

Effect of Bhramari Pranayama on Depression among College going Students

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Abstract

Depression is a prevalent mental health disorder that significantly disrupts an individual's psychosocial stability, personality, and overall quality of life. Epidemiological trends indicate a sharp rise in cases, affecting approximately 26% of women, 20% of men, and nearly 10% of the adolescent population. While the World Health Organization (WHO) reports that over 40 million people suffer from mental health conditions globally, conventional treatments like Psychotherapy and Allopathy are often supplemented or substituted by Yoga. Among yogic interventions, *Pranayama* and *Meditation* have proven highly effective in restructuring the emotional state of the brain.

Objective: This study specifically examines **Bhramari Pranayama** as a non-invasive breathing and vibrational technique for treating depressive symptoms.

Mechanism of Action: *Bhramari Pranayama* utilizes rhythmic humming to produce internal resonance. Scientific data suggests that these vibrations stimulate the cerebral cortex, which in turn sends direct impulses to the hypothalamus. By modulating the hypothalamus, the practice regulates the pituitary gland—the master of the endocrine system—thereby balancing the hormonal response to stress. This process induces instant mental stillness, reduces autonomic arousal, and fosters a rational, calm cognitive state.

Key Words: Depression, Bhramari Pranayama, Hypothalamus, Pituitary Gland, Cerebral Cortex, Vibrational Therapy, HPA Axis

1. Introduction

Depression is a state of low mood and aversion to activity that can affect a person's thoughts, behaviour, feelings and physical well-being. It may include feelings of sadness, anxiety, emptiness, hopelessness, worthlessness, guilt, irritability, or restlessness. Depressed people may lose interest in activities that once were pleasurable, experience difficulty concentrating, remembering details, or making decisions, and may contemplate or attempt suicide, excessive sleeping, fatigue, loss of energy, or aches, pains or digestive problems that are resistant to treatment may be present.

The word `Depression` is defined by the Collins Dictionary as "a state of low spirits, dejection and despondency that can disturb the normal physiological and psychological functioning of an

individual. According to the dictionaries, the word “Vishada” has been said to have a denotation of “Low spirit”. Hence, owing to the commonness of the meaning, it may be correlated with the English term “Depression: In ancient Indian literatures too, the term “Vishada” has been used as a catastrophe, which may be correlated with depression. Regveda (Ri. 11/97) the first ever-authentic human literature denotes the use of a special invocation to God for getting rid of Vishada i.e. awareness about Vishada prevention was prevalent. According to the first chapter of “Shrimad Bhagvad Geeta” the condition of Arjun in the battle field, viz. Sidanati Gatrani (loosening of muscles), Mukhashosha (dry mouth), Vepathu (tremors), Aruchi (anorexia), Prasveda (sweating), Twak Paridaha (burning sensation in the skin) etc. which commensurate with the symptoms of depression enlisted till date. Even in Ayurvedic texts like Charaka Samhita mention “Vishada” as one of the Nanatmaja Vata Vikara and it is further said that Vishada is the main factor that increases the rage of all the diseases.

Pranayama

Life Energy is called *Prana* (prah-nah). In Sanskrit, the word for breath is the same as the word for life – prana. The first thing you do as you enter this world is to inhale. Your last act in life is to exhale. When prana leaves the body, we die. The breath is a metaphor for life energy. In yoga, and in Ayurveda, we seek to sustain and enhance the life force as much as possible – absorbing as much prana through breath, food, visual surroundings, sound, all our sense as possible. The most significant way of doing this is through the practice of pranayama (prah-nah-yah-mah) , breathing techniques or breath control. *Yama* (yah-mah) is translating as control, discipline, regulation or mastery. Hence, some translate pranayama as “breathe control”.

Ayama (ah-yah-mah) is expansion, growth, extension, augmentation or magnification. Hence, another translate is “expansion of the life force”. Both are loosely translated as “breathe control” but realize that there is much more behind this definition.

Breathing is one of the few autonomic function of the body that we may also control (although more experiment yogis and yogi is may control heart rate, blood pressure, skin temperature, and other functions previously believed to autonomic). The breath is seen as an important link between our body, our mind, and our spirit – moving from the purely physical realm, to the mental, to the spiritual. Yogis tell us that we derive only 5-10% of prana from food – the rest breathing. Therefore, according to yoga, it is essential to breath effectively for optimum health. Many breathing techniques – *Pranayama* – have been devised, over thousands of year’s inspiration (pun intended!) and experimentation. Each technique has a different effect, and therefore serves a different purpose.

