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Integrating Medhya Rasayana for mental resilience: A review of ayurvedic stress management

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Abstract

Stress is a pervasive health concern, affecting physical, mental, and social well-being globally. Ayurveda offers holistic strategies for stress management, which is conceptualized as Manasika Vyadhi, a fundamental disturbance of the Manovaha Srotas influenced by the mental qualities of Rajas (agitation) and Tamas (inertia). Mechanistically, chronic stress is linked to the hyperactivity of the HPA axis and increased cortisol levels. Ayurvedic management aims to restore Sattva guna (clarity) and harmonize the Tridosha through comprehensive strategies, including Ahara (diet), Vihara (lifestyle), and Medhya Rasayana (cognitive-enhancing herbs). This review examines the therapeutic role of six key Medhya Rasayana: Ashwagandha (*Withania somnifera*), Brahmi (*Bacopa monnieri*), Shankhapushpi (*Convolvulus pluricaulis*), Mandukaparni (*Centella asiatica*), Yashtimadhu (*Glycyrrhiza glabra*), and Guduchi (*Tinospora cordifolia*). Modern research validates their traditional uses; for example, Ashwagandha modulates the HPA axis, demonstrating significant adaptogenic and anxiolytic effects. Brahmi enhances memory and cognition through neuroprotective and antioxidant properties. Shankhapushpi and Yashtimadhu provide synergistic support against anxiety and oxidative stress, while Guduchi supports neuroimmune homeostasis. By integrating these classical Ayurvedic principles with contemporary pharmacological evidence, provides a robust, evidence-based framework for enhancing mental resilience, promoting neuroimmune homeostasis, and supporting the body's holistic adaptation to stress. This review highlights the need for standardization and clinical validation of Medhya Rasayana in stress-related disorders.

Keywords: Adaptogens, Ayurveda, Ashwagandha, Medhya Rasayana, Stress

Introduction

Stress is a ubiquitous and insidious factor in contemporary life, fundamentally contributing to a wide spectrum of physical and psychological disorders globally [14]. Modern medical science has firmly established that chronic exposure to stressors activates the hypothalamic-pituitary-adrenal (HPA) axis, which is the central neuroendocrine mechanism regulating the stress response. Sustained activation leads to the excessive secretion of cortisol and other glucocorticoids. This neurochemical imbalance is directly implicated in the pathogenesis of severe chronic conditions, including hypertension, metabolic syndrome, generalized anxiety, and clinical depression [1, 6]. The widespread prevalence and complexity of these resulting pathologies mean the World Health Organization identifies stress-related disorders as among the most significant public health challenges of the 21st century.

Ayurveda addresses stress not merely as a biological event but as a systemic imbalance rooted in psycho-spiritual integrity. Stress is categorized as a disturbance of the Manovaha Srotas (the channels that carry mental processes and consciousness), fundamentally conceptualized as Manasika Vyadhi (mental disease) [8, 14]. According to classical texts like the Charaka Samhita [14] and Sushruta Samhita [8], the aetiology of mental distress primarily arises from the imbalance of the three Manasika Gunas (mental qualities): Rajas (the quality of dynamism, restlessness, and passion) and Tamas (the quality of inertia, ignorance, and darkness) become excessive, thereby diminishing Sattva (the quality of clarity, balance, and purity).

Classical texts emphasize that optimal mental and physical health (Swasthya) is achieved through the harmonization of Sattva guna and the three physical qualities, or Tridosha Vata, Pitta, and Kapha ^[14, 16]. Vata is particularly relevant to

the stress response, as its aggravation leads to symptoms highly correlated with stress, such as anxiety, tremors, and insomnia.

