Research Article

# Therapeutic Role Of Bhramari Pranayama In The Management Of Depression: A Narrative Review

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**ABSTRACT**

Depression is a multifactorial psychiatric disorder characterized by persistent sadness, anhedonia, disturbed sleep, and impaired cognitive function. Although pharmacological and psychotherapeutic approaches remain standard treatment modalities, complementary and integrative practices such as yogic breathing techniques are increasingly being explored for their therapeutic potential. Bhramari Pranayama, a classical yogic breathing practice involving slow inhalation followed by humming exhalation, is traditionally described as a calming technique that stabilizes the mind. Ayurvedic literature conceptualizes depressive states under conditions such as Vishada, Chittodvega, and disturbances of Manovaha Srotas, primarily involving imbalance of Rajas and Tamas gunas.

This narrative review synthesizes classical Ayurvedic references, yogic textual descriptions, and contemporary scientific literature to explore the theoretical and practical relevance of Bhramari Pranayama in managing depression. Evidence suggests that Bhramari may modulate autonomic balance, reduce stress responses, improve emotional regulation, and enhance Sattva guna. Although current literature supports its psychological benefits, further well-designed studies are required to establish standardized therapeutic protocols.

**KEYWORDS** Bhramari Pranayama; Depression; Vishada; Ayurveda; Manovaha Srotas; Yogic Breathing; Mental Health; Narrative Review.

## INTRODUCTION

Depression is one of the leading causes of disability worldwide and significantly contributes to the global burden of disease. It is a complex neuropsychiatric disorder characterized by persistent sadness, anhedonia, cognitive impairment, sleep disturbances, and neuroendocrine dysregulation. Modern biomedical science associate's depression with neurotransmitter imbalance, chronic stress, inflammation, and autonomic nervous system dysfunction [(1,2)]. These interrelated physical and psychological changes indicate that depression affects the individual holistically.

Despite advances in pharmacological and psychotherapeutic interventions, limitations such as adverse effects, relapse, and incomplete remission persist. This has led to growing interest in integrative approaches combining modern medicine with traditional systems like Ayurveda and Yoga.

In Ayurveda, mental health is governed by the equilibrium of Triguna—Satva, Rajas, and Tamas—along with proper functioning of Doshas and Manovaha Srotas. Disturbance in these leads to Manas Vikara (mental disorders). Conditions resembling depression are described as Vishada, Avasada, and Chittodvega [(3–5)].

The Charaka Samhita describes Vishada as a state of profound mental dejection that impairs enthusiasm and activity. [(3)]. It also emphasizes that imbalance of Rajas and Tamas contributes significantly to mental disturbances [(4)]. Furthermore, Sattvavajaya Chikitsa is described as an important therapeutic approach for controlling the mind and restoring psychological balance [(17)].

The Sushruta Samhita highlights the close relationship between body and mind, stating that disturbances in Doshas can influence mental health [(6)]. Similarly, Ashtanga Hridaya explains that improper sensory indulgence and stress (Asatmya Indriyartha Samyoga) contribute to psychological disorders and emphasizes the role of Prana Vayu and Sadhaka Pitta in mental functioning. [(11,12)]

To restore mental equilibrium, Ayurveda recommends non-pharmacological approaches such as Sattvavajaya, Dhyana, and Pranayama. Yogic texts like the Hatha Yoga Pradipika and Gheranda Samhita describe Bhramari Pranayama as a technique involving humming exhalation that promotes mental calmness and internal awareness [(7,8)].

Modern scientific studies support these traditional concepts, suggesting that slow breathing techniques improve autonomic balance, enhance vagal tone, reduce stress hormones, and improve emotional regulation [(13,14)]. Thus, integrating Ayurvedic principles with contemporary scientific understanding provides a strong basis for exploring the role of Bhramari Pranayama in depression management.

## AIM AND OBJECTIVES

**Aim**

To review classical and contemporary literature regarding the therapeutic role of Bhramari Pranayama in depression.

**Objectives**

1. To explore Ayurvedic understanding of depressive states.
2. To examine classical descriptions of Bhramari Pranayama.
3. To analyze modern scientific explanations for its psychological benefits.
4. To integrate traditional theory with current evidence.

