



## EXPLORING THE EFFECT OF BHRAMARI PRANAYAMA ON MENTAL HEALTH

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**ABSTRACT** Pranayama, the fourth limb of Ashtanga Yoga of Patanjali yoga-darshan, is usually practiced after asana to get the mind ready for meditation. It involves the deliberate control and alteration of the breath (Prana) to develop vital energy. The reference to Bhramari Pranayama is found in various Hatha yoga texts specifically Gherand Samhita and Hatha Pradipika. The bee-like humming sound produced by bhramari pranayama promotes relaxation and tranquillity in the brain areas. Bhramari Pranayama support healthy brain functioning by calming the nervous system through internal sound vibration. Higher level brain activities are linked to Bhramari pranayama, which helps to prevent mental congestion. The objective of this study is to provide an overview of how bhramari pranayama affects mental health. Furthermore, the results of this study collectively suggest a number of possible applications of bhramari pranayama that are equally beneficial for modern day needs.

**KEYWORDS :** Bhramari Pranayama, Mind, Meditation, Brain function, Nervous System

### INTRODUCTION

In an increasingly fast-paced environment stress and other mental illnesses have become more common. According to a Lancet study (2020), 5.2% of the world's disease burden is caused by mental health issues.<sup>[1]</sup> Mental health deteriorates as a result of these mental illnesses, which affect thinking, emotional regulation, and everyday functioning. Yoga has emerged as a holistic tool that can improve cognitive function, self-awareness, emotional resilience, and relaxation. Additionally, practicing yoga lowers stress hormones<sup>[2]</sup> and balances the nervous system.<sup>[3]</sup> Yoga has long been considered a path to Kaivalya, or liberation.<sup>[4]</sup> However, yoga is currently being practiced as a way to attain holistic health and avoid a number of ailments, which has also been demonstrated by numerous studies.<sup>[5,6,7]</sup> Yoga is an age-old discipline that integrates meditation, asana, pranayama, mudra-bandha, and shatkarma for holistic well-being. Pranayama is regarded as the fourth limb in Maharshi Patanjali's Ashtanga yoga, following asana practice.<sup>[4]</sup> The word pranayama is composed of two Sanskrit words, Prana means life force, or vital energy, and "ayama", to extend or to regulate.<sup>[8]</sup> Among the many well-known, frequently practiced, and extensively studied pranayamas in yoga for mental health issues is Bhramari. Bhramari, which means "bhramar or bee" in Sanskrit, is the name given to the pranayama because of the humming sound it produces. The practice of Bhramari Pranayama involves making a humming sound. The brain and nervous system are thought to benefit from the vibrations produced during the humming sound of bhramari pranayama. Regularly practicing bhramari pranayama is linked to increased mental wellness and higher sleep quality.<sup>[9, 15]</sup> The vagus nerve is stimulated by the humming sound, which raises parasympathetic activity and promotes emotional stability and resilience while reducing stress, anxiety, and depression.<sup>[10,11]</sup> Furthermore, Bhramari pranayama facilitates stability in every aspect of health, especially mental wellness. Hence, the study investigates the ways in which bhramari pranayama supports both psychological stability and the restoration of homeostatic balance in the human body.

### Method

This review aims to understand how bhramari pranayama affects mental health. Material related to method and benefits of bhramari pranayama is collected from various hatha yoga texts specifically Hatha Pradipika, Gherand Samhita, Hatha Ratnavali, and Siddha Siddhant Paddati. A thorough search was conducted in Google Scholar, PubMed, Scopus, Medline, Cochrane library databases, Shodhganga, and other online databases to determine the impact of bhramari pranayama on mental health. Additionally, a manual search was carried out to ensure that all the studies could be accessed. The key words used were: pranayama, bhramari pranayama, impact/influence/effect of bhramari pranayama on the health/brain/ mental health, etc. These keywords were used to find randomized controlled trials, cross-sectional studies, and/or meta-analyses, etc. written in English. The duplicates were manually eliminated.

### Mental Health and its Significance

The World Health Organization defines mental health as a state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn and work effectively, and contribute to their communities.<sup>[12]</sup> Mental health is an integral component of overall

health, and has a direct impact on physical well-being, and social relationships. Without good mental health we might struggle with challenges of life. Restoring and maintaining mental health has emerged as a major priority. A WHO data sheet states that around one in seven people worldwide suffer from a mental illness. A mental illness that goes untreated might interfere with day-to-day functioning. WHO acknowledges the holistic approach to health and explains how social, mental, and physical well-being contribute to overall health. Therefore, it must be accepted that a person's physical and social wellbeing will be positively correlated with his mental health.