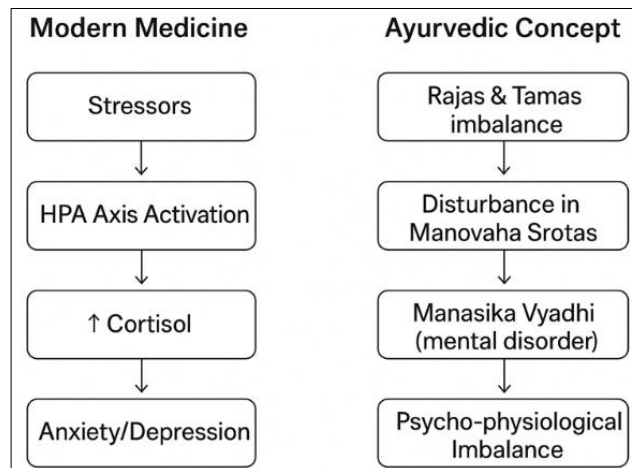


Fig 1: Ayurvedic and Modern Stress Mechanisms

Management strategies within Ayurveda are comprehensive and multi-modal, aiming to restore this psycho-physiological equilibrium ^[16]. These strategies include:

- **Ahara (Dietary regulation):** Personalized nutritional guidance is foundational, as proper diet directly supports Agni (digestive fire). A balanced Agni prevents the formation of Ama (undigested toxins), which can obstruct the Srotas and contribute to Tridosha imbalances that lead to disease ^[14]. Dietary recommendations for stress management often emphasize Sattvic foods (fresh, whole, easily digested) while reducing Rajasic foods (spicy, stimulating) and Tamasic foods (processed, stale) to directly foster mental clarity.
- **Vihara (Lifestyle practices):** This involves adherence to disciplined routines, primarily Dinacharya (daily routine), which includes rising early, oil pulling, and self-massage (Abhyanga). These practices are designed to stabilize the nervous system and pacify aggravated Vata, thereby promoting systemic tranquillity and resilience against external stressors ^[14, 16]. Proper Nidra (sleep) is also considered an essential component of Vihara for maintaining the integrity of the mind and body ^[14].
- **Meditation and Mind-Body Practices:** Techniques like Yoga, and especially Pranayama (breath control), are prescribed to actively increase Sattva guna ^[14]. By calming the prana (life force), these practices directly regulate the nervous system, offering a non-pharmacological means to manage the physiological manifestations of stress, such as rapid heartbeat and shallow breathing.
- **Aushadhi (Herbal therapies):** The pharmacological approach utilizes specific therapeutic agents to directly balance the Doshas and the Manasika Gunas.

Within this therapeutic framework, the use of herbal therapies is paramount. These agents specifically target cognitive enhancement and resilience. Medhya Rasayana herbs, defined as plant-based elixirs for the intellect (Medha), play a crucial role in maintaining mental clarity,

memory, and emotional stability ^[13, 16]. The documented clinical and experimental studies confirming their anti-stress and adaptogenic effects align perfectly with their classical function as Rasayana, which denotes therapeutic agents aimed at rejuvenating the body's tissues and promoting longevity and mental strength ^[13, 16]. This review, therefore, focuses on the empirical evidence supporting the traditional claims of these powerful Ayurvedic adaptogens.

Materials and Methods

This review synthesized data from classical Ayurvedic texts, including Charaka Samhita and Sushruta Samhita ^[8, 14]. Modern literature was retrieved from PubMed, Scopus, and Google Scholar using the keywords 'Medhya Rasayana', 'adaptogens', 'Ayurveda', and 'stress management'. Peer-reviewed studies evaluating pharmacological, clinical, and toxicological properties of the selected herbs were included ^[13]. Studies lacking experimental data or peer review were excluded. Qualitative analysis was performed to correlate classical Ayurvedic interpretations with modern pharmacological findings.