## MATERIALS AND METHODS

**Study Design**

This study is a narrative literature review.

**Materials**

- Classical Ayurvedic texts: Charaka Samhita [3–5], Sushruta Samhita [6], Ashtanga Hridaya [11,12]
- Yogic texts: Hatha Yoga Pradipika [7], Gheranda Samhita [8]
- Research articles indexed in PubMed, Scopus, and AYUSH databases [9–20]

**Method of Review**

Relevant literature on Bhramari Pranayama, depression, autonomic regulation, and Ayurvedic mental health concepts was collected and thematically analyzed. Classical references were interpreted in the context of mental health.

**CONCEPTUAL UNDERSTANDING OF DEPRESSION IN AYURVEDA**

Ayurveda categorizes mental disorders under Manas Vikara. Depression-like conditions are explained as:

- Vishada – persistent sadness and hopelessness [3]
- Chittodvega – mental agitation [5]
- Imbalance of Rajas and Tamas [4]
- Dysfunction of Prana Vayu and Sadhaka Pitta [11]

Ashtanga Hridaya describes psychological disturbances arising from improper sensory interaction and stress [12].

**Therapeutic Principles**

- Sattvavajaya Chikitsa
- Regulation of Prana
- Meditation and Pranayama

**CLASSICAL DESCRIPTION OF BHRAMARI PRANAYAMA**

The Hatha Yoga Pradipika describes Bhramari Pranayama as producing a humming sound like a bee during exhalation, leading to mental tranquility and bliss [7].

The Gheranda Samhita also classifies Bhramari as an important pranayama that promotes mental steadiness [8].

Though not elaborately detailed in Ayurvedic Samhitas, pranayama is indirectly supported as a method for regulating Prana Vayu and stabilizing the mind [3,4].

**PROBABLE MECHANISMS IN DEPRESSION**

Bhramari Pranayama may help in depression through:

1. **Autonomic Modulation:**
   Enhances parasympathetic activity and reduces sympathetic overactivity [13].
2. **Vagal Stimulation:**
   Humming vibrations stimulate the vagus nerve and improve emotional regulation [14].

3. **Nitric Oxide Release:**
   Increases nasal nitric oxide, improving cerebral circulation [13].
4. **Stress Hormone Reduction:**
   Reduces cortisol and stress response [14].
5. **Enhancement of Sattva Guna:**
   Reduces Rajas and Tamas, promoting mental clarity [16].

## DISCUSSION

Depression is a multifactorial neuropsychiatric disorder involving neurotransmitter imbalance, neuroplasticity alterations, inflammation, and autonomic dysfunction [1,2]. Reduced parasympathetic tone and increased sympathetic activity contribute significantly to its pathophysiology.

Breathing practices act as a bridge between mind and body by influencing autonomic regulation [14]. Slow breathing enhances vagal tone and stabilizes emotional processing.

Bhramari Pranayama, with prolonged exhalation and humming, promotes parasympathetic dominance and improves heart rate variability [9,15]. It may stimulate vagal pathways and nitric oxide release, improving cerebral circulation and reducing stress hormones. [10,14].

From an Ayurvedic perspective, depression arises from imbalance of Rajas and Tamas and dysfunction of Prana Vayu [3–5,11]. Bhramari helps restore balance, supports Sadhaka Pitta, and enhances Sattva.

It aligns with Sattvavajaya Chikitsa, helping reduce mental disturbances and improve emotional stability [17].

Modern studies support yoga-based interventions as effective adjunct therapies for depression [18–20]. However, lack of standardized protocols and limited isolated studies on Bhramari highlight the need for further research.

## CONCLUSION

Bhramari Pranayama may serve as a beneficial complementary therapy in the management of depression. Classical Ayurvedic and yogic texts describe it as a calming technique that stabilizes the mind, while modern studies suggest its role in autonomic regulation and stress reduction.

Although current evidence is promising, further well-designed clinical trials are required to establish its efficacy and develop standardized treatment protocols.

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