Pranayama is the technique of choice for building energy. When practice after yoga postured – or any form of exercise – it harnesses and consolidates the released energy, and makes it accessible to the body over longer periods. Doing a workout, and then heading straight to the cafe, will result in waste dispersion of your energy – instead do some pranayama first? I have personally used pranayama with great results – after 20 years of experiencing chronic fatigue and depression, I now accomplish, much more in 16-18 hour day than I used to in a week; now combining full-time study, yoga instruction, part-time work, Ayurvedic massage, and family time! Some breathing techniques activate the parasympathetic

The traditional purpose pranayama is to cleanse the body of excess doshas (humours), and purify the Nadis (energy channels). This will increase health and immunity, and facilitate meditation. In fact, many yogis feel that trying to meditation without pranayama is futile. The ideal sequence is asana

(postures) to release energy, pranayama (breathing) to harness the energy and direct it to brain, then meditation.

Bhramari Pranayama

The name Bhramari is given to this Pranayama because use produces a humming sound like a bee. In this pranayama the practitioner implies the same deep. Low pitched sound as the bee. According to Hatha yoga pradipika;-

वेगाद घोशं पूरकं भृङ्गनादम! भृङ्गीनादं रेचकं मन्दमन्दम!!
योगीन्द्राणामेवमभ्यासपोगात! चित्ते जाता काचिदानन्द लीला!!

(H.P. II/68)

Breathing quickly, making a rausberating sound like the made black bee, and exhale slowly while softly making the sound of the female black bee. By this yogic practice one becomes world of yogis and the mind is absorbed in bliss.

Gheranda Samhita;-

“It is advised to practice Bhramari pranayama at the mid night when the atmosphere is compactly calm due to all sounds and noise of creators being silent one is asked to cover the ears with the hands and practice and kumbhaka, than the student starts hearing various subtle sounds after a confined practice that is Bhramari pranayama.”

Gheranda sanhita speaks of Bhramari in higher sense. There is nothing wrong in it but it is meant for the adept. A beginners cannot practice it that way. Hearing a subtle sounds which happens after the around of kundalines does not cell for any particular variety of pranayama. Impact it is an effect of a prolonged practice of pranayama. The sound produced in Bhramari is more absorbing soothing the sound vibration make an impact on the brain and there immediate effect is peace and joy, which are things of greatest value in human life”. (*Gherand Samhita , 5 /79-82 by Niranjananad Saraswati, Munger.*)

Hypothesis:- Directional Hypothesis is used. "There is significant effect on Depression through Bhramri Pranayama."

RESEARCH METHODOLOGY

Research design: Pre - Post Design Firstly 20 boys of group of ranged 20-25 year under study were selected of DSVV students for the practice of Bhramri Pranayama. This practice was given for one month.

A-----O₁ X

Research Design O₁ X (A) O₂

A = Group under Study,

X = Bharamari pranayam.

O₁ = Pre test.

O₂ = Post test.

Sample size –Firstly 20 boys of group ranging 18-25 years under study were selected from Dev Sanskriti Vishwavidhyalaya (Haridwar) for the practice of Bhramri Pranayama.

Sampling:- Purposive sampling was used for selection of 20 students(boys) under study.

Tool Used:- For data collection” Depression scale” in (Hindi version) constructed and standardized by Dr. Shamim Karim. Reliability - according to split half method 0.862 and 0.916 Validity - high validity

Procedure applied for data collection:-For collection of data the questionnaire was administered for pre data to students on 15 October 2010 then, the practice of Bhramri Pranayama was given to students selected for one month and again the questionnaire was administered for post data collection on 15 November 2010.