Results

The Ayurvedic interpretation of stress posits it as a fundamental disturbance of the Manovaha Srotas primarily characterized by the dominance of the mental qualities Rajas or Tamas ^[14]. The therapeutic goal is to restore the balance, allowing Sattva guna to prevail, thereby supporting mental clarity and emotional stability ^[14, 16]. Medhya Rasayana herbs achieve this by working at the level of the nervous system, aiming to rejuvenate the Majja Dhatu and enhance overall cognitive functions ^[16]. Classical texts are unanimous in recommending specific herbs for this purpose. The Charaka Samhita and Sushruta Samhita explicitly list Ashwagandha, Brahmi, Shankhapushpi, Mandukaparni, Yashtimadhu, and Guduchi as primary Medhya Rasayana ^[8, 14]. Modern scientific studies have validated these traditional claims, demonstrating that these herbs collectively exert significant adaptogenic, neuroprotective, anxiolytic, and antioxidant effects ^[1, 3, 13]. The pharmacological actions of these Medhya Rasayana are detailed below, correlating their traditional properties with contemporary mechanisms:

Table 1: Classical Ayurvedic Properties of Medhya Rasayana

Herb (Botanical)	Ayurvedic Name	Dosha Effect	Rasa (Taste)	Guna (Quality)	Karma (Action)	Classical References
<i>Withania somnifera</i>	Ashwagandha	Vata-Pitta pacifying	Katu, Madhura	Guru, Snigdha	Medhya, Balya (strength-promoting), Rasayana (rejuvenating)	Charaka Samhita, Sushruta Samhita [8, 14]
<i>Bacopa monnieri</i>	Brahmi	Vata-Pitta pacifying	Tikta, Katu	Laghu, Snigdha	Medhya, Smriti vardhana (memory-enhancing)	Charaka Samhita, Ashtanga Hridaya [14]
<i>Convolvulus pluricaulis</i>	Shankhapushpi	Vata-Pitta pacifying	Tikta	Laghu, Snigdha	Medhya, Nidra (sleep-inducing/regulating)	Bhavaprakasha, Yogaratnakara
<i>Centella asiatica</i>	Mandukaparni	Vata-Pitta pacifying	Tikta	Laghu, Snigdha	Medhya, Vatahara (Vata-pacifying)	Charaka Samhita, Ashtanga Hridaya [14]
<i>Glycyrrhiza glabra</i>	Yashtimadhu	Vata-Pitta pacifying	Madhura	Guru, Snigdha	Medhya, Balya	Charaka Samhita, Sushruta Samhita [8, 14]
<i>Tinospora cordifolia</i>	Guduchi	Tridosha pacifying	Tikta, Kashaya	Laghu, Ruksha	Rasayana, Medhya	Charaka Samhita, Bhavaprakasha [14]

Table 2: Modern Scientific Corroboration and Mechanisms

Herb	Key Phytochemicals	Mechanism of Action	Clinical / Preclinical Evidence	References
Ashwagandha	Withanolides	Modulates HPA axis, reduces cortisol, potent antioxidant, GABAergic effects	Reduces stress, anxiety, and improves sleep quality, confirming its adaptogenic role.	[1, 3, 6]
Brahmi	Bacosides	Enhances acetylcholine signalling (pro-cholinergic action), strong antioxidant activity, neuroprotective effects.	Improves verbal learning, memory retention, and reduces stress markers.	[7, 11]
Shankhapushpi	Flavonoids, Alkaloids	GABA modulation, Nootropic effects, mild CNS depressant activity.	Significant anxiolytic action and improvement in various cognitive domains.	[4, 5]
Mandukaparni	Asiaticoside	Promotes neurogenesis, enhances cerebral blood flow, powerful antioxidant.	Supports cognitive function, enhances mood, and aids wound healing (neuroprotective context).	[10, 14]
Yashtimadhu	Glycyrrhizin	Anti-inflammatory action, neuroprotective effects, potential modulation of corticosteroid metabolism.	Ameliorates behavioural deficits in stress models and reduces oxidative damage.	[9, 15, 18]
Guduchi	Tinosporaside	Immunomodulatory properties, robust antioxidant defence, enhances macrophage function (adaptogenic).	Enhances adaptive capacity to physical and chemical stress, and supports neuroimmune integrity.	[2, 12, 17]

Discussion

The validation of Medhya Rasayana herbs by modern science is central to bridging traditional Ayurvedic pharmacology with contemporary neurobiology. The traditional classification of these herbs as adaptogens is strongly supported by their demonstrated capacity to non-specifically enhance the body's resistance to stress and promote cellular protection [3, 13].

