of Swasthavritta & Yoga, Government Ayurveda College, Dharashiv, Maharashtra, India. Email: prafullkotalwar@gmail.com

Abstract

Anxiety disorders involve persistent fear, worry, avoidance, and physiological arousal that impair daily life. Cognitive-behavioural therapy and medication remain established treatments, yet access, preference, adverse effects, and incomplete response create interest in adjunctive approaches. Yoga combines movement, breathing, attention, relaxation, and, in its classical context, ethical and contemplative discipline. This narrative review compares Yogic accounts of mental fluctuation and self-regulation with contemporary psychiatric evidence without treating the frameworks as equivalent. Trials suggest that structured Yoga can reduce anxiety symptoms, particularly in generalized anxiety and stress-related populations, but effects vary and Yoga has not consistently matched first-line treatment. Slow breathing, body awareness, exposure to internal sensations, attentional training, exercise, expectancy, and group support may all contribute. Claims of corrected GABA, serotonin, inflammation, or neural circuitry remain more tentative than symptom

findings. Yoga should be offered as a preference-sensitive adjunct with qualified instruction, diagnostic assessment, adverse-event monitoring, and clear escalation pathways. Trauma-sensitive choice is especially important. Better research requires defined interventions, active controls, adequate samples, diagnostic outcomes, long follow-up, and comparison with evidence-based psychotherapy.

Keywords

Yoga; anxiety disorders; psychiatry; *Pranayama*; *Dhyana*; integrative mental healthcare

1. Introduction

Anxiety is adaptive when it helps a person respond to danger. It becomes clinically significant when fear, worry, avoidance, or arousal is excessive, persistent, and functionally impairing. Anxiety disorders are common worldwide and contribute substantially to disability [1]. Accurate diagnosis

matters because panic, obsessive-compulsive symptoms, trauma-related conditions, depression, substance use, thyroid disease, arrhythmia, and medication effects may require different management.

CBT and antidepressant medicines such as SSRIs and SNRIs are established treatments; benzodiazepines have narrower roles because of sedation, tolerance, dependence, and withdrawal concerns [2,23]. Yoga may be acceptable to people seeking an embodied self-management practice, but it should complement—not delay—appropriate psychiatric and medical care.

Aim and Scope

This review describes classical Yogic concepts relevant to distress, evaluates plausible mechanisms and clinical evidence for anxiety, addresses safety, and identifies priorities for responsible integration.

2. Review Method

Classical sources included the *Patanjali Yoga Sutra*, *Bhagavad Gita*, *Hatha Yoga Pradipika*, *Gheranda Samhita*, and *Shiva Samhita*. Biomedical sources were sought in PubMed, Scopus, Web of Science, Google Scholar, and the Cochrane Library using Yoga, anxiety, generalized anxiety, breathing, meditation, and psychiatry. Randomized trials, systematic reviews, meta-analyses, guidelines, and mechanistic research were emphasized. The review was narrative rather than preregistered, so it does not provide a formal pooled estimate or risk-of-bias assessment.

3. Classical Accounts of Mental Regulation

Patanjali's Yoga system includes ethical restraint, personal observance, posture, breathing, sensory regulation, concentration, meditation, and absorption [3–5]. *Yogah Chitta Vritti Nirodhah* is often rendered as the regulation or stilling of mental fluctuations. The system aims at liberation and discernment, not merely symptom reduction.

Chitta, *Vritti*, *Triguna*, *Avidya*, and *Viveka* belong to a philosophical psychology. *Sattva*, *Rajas*, and *Tamas* describe qualities of experience and conduct. They should not be relabelled as neurotransmitters, diagnostic categories, or biomarkers. At most, these

ideas provide a vocabulary for self-observation, agitation, inertia, clarity, and disciplined response.

4. Contemporary Understanding of Anxiety

DSM-5-TR anxiety disorders include generalized anxiety disorder, panic disorder, social anxiety disorder, agoraphobia, specific phobia, separation anxiety disorder, and selective mutism [2]. PTSD and obsessive-compulsive disorder are classified separately, despite overlapping fear and arousal.

Risk reflects interaction among temperament, genetics, learning, adversity, health, and current context [6,7]. Amygdala, insula, hippocampus, anterior cingulate, and prefrontal systems contribute to threat learning and regulation, but no single scan or neurotransmitter diagnoses anxiety. Autonomic arousal and HPA-axis activity also vary across people and situations.

