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Psychological benefits of *Bhramari Pranayama* in Menopausal Women : A Review

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ABSTRACT

Menopause, occurring between ages 45-55, causes hormonal changes that often lead to psychological symptoms such as mood swings, anxiety, and sleep disturbances. About 20% of women experience these issues during menopause. *Bhramari Pranayama*, a breathing technique, is recognized for its therapeutic effects on psychological disorders. **Aim and Objectives:** To review psychological benefits of *Bhramari Pranayama* in menopausal women, to review the literature regarding *Bhramari Pranayama*, To review the literature regarding Menopause. **Materials and Methods:** Different literature from articles, journals and from classical texts of *Ayurveda*, modern science and *Yoga* were reviewed and analyzed. **Discussion:** The humming sound in *Bhramari Pranayama*, similar to *Mantra* repetition, and its impact on breathing rhythm may help alleviate psychological issues in menopausal women. **Conclusion:** *Bhramari Pranayama* would be more beneficial to combat the psychological issues occurring in the menopausal women.

Key words: Psychological, Menopause, *Bhramari Pranayama*.

INTRODUCTION

Menopause is a natural phenomenon occurs at the age of 45-55 years. Various hormonal changes take place in the body during this phase of life; which results in development of several signs and symptoms that may disturb the routine activities. During reproductive years, women are protected by female hormones, i.e., estrogen and progesterone. With menopause, women enter an estrogen deficient phase in their lives, which accelerates the ageing process resulting into greater vulnerability to psychosomatic problems. These

diminished hormonal levels lead to the various symptoms seen in menopausal age which includes vasomotor symptoms like hot flushes, night sweats, headache, insomnia, dizziness, etc.^[1]

Psychological symptoms include poor memory and concentration, insomnia, fatigue, mood swings, anxiety, depression, irritability, sleep apnea, restless leg, loss of self-esteem.^{[2][3]}

Up to 70% of women experience psychogenic symptoms associated with perimenopause and menopause. So, menopausal health demands even higher priority in Indian scenario.^[4]

The eight limbs of *Yoga (Ashtang Yoga)* - *Yama, Niyam, Aasana, Pranayama, Pratyahar, Dharana, Dhyana, Samadhi*. *Pranayama* being the most relaxing technique which help in relaxing the body as well as mind. *Pranayamas* and are considered a form of meditation in itself, as well as a preparation for deep meditation. They promote physical well-being and self-awareness, improve lung and cognitive capacities, reduce blood pressure, anxiety, and other psychosomatic patterns, probably by increasing the parasympathetic tone.^[5]

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Although *Pranayama* therapy is a useful as a adjuvant therapy for menopausal women. Current evidence indicates that women will get benefits from *Pranayama* during menopausal transition in term of improved psychological wellbeing, sleep patterns & emotional modulation by enhancing the quality of life.^[6] While *Yoga* offers numerous benefits, and many studies have explored its effects related to menopause,^[7] there is limited research focusing on individual *Pranayama* techniques, particularly in relation to psychological aspects of menopause. *Bhramari Pranayama*, known for its health benefits, lacks sufficient scientific evidence supporting its effects. Most existing literature discusses the collective benefits of *Pranayama* practices, without specifically addressing *Bhramari Pranayama*. This systematic review aims to examine the available research on *Bhramari Pranayama*, assessing the methodologies used and the benefits highlighted. The findings could help identify gaps in current studies and open new opportunities for scientific advancements in this field.

Bhramari Pranayama, a branch of *Yoga* practice is extremely beneficial to mankind in maintaining sound mental health of menopausal women, this article aims to attain an insights of psychological benefits of *Bhramari Pranayama* in menopausal women.

AIM AND OBJECTIVES

1. To review psychological benefits of *Bhramari Pranayama* in menopausal women.
2. To review the literature regarding *Bramari Pranayama*
3. To review the literature regarding Menopause.

METHODOLOGY

Different literature from articles, journals and from classical texts of *Ayurveda*, modern science and *Yoga* were reviewed and analyzed.

REVIEW

यमनियमासनप्राणायामप्रत्याहारधारणाध्यान -
समाधयोऽष्टावङ्गानि ॥ पा. यो. २/२९ ॥

Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyan, Samadhi are eight pillars of *Yoga* science i.e., *Ashtang Yoga* by Patanjali Muni.

Patanjali Muni only explain the state of *Pranayama* and its aspects.^[8]

तस्मिन्सति श्वासप्रश्वासयोगतिविच्छेदः प्राणायामः ॥ पा.यो.
२/ ४९ ॥

Firstly, by gaining the control over the *Yama, Niyama* and *Asana* one should go for the *Pranayama* stage i.e., practising the breath regulation.

In Sanskrit '*Pran*' means life energy and '*Yama*' means control.^[9]

The *Hatha Yog Pradipika*, written by Svataamaram enumerates names eight types of breath holding techniques-

Surya Bhedana Kumbhaka, Ujjayi Kumbhaka, Siktari Kumbhaka, Sitali Kumbhaka, Bhastrika Kumbhaka, Bhramari Kumbhaka, Murccha Kumbhaka, Plavini Kumbhaka, highlighting the importance of air retention.^[10]

Bhramari Pranayama^[11]

वेगाद्धोषं पूरकं भृङ्गनादं भृङ्गीनादं रेचकं मंदमंदम् ।
योगीन्द्राणामेवमभ्यास योगाच्चित्ते जाता काचिदानंदलीला ॥
(ह.यो.प्र.२/६८)

Sound is produced like the large black bee (*Bhramara*) during *Prāṇāyāma*, the name called it as a *Bhramari*.