Intervention:- The time for practice is 7.00 to 7.15 a.m., Bhramri Pranayama – 15 minutes per day

Technique of Bhramari Pranayam:- Sit in a comfortable meditation asana padmasana. The spinal cord should be erect, the head straight and the hands resting on the knees in chin or jnana mudra. Close the eyes and relax the whole body for a short time. The lips should remain gently closed with the teeth slightly separated throughout the practise. This allows the sound vibration to be heard and felt more distinctly in the brain. Make sure the jaws are relaxed. Raise the arm sideways and bend the elbows, bringing the hands to the ears. Use the index finger to plug the ears. The flaps of the ear may be pressed without inserting the fingers. Bring the awareness to the centre of the head, where ajna chakra is located, and keep the body absolutely still. Breathe in through the nose exhale slowly and in a controlled manner while making a deep, steady humming sound likes that of the black bee. The humming sound should be smooth, even and continuous for the duration of the exhalation. The sound should be soft and mellow, making the front of the skull reverberate. This is one round. At the end of exhalation, breathe in deeply repeat the process.

Technique of statistical analysis:-Statistical analysis of the project was done of the basis of the following formula:-

1. For calculation of t-test we used formula:

$$t\text{- Test} = \frac{M1 - M2}{SED}$$

M1 = Mean of pre- test, M2 = Mean of Post –test, SED = Standard Error Deviation

2. For calculation of M1 and M2 are:-

$$M1 = \frac{\sum X1}{N} \quad \text{and} \quad M2 = \frac{\sum X2}{N}$$

$\sum X1$ = Total Score of Pre test

$\sum X2$ = Total Score of Post test

N = Total Number of Sample

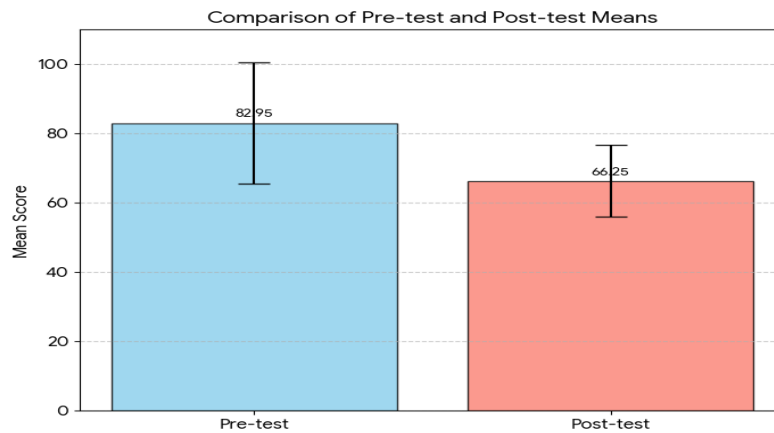
3. For calculation of SED, we used the formula: $SED = \sqrt{(\sigma M1)^2 + (\sigma M2)^2 - 2 r X M1 X \sigma M2}$

Result -

Group	N	M	SD	r	df	t
Pre-test	20	82.95	17.45	0.78	19	2.88
Post-test	20	66.25	10.38			

*Significant at p<0.01 levels

- Graphical Presentation-

**Summary of the Data:**

- Pre-test Mean (M):** 82.95 (with an SD of 17.45)
- Post-test Mean (M):** 66.25 (with an SD of 10.38)
- Sample Size (N):** 20 for both groups.
- Statistical Significance:** The t-value of 2.88 with 19 degrees of freedom (df) typically suggests a significant difference between the two measurements.

Discussion of the result-

The above final result of the study shows the mean difference as pre-test value was 82.95 and post-test value was 66.25 mean the reduction in mean is 16.7. S.D difference is 7.07 and t-value is 2.88 which mean there is significant reduction of depression at the level of $p < 0.01$ level. Which indicates that the Bhramri Pranayama can be very effective yogic techniques for reducing the depression. Thus the Directional hypothesis is significant. This result show that the result is not because of sampling. But this result is due to intervention which is given to the subjects.

On the basis of above discussion it is confirm that depression has significant reduction because of Bhramari Pranayama.

Conclusion

The study concludes that the practice of Bhramri Pranayama leads to depression free. The sound of bee produces instant positive vibrations and takes the listener to a state of mental stillness, reduce the physical stress and making relax, strengthen the will to live. From the result table the result is significance at 0.01 level. So there is a significant relation between Bhramari pranayam and depression level among college going boys.

On the basis of present study, it can be said that if bhramari pranayam are regularly practiced then it would impart effect on depression level .I am very that bhramari pranayam is very useful pranayam technique for the depression.

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