5. How Yoga Might Help

Yoga is a multicomponent intervention. Postures provide graded movement and bodily mastery; slow breathing changes respiratory sensations and arousal; attention practices may reduce automatic elaboration; relaxation can improve sleep; and group practice may add social support. These pathways are not unique to Yoga, and their relative contribution remains uncertain [8,28].

Learning to remain with manageable bodily sensations may reduce fear of arousal for some people. In others, inward attention or breath manipulation can intensify panic, dissociation, or traumatic recall. Choice, pacing, and permission to stop are therefore therapeutic safeguards.

6. Autonomic and HPA-Axis Findings

Slow breathing practices are associated with changes in heart rate, respiratory sinus arrhythmia, heart-rate variability, and perceived calm [9]. Describing this simply as increased vagal tone can overstate what short-term measures establish. Breathing should be comfortable; prolonged retention, rapid ventilation, or forced techniques may cause dizziness or panic-like sensations.

Meta-analytic evidence suggests reductions in some stress-related physiological measures, including cortisol, after Yoga or mindfulness programs [10]. Effects are heterogeneous and

influenced by sampling time, sleep, medication, menstrual status, and expectancy. Cortisol change is not required for clinical improvement.

7. Neurochemical, Inflammatory, and Brain Claims

Small studies and theoretical models have examined GABA, serotonin, dopamine, BDNF, inflammation, and neuroplasticity [8,11]. A reported post-session GABA difference does not show that Yoga corrects an anxiety disorder, and peripheral BDNF or cytokines do not directly measure brain change. These findings should be treated as exploratory.

Meditation research reports altered activation or connectivity in emotion-regulation networks [12]. Cross-sectional findings may reflect pre-existing differences, and results from expert meditators cannot be generalized to brief clinical Yoga classes.

8. Asana and Movement

Asana may reduce muscle tension, improve sleep, and build confidence through movement. Common sequences include *Tadasana*, *Vrikshasana*, *Bhujangasana*, *Balasana*, *Setu Bandhasana*, and *Shavasana*, but no posture is specifically anxiolytic. Selection should reflect mobility, pain, pregnancy, balance, cardiovascular status, and personal comfort.

Because exercise itself reduces anxiety, studies need active movement comparators to determine whether breathing, meditation, or Yogic framing adds benefit.

9. Pranayama and Breathing

Nadi Shodhana, *Bhramari*, *Anulom Vilom*, *Ujjayi*, and slow diaphragmatic breathing are frequently used. Slow, non-forceful practice may help people regulate respiratory rate and recognize arousal without catastrophe. For panic-prone participants, close attention to breathing can initially worsen symptoms; brief externally anchored practice may be preferable.

Breathing instruction should avoid promises of increased oxygen unless hypoxaemia is actually present. Excessive ventilation can lower carbon dioxide and produce tingling, light-headedness, or fear.

10. Dhyana and Yoga Nidra

Dhyana-related practices train attention and a less reactive relationship to thoughts and sensations. These skills overlap with, but are not identical to, mindfulness-based therapies. *Yoga Nidra* is a guided relaxation practice that may support sleep and perceived stress, though protocols and evidence vary.

Meditation can occasionally evoke agitation, intrusive memories, depersonalization, or insomnia. Trauma-sensitive approaches emphasize agency, eyes-open options, environmental orientation, and avoidance of coercive silence or touch.

11. Generalized Anxiety Disorder

A randomized clinical trial found Kundalini Yoga superior to stress education for generalized anxiety disorder but less effective than CBT, supporting it as an adjunct or preference-sensitive option rather than a replacement for first-line psychotherapy [13]. Outcomes should include functional impairment, remission, durability, and adverse events—not symptom scores alone.

12. Panic, Social Anxiety, and Trauma-Related Symptoms

Evidence specific to panic disorder and social anxiety is limited. Breathing awareness may help some participants, but exposure-based CBT has a stronger disorder-specific rationale. Avoidance should not be reinforced by using relaxation only to suppress every anxious sensation.

Trauma-sensitive Yoga has shown benefit in some PTSD studies [22]. PTSD is not an anxiety disorder in current classification, and results should not be generalized automatically. Programs need consent, predictable structure, choice of posture, and coordination with trauma-focused care.

13. Anxiety in Medical Illness

Yoga programs may improve anxiety and quality of life in cancer and other chronic conditions [14]. Benefits can come from symptom management, activity, sleep, social connection, and self-efficacy. Medical screening remains essential, and modifications may be required for surgery, bone fragility, neuropathy, cardiopulmonary disease, or treatment-related fatigue.