Method

1. Sit in *Padmāsana, Siddhāsana, Vajrāsana* or *Sukhāsana* with the back erect.
2. Perform *Jalandhara Bandha*.
3. Close the eyes & look inwards.
4. Exhale completely.
5. Take slow, deep, steady breath through both nostrils. Fill the lung
6. With hold the breath with *Mula Bandha*.
7. Exhale slowly with humming round like a black bee.

8. Repeat the cycle five to ten minutes.

Benefits^[12]

1. Beneficial in insomnia.
2. Relieves stress, tensions, anger, anxiety, & blood pressure
3. Improves the voice & throat ailments.

Menopause

Menopause means permanent cessation of menstruation at the end of reproductive life due to loss of ovarian follicular activity. It is the point of time when last and final menstruation occurs. The clinical diagnosis is confirmed following stoppage of menstruation (amenorrhea) for twelve consecutive months without any other pathology. As such, a woman is declared to have attained menopause only retrospectively Serum follicle-stimulating hormone (FSH) level is found elevated around the period of menopause (45-55 years).^[13]

Causes

Menopause is a natural process that occurs as the ovaries ages and produce less reproductive hormones.^[14] The body begins to undergo several changes in response to lower levels of :

- Oestrogen
- Progesterone
- Testosterone
- Follicle stimulating hormone
- Leutinizing hormone

Symptoms^[15]

1. Menstrual changes - Shorter cycles, Irregular bleeding
2. Vasomotor symptoms - Hot flashes, Night sweats, Sleep disturbances, incontinence, Urgency, Dysuria.
3. Psychological - They include anxiety, poor memory, inability to concentrate, depressive mood, irritability, mood swings, and less interest in sexual activity.

4. Sexual dysfunction - Vaginal dryness, Dyspareunia
5. Urinary - Incontinence, Urgency, Dysuria
6. Others - Back aches, Joint aches

Management

1. Nonhormonal treatment
2. Lifestyle modification, Nutritious diet, Supplementary calcium, Exercise, Vitamin D, Cessation of smoking and alcohol, Bisphosphonates, Calcitonin, selective estrogen receptor modulators (SERMS), Clonidine, Paroxetine, Gabapentine, Phytoestrogens, Soy protein, Vitamin E.
3. Hormonal Therapy^[16]

DISCUSSION

Pranayama, by continuous practice reduces the dead space ventilation and decreases the work of breathing. Entire lung is ventilated in contrast to the shallow breathing which only refreshes the base of the lung. Practicing *Pranayama* regularly has a positive impact on cardiovascular and respiratory functions improves the autonomic system towards parasympathetic (vagal tone) dominance. This in turn reduces the effects of stress and strain on various systems. Hence the overall physical and mental health improves.^[17]

Bhramari Pranayama enhances the production of nitric oxide (NO), with the humming during the exhalation phase boosting nitric oxide levels by up to 15 times compared to a quiet exhalation. This increase in NO helps to dilate the arteries, improve blood circulation, and enhance tissue oxygenation. The acoustic vibrations from the humming sound serve as a beneficial stimulus for the brain, soothing the brain and nerves, leading to significant positive effects.^[18]

The *Bhramari* is one type of *Pranayama*. Its simplicity of slow breathing and that it could be easily practiced by everyone irrespective of their age or gender makes it notifiable. In *Bhramari Pranayama*, the practitioner will sit in any comfortable posture and inhale and exhale through nostrils slowly and deeply. While exhaling, will have to produce sound (humming sound)

like bumble bee strictly through nasal airways, keeping oral cavity closed by the lips, ears closed by fingers,^[19] the self induced humming sound in this practice resembles *Mantra* repetition technique. *Bhramari Pranayama* changes the normal breathing rhythm, with prolonged exhalation and short inhalation, which produces significant impact in physiological system.^[20] Practice of *Bhramari Pranayama* for 5-10 min continuously induce subjective feelings of mind refreshment and blissfulness and sometimes the subjects are believed to go to even meditative state.^[21] So *Bhramari Pranayama* technique is not only a breathing practice but also a form of meditation. As compared with other *Pranayama*, it does not have any kind of breath holding or alternate nostril involvement with counting. Added to above, the humming sound which is produced during the breathing gives more attraction and interest to the subjects for practicing the *Pranayama*. In this, it's very convenient to control and check the correctness by the sound of humming which is produced by the *Pranayama* practitioners. It has been reported that the practice of *Bhramari Pranayama* is effective for Treating hormonal imbalance conditions and other disorders like anxiety and depression, and extremely beneficial in gynaecological diseases.

Bhramari Pranayama directly impacts the hypothalamus, pituitary, and pineal glands, helping to restore balance to the body's endocrine system. The vibrations from *Bhramari Pranayama* stimulate the hypothalamus, which plays a key role in maintaining homeostasis. This, in turn, helps regulate the pituitary gland, the master gland that controls the secretion of sex hormones, growth hormones, thyroid hormones, and adrenal hormones. As a result, regular practice of *Bhramari Pranayama* can help maintain hormonal balance, and individuals experiencing hormonal imbalances can greatly benefit from incorporating this *Pranayama* into their routine.^[22]

CONCLUSION

From the study, it can be concluded that *Bhramari Pranayama* would be more beneficial to combat the

psychological issues occurring in the menopausal women.

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