

## Comparative study of Bhramary Pranayam and Shavasana in the management of stress of night duty workers

<sup>1</sup>Jaydip J. Visave <sup>2</sup>Amit S. Diwakar

<sup>1</sup>Assistant Professor, Dept. of Swasthavritta & Yoga <sup>2</sup>Associate Professor, Dept. of Swasthavritta & Yoga <sup>3</sup>Associate Professor, Dept. of Dravyaguna, SSAM & H, NAshik,

### Abstract-

There is intimate relation between the state of mind and body. Relaxed mind reduces stress of body. Stress builds a state of Physical as well as mental tension. Yoga is the ancient science which works on body and mind, altogether. Muscle strength, flexibility, blood circulation and oxygen uptake as well as hormonal functions can be improved by proper practices of physical postures and breathing exercises. Meditation helps to stabilize the autonomic nervous system with tendency towards parasympathetic dominance. Yoga practitioners become more resilient to physiological changes causing stressful conditions and reduce risks for mental disorders.

Workers were divided in 2 groups named Group A, Group B.

Each group contains 30 workers.

Group A - 30 Workers were advised Bhramary Pranayama

Group B - 30 Workers were advised Shavasana

This article aims to attain an insight on the study conducted on the effectiveness of Bhramary Pranayama and Shavasana on stress management.

Key words: Bhramary Pranayam, Shavasana, Stress, Yoga

### Introduction –

Ayurveda has the ultimate aim of preventing diseases and maintaining health of healthy person<sup>1</sup>. Yoga is an ancient science which designs way of life with its various paths. Yogabhyas is being practiced in the form of Asanas, Pranayama, Dharana, Dhyana, etc by the practitioners in different ways and styles. The definition of yoga is “to unite or joint together”<sup>2</sup> that is the union of the soul with God<sup>3</sup>.

Pranayama is the practice that has been found to be very effective to physiology of humans in many ways. Maharishi

Patanjali, in his Ashtanga yoga, has given more importance to Pranayama than Asana. The Sanskrit word Pranayama is of two segments namely Prana means vital force and Yama means control. It is the yogic practice performed to control the flow of vital energy that conducts all the physiological process in the body. Puraka (Inhalation), Kumbhaka (retention) and Rechaka (exhalation) are the three phases of Pranayama. These are practiced alone or with combination depending on type of Pranayama such as its duration, frequency, speed, seasonal, diseased condition. And accordingly mentioned as Nadishuddhi,

Kapalbhati, Bhasrika, Bhramary Pranayama and so on.

Regularly Practicing of Pranayama 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 thus the overall physical and mental health improves. The breathing cycle, tidal volume and other factors like the use of mouth, nostrils, constriction of laryngeal muscles and position of the glottis has its own benefits.

**Bhramary Pranayama-** The Bhramary is one of the simplest types of Pranayama. Because of its nature of slow breathing, it could be easily practiced by everyone irrespective of their age or gender.

**Procedure-** Sit in comfortable Asana (posture).

Inhale and exhale through nostrils slowly and deeply.

While exhaling, will have to produce sound (humming sound) like the large black bee. Strictly advised to practice through nasal airways and oral cavity closed by the lips, ears closed by fingers. For 30 min daily

**Benefits** - Entire lung is ventilated in contrast to shallow breathing. Refreshes mind. It relieves stress, tension, anger, anxiety and blood pressure.

**Asanas-** Yoga is the one of the antique science defined as the union of the soul with god. It is “a path of personal spiritual

development that utilizes meditation to bring enlightenment, self-realization, and, ultimately, the attainment of God and bliss”. The ultimate goal of Yoga is attainment of Samadhi, i.e. self-realization<sup>4</sup>. Different postures have effect of Chitta that works to eliminate the physical and mental tensions.

Some important relaxative Asanas are Shavasana and Makarasana, Vijrasana, Bhujangasana, Trikonasana, Virabdrasana, Pranayama, Siddhasana with Kumbhaka, Padmasana, Yogamudras.

**Shavasana-** (Corpse pose) Shavasana is easiest form of Asana that anyone can practice<sup>5</sup>.

**Procedure-** Lie down on the ground in the supine position like a dead body.

Relax body and mind

During the pose, close eyes, breathe naturally and practice eliminating tension from body. For 30 min daily

**Benefits** – relieves tiredness and mental tension. Relaxes the body completely, calms the mind.

### **Stress:**

Stress is becoming curse of 21<sup>st</sup> century. It is silent killer in the fast and modern world. Stress can be said as priceless poison for mankind. Stress is a sudden biological change. Health is a complete state of physical, mental, social and spiritual wellbeing and not merely an absence of disease or infirmity. Stress damages the physical, mental, emotional and behavioral balance of body. Stress can also affect different levels of whole body such as, muscles, tissues, organs and blood vessels. It can raise pulse rate, respiration, blood pressure and body temperature. Thus it interferes with various metabolic

functions, appetite, digestion, sleep, sexuality etc. Occupational stress includes the effects of environmental factors or stressors such as workload, role ambiguity,

role conflict, diurnal variations and poor working conditions etc. relating to a particular job<sup>6</sup>.

### Signs and Symptoms of Stress

If exposure to stressors continues for a longer period of time health related issues can develop, such as-

<b>Psychological and emotional-</b