Correlation of classical action with modern pharmacology

The specific mechanisms of action strongly confirm the classical uses:

- 1. HPA Axis Modulation and Anxiety:** Ashwagandha is the prime example, directly fulfilling its Balya and Rasayana roles. Clinical trials confirm its ability to reduce cortisol levels and anxiety, establishing it as a true adaptogen that modulates the HPA axis [1, 6]. By regulating this central stress pathway, Ashwagandha provides a biological basis for its traditional use in stabilizing the mind and body against chronic stress.
- 2. Cognitive Enhancement and Neuroprotection:** Brahmi and Mandukaparni are validated as powerful nootropics. Brahmi's efficacy as Smriti vardhana is linked to its active bacosides, which enhance acetylcholine signalling a key neurotransmitter for memory and provide robust antioxidant protection to neural tissue [7, 11]. Mandukaparni's triterpenoids promote neurogenesis and enhance cerebral blood flow,

supporting its use in maintaining mental resilience [10, 14].

- 3. Anxiolytic and Supportive Action:** Shankhapushpi and Yashtimadhu provide synergistic benefits. Shankhapushpi's anxiolytic effect is attributed to the modulation of GABA (gamma-aminobutyric acid), calming an over-stimulated Vata-Pitta nervous system [4, 5]. Yashtimadhu supports this defense by providing anti-inflammatory and neuroprotective action, mitigating the oxidative damage induced by chronic stress [9, 15, 18].
- 4. Neuroimmune Homeostasis:** Guduchi functions as an immunomodulator and powerful Rasayana. Its ability to support neuroimmune homeostasis and enhance the adaptive response is critical for chronic stress management, where immune function is often suppressed [2, 12, 17].

The Holistic Advantage

Critically, the Ayurvedic approach extends far beyond mere herbal supplementation. Integrating Rasayana therapy with Yoga, Pranayama, and meditation optimizes mental resilience by actively enhancing the Sattva guna [16]. The systemic calming effects of these mind-body practices complement the biochemical support provided by the Medhya Rasayana, offering a truly holistic and personalized approach to stress management [16]. This multi-modal strategy simultaneously addresses the physical, psychological, and psycho-spiritual roots of Manasika Vyadhi.

Future research must focus on the standardization of these herbal formulations, the precise elucidation of their molecular mechanisms using modern '-omics' technologies, and large-scale clinical validation to effectively bridge traditional Ayurvedic wisdom with modern biomedical science [13].

Conclusion

Ayurveda provides a profoundly holistic and sophisticated framework for stress management by addressing the fundamental imbalance of the Manasika Gunas and the Tridosha [14]. This approach emphasizes restoring Sattva guna through multi-modal strategies encompassing diet, lifestyle, mind-body practices, and specialized herbal agents.

The core of the Ayurvedic pharmacological strategy lies in Medhya Rasayana herbs. These six agents Ashwagandha, Brahmi, Shankhapushpi, Mandukaparni, Yashtimadhu, and Guduchi are consistently validated by modern pharmacological studies, offering safe and effective strategies for enhancing mental resilience [16]. Their confirmed adaptogenic, neuroprotective, and anxiolytic properties provide concrete biochemical support for their traditional use in rejuvenating the nervous system and mind [3]. The ability of these compounds to modulate the HPA axis, enhance neurotransmission, and combat oxidative stress provides a compelling, evidence-based rationale for their efficacy in managing chronic stress [1, 6, 11].