### Factors Affecting Mental Health

Mental health is impacted by multiple factors. These risk factors frequently coexist and contribute to a number of additional mental health issues. The different factors are summarized as follows;

- Family history of mental illnesses
- Neuro-hormonal imbalances and brain damage
- Chronic Physical conditions
- Divorce and Death of loved ones
- Childhood trauma and/or abuse
- Alcohol and/or drug addict
- Job insecurity and financial crisis
- Living in areas with high violence, crime, or social unrest
- Social isolation and loneliness

### Bhramari Pranayama

Swami Swatmarama's Hatha Yoga Pradipika and Sage Gheranda's Gheranda Samhita both discussed the methods and advantages of bhramari pranayama. These sources highlight that Bhramari Pranayama, which is typically performed with shanmukhi mudra, is one of the ashta kumbhaks (eight major pranayamas) and one of the six methods for achieving samadhi. According to the Hatha Yoga Pradipika (Chapter 2, Verse 68), the technique of bhramari pranayama involves rapid, humming inhalation mimicking a male bumble bee and a slow, gentle exhalation mimicking a female bee. The similar pranayama technique is described in the Gheranda Samhita along with kumbhaka with ears closed with the fingers.

### Effect of Bhramari Pranayama on Mental Health

Different types of pranayama produce specific response in various systems of human body and it greatly depends on the type of pranayama and duration of the practice. Swami Swatmarama stated in the "Hatha Yoga Pradipika" that "the mind is unsteady when the prana (breath) wanders." However, the mind will also be steady after the breath is regulated.<sup>[13]</sup> Bhramari pranayama is one such pranayama that may control prana, or breath, and has beneficial effects on the brain and mental well-being. Bhramari pranayama creates a vibration that stimulates different parts of the brain, improving focus, memory, and concentration. According to hatha yoga texts, the bhramari pranayama helps achieve Samadhi perfection and improves mental health.<sup>[14]</sup> The vagus nerve is one of the several nerves in the human body that are stimulated by the deep vibrations produced during the bhramari pranayama.<sup>[15]</sup> Through prolonged, low-frequency sound vibrations, Bhramari Pranayama's humming sound activates the vagus nerve. The vagus nerve's function in emotional regulation, resilience to stress, recovery from depression, and improving mental health has come to

light more and more in recent years. Numerous studies also indicate that depression, anxiety, and heightened vulnerability to stress are linked to decreased vagal tone.<sup>[16,17]</sup> In addition to many other mental health advantages, this sound effect increases parasympathetic nervous system activity<sup>[18]</sup>, which encourages deep relaxation, lowers stress, and manages anxiety. According to a different study, Bhramari pranayama instantly balances the autonomic nerve system and causes subjects to shift toward parasympathetic dominance.<sup>[19]</sup> Additionally, the activated parasympathetic nervous system helps in energy conservation, digestion, and body repair.<sup>[20]</sup> Karel, Netspar, and Bhuti, Swarup (2000) stated that Bhramari Pranayama reduces anxiety, stress, aggression, insomnia, depression, and many other mental illnesses. The findings of Jagadeesan, T., et al. (2022) indicated that Bhramari pranayama intervention had a positive impact on psychological health as well as quality of sleep among the COVID-19 patients during home isolation.<sup>[21]</sup> In order to assess the impact of Bhramari Pranayama on college students' mental health, Suprabha Srivastav et al. (January–March 2007) conducted a study and found that after practicing Bhramari Pranayama, students' mental health scores were higher compared to pre mental health score.<sup>[22]</sup> According to B.K.S. Iyengar in Light on Pranayama, the humming sound of Bhramari pranayama helps people with insomnia fall asleep.<sup>[23]</sup> When Bhramari pranayama is practiced continuously for five to ten minutes, the subjects experience subjective feelings of bliss and mental refreshment, and occasionally they are even thought to enter a meditative state.<sup>[24]</sup> As a result, engaging in a bhramari practice as a regular lifestyle intervention may be beneficial for sound mental health.

## CONCLUSION

In conclusion, this review has attempted to describe the effect of bhramari pranayama on mental health based on the studies so far found. The findings indicated that bhramari pranayama has a positive effect on psychological health. Bhramari Pranayama, is a breathing practice often known as 'bumblebee breathing'. It is an ancient yoga technique discussed in Hatha Yoga Pradipika and Gheranda Samhita. Bhramari pranayama practice has been shown to improve parasympathetic activity and decrease sympathetic activity. It is evident that bhramari pranayama positively influences multiple systems of human body particularly the brain. In this way, it is a great tool of yoga to improve mental health. However, for more valid and trustworthy results, it is necessary to focus on strengthening the methodology and study designs.

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