14. Relationship to Standard Treatment

Yoga can sit alongside CBT, medication, psychoeducation, sleep care, and social interventions. It does not reproduce cognitive restructuring, exposure, relapse planning, or pharmacological action. A collaborative plan should identify the purpose of Yoga, how progress will be measured, and when treatment will be stepped up.

Urgent assessment is required for suicidality, psychosis, mania, severe functional decline, substance withdrawal, or suspected medical causes of anxiety. Yoga instructors should not diagnose, alter medication, or work beyond their competence.

15. Safety and Acceptability

Adverse effects may include pain, strain, falls, dizziness, hyperventilation, anxiety escalation, traumatic recall, or dissociation. Instructor training, screening, progressive practice, consent for touch, and incident reporting are necessary. Intensive retreats and advanced breath retention are not equivalent to supervised therapeutic classes.

Cultural familiarity can improve acceptability, but programs should avoid religious coercion and respect diverse beliefs. Cost, language, disability access, time, gender safety, and digital privacy influence whether an intervention is genuinely accessible.

16. Quality of the Evidence

Reviews generally report reductions in anxiety symptoms, but confidence is limited by small samples, mixed diagnoses, variable Yoga styles, wait-list controls, self-report outcomes, and short follow-up [15–21,29]. Participants and teachers cannot be blinded, making expectancy and allegiance important. Publication bias is plausible.

A single label such as 'Yoga' may conceal very different doses of movement, breathing, meditation, education, and teacher contact. Intervention manuals and adherence data are essential for interpretation.

17. Research Priorities

Future multicentre trials should use diagnostic interviews, credible active comparators, prespecified primary outcomes, blinded assessors, long follow-up, and systematic adverse-event collection. Comparisons with CBT, aerobic exercise, and

breathing-only programs can clarify relative and component effects.

Children, older adults, perinatal populations, trauma-exposed groups, and people with medical comorbidity require tailored safeguards. Digital and AI-guided Yoga should be tested for instruction accuracy, crisis detection, privacy, and inequitable performance before clinical deployment [25–32].

18. Conclusion

Yoga offers an embodied set of practices that may reduce anxiety symptoms and support self-regulation, particularly when people value movement and breath-based approaches. The best-supported interpretation is adjunctive: Yoga can complement evidence-based psychiatric treatment but has not replaced CBT or indicated medication. Classical concepts can enrich reflection without being equated with neural mechanisms. Safe integration requires diagnostic clarity, trauma-sensitive choice, qualified instruction, adverse-event monitoring, and honest discussion of the limits of evidence.

19. Position within Psychiatric Care

Intervention	Primary role	Relationship to Yoga
CBT	First-line psychological treatment for many anxiety disorders	Yoga may support embodied awareness; it does not replace exposure or cognitive work
Medication	Evidence-based symptom treatment selected by diagnosis and risk	Yoga does not reproduce pharmacological effects or justify stopping medicines
Slow breathing	Regulation of respiratory arousal	Can be included in Yoga; must avoid overbreathing
Trauma-focused care	Processing and integration of traumatic memories	Trauma-sensitive Yoga may be adjunctive

Yoga practice	Movement, breath, attention, relaxation, and self-management	Use with screening, qualified instruction, and outcome monitoring
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20. References