To fully integrate these findings into global healthcare standards, it is imperative that future research efforts focus on establishing the standardization of herbal extracts and the precise elucidation of their complex molecular mechanisms. Only through rigorous, large-scale clinical trials can the therapeutic potential of Medhya Rasayana be definitively established, successfully bridging ancient Ayurvedic wisdom with the demands of modern scientific validation [13].

Authors contribution

LH drafted the manuscript and carried out work. MG, EL, RS participated in its design and coordination. All authors read and approved the final manuscript.

Conflict of interest

The authors declare that they have no conflicts of interest.

References

- Chandrasekhar K, Kapoor J, Anishetty S. A prospective, randomized double-blind, placebo-controlled study of safety and efficacy of a high-concentration full-spectrum extract of Ashwagandha root in reducing stress and anxiety. *Indian J Psychol Med.* 2012;34(3):255-262.
- Gupta A, et al. *Tinospora cordifolia* (Giloy): An insight on the multifarious pharmacological activities. *Phytother Res.* 2024;38(4):1104-1120.
- Gupta GL, Rana AC. *Withania somnifera* (Ashwagandha): A review. *Pharmacogn Rev.* 2007;1(1):129-136.
- Batra P. Effect of *Shankhapushpi* on attentional processes. *Indian J Positive Psychol.* 2014;5(3).
- Malik J, et al. Nootropic, anxiolytic and CNS-depressant studies on *Shankhapushpi* (*Convolvulus pluricaulis* Chois.). *Phytother Res.* 2011;25(10):1517-1523.
- Mikulska P, et al. *Ashwagandha* (*Withania somnifera*)—Current research on its adaptogenic properties. *Phytomedicine.* 2023;101:153974.
- Morgan A, Stevens J. Does *Bacopa monnieri* improve memory performance in older persons? *J Altern Complement Med.* 2010;16(7):753-759.
- Murthy KRS. *Susruta Samhita* (Text with English Translation). Varanasi: Chaukhamba Publications; 2013.
- Gupta GL, Sharma L, Sharma M. 18 β -Glycyrrhetic acid ameliorates neuroinflammation linked depressive behavior instigated by chronic unpredictable mild stress via triggering BDNF/TrkB signaling pathway in rats. *Neurochem Res.* 2023;48(2):551-569.
- Orhan IE, et al. *Centella asiatica* (L.) Urban: From traditional medicine to modern medicine. *Phytother Res.* 2012;26(6):743-749.
- Pase MP, et al. The cognitive-enhancing effects of *Bacopa monnieri*: A systematic review of randomized, controlled trials. *J Altern Complement Med.* 2012;18(7):647-652.
- Mutalik M, Mutalik M. *Tinospora cordifolia*: Role in depression, cognition and memory. *Aust J Med Herbalism.* 2011;23(4):168-173.
- Rege NN, Thatte UM, Dahanukar SA. Adaptogenic properties of six *rasayana* herbs used in Ayurvedic medicine. *Phytother Res.* 1999;13(4):275-291.
- Sharma PV. *Charaka Samhita* (Text with English Translation). Varanasi: Chaukhamba Orientalia; 2014.
- Sharma R, et al. Revisiting *Licorice* as a functional food in the management of stress-related disorders. *Phytother Res.* 2023;37(6):1821-1833.
- Sharma H, Chandola HM, Singh G, Basisht G. Utilization of Ayurveda in health care: an approach for prevention, health promotion, and treatment of disease. Part 2—Ayurveda in primary health care. *J Altern Complement Med.* 2007;13(10):1135-1150.
- Upadhyay AK, et al. *Tinospora cordifolia* (Willd.) Hook. f. and Thoms. (*Guduchi*): A review of its medicinal properties. *J Ethnopharmacol.* 2010;130(1):1-15.
- Wahab S, et al. *Glycyrrhiza glabra* (*Licorice*): A comprehensive review on its pharmacological properties. *Phytochem Rev.* 2021;20(1):1-24.