- [1] World Health Organization. Mental Disorders: Key Facts. Geneva: World Health Organization; 2023. p.1–10.
- [2] American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR). 5th ed. Text Revision. Washington DC: American Psychiatric Association Publishing; 2022. p.189–276.
- [3] Taimni IK, translator. The *Yoga Sutras* of Patanjali. Reprint ed. Chennai: Theosophical Publishing House; 2011. p.1–212.
- [4] Swami Muktibodhananda, editor. *Hatha Yoga Pradipika*. 3rd ed. Munger: Bihar School of Yoga; 2012. p.1–643.
- [5] Swami Vivekananda. Raja Yoga. Reprint ed. Kolkata: Advaita Ashrama; 2018. p.75–142.
- [6] Sadock BJ, Sadock VA, Ruiz P. Kaplan and Sadock's Synopsis of Psychiatry. 12th ed. Philadelphia: Wolters Kluwer; 2021. p.379–452.
- [7] Stahl SM. Stahl's Essential Psychopharmacology: Neuroscientific Basis and Practical Applications. 5th ed. Cambridge: Cambridge University Press; 2021. p.245–336.
- [8] Streeter CC, Gerbarg PL, Saper RB, Ciraulo DA, Brown RP. Effects of yoga on the autonomic nervous system, gamma-aminobutyric acid, and allostasis in epilepsy, depression, and post-traumatic stress disorder. *Med Hypotheses*. 2012;78(5):571–579.
- [9] Tyagi A, Cohen M. Yoga and heart rate variability: A comprehensive review. *Altern Ther Health Med*. 2016;22(3):54–62.
- [10] Pascoe MC, Thompson DR, Ski CF. Yoga, mindfulness-based stress reduction and stress-related physiological measures: A meta-analysis. *Psychoneuroendocrinology*. 2017;86:152–168.
- [11] Falkenberg RI, Eising C, Peters ML. Yoga and immune system functioning: A systematic review. *J Behav Med*. 2018;41(4):467–482.
- [12] Gothe NP, McAuley E. Yoga and cognition: A meta-analysis of chronic and acute effects. *Psychosom Med*. 2015;77(7):784–797.
- [13] Simon NM, Hofmann SG, Rosenfield D, et al. Efficacy of yoga versus stress education for generalized anxiety disorder: A randomized clinical trial. *JAMA Psychiatry*. 2020;77(9):1–10.
- [14] Cramer H, Lauche R, Anheyer D, et al. Yoga for improving health-related quality of life, mental health and cancer-related symptoms in women diagnosed with breast cancer. *Cochrane Database Syst Rev*. 2017;1:CD010802.
- [15] Khalsa SBS. Yoga for psychiatry and mental health: An ancient practice with modern relevance. *Indian J Psychiatry*. 2013;55(Suppl 3):S334–S336.
- [16] Balasubramaniam M, Telles S, Doraiswamy PM. Yoga on our minds: A systematic review of yoga for neuropsychiatric disorders. *Front Psychiatry*. 2013;3:117.
- [17] Cramer H, Lauche R, Langhorst J, Dobos G. Yoga for depression: A systematic review and meta-analysis. *Depress Anxiety*. 2013;30(11):1068–1083.
- [18] Hofmann SG, Gomez AF. Mindfulness-based interventions for anxiety and depression. *Psychiatr Clin North Am*. 2017;40(4):739–749.
- [19] Gupta N, Khera S, Vempati RP, Sharma R, Bijlani RL. Effect of yoga-based lifestyle intervention on state and trait anxiety. *Indian J Physiol Pharmacol*. 2006;50(1):41–47.
- [20] Sharma M. Yoga as an alternative and complementary treatment for anxiety: A systematic review. *J Evid Based Complementary Altern Med*. 2014;19(2):123–130.

- [21] Wang F, Eun-Kyoung Lee O, Feng F, et al. The effect of meditative movement on sleep quality: A systematic review. *Sleep Med Rev.* 2016;30:43–52.
- [22] Van der Kolk BA, Stone L, West J, et al. Yoga as an adjunctive treatment for post-traumatic stress disorder: A randomized controlled trial. *J Clin Psychiatry.* 2014;75(6):e559–e565.
- [23] National Institute for Health and Care Excellence (NICE). Generalised Anxiety Disorder and Panic Disorder in Adults: Management (Clinical Guideline CG113). London: NICE; Updated 2020. p.1–54.
- [24] Feuerstein G. *The Yoga Tradition: Its History, Literature, Philosophy and Practice.* 3rd ed. Prescott: Hohm Press; 2008. p.245–390.
- [25] Iyengar BKS. *Light on Pranayama.* Reprint ed. London: HarperCollins Publishers; 2010. p.1–298.
- [26] Ministry of AYUSH, Government of India. *Common Yoga Protocol.* New Delhi: Ministry of AYUSH; 2025. p.1–48.
- [27] World Health Organization. *Comprehensive Mental Health Action Plan 2013–2030.* Geneva: World Health Organization; Updated 2021. p.1–44.
- [28] Telles S, Sharma SK, Balkrishna A. Yoga and public mental health: Current evidence and future perspectives. *J Ayurveda Integr Med.* 2023;14(4):100767.
- [29] Gard T, Noggle JJ, Park CL, Vago DR, Wilson A. Potential self-regulatory mechanisms of yoga for psychological health. *Front Hum Neurosci.* 2014;8:770.
- [30] Breedvelt JJF, Amanvermez Y, Harrer M, et al. The effects of meditation, yoga and mindfulness on depression, anxiety and stress in tertiary education students: A meta-analysis. *Clin Psychol Rev.* 2019;74:101786.
- [31] National Institute of Mental Health. *Anxiety Disorders.* Bethesda: National Institute of Mental Health; 2024. p.1–18.
- [32] World Health Organization. *Traditional Medicine Strategy 2025–2034.* Geneva: World Health Organization; 2025. p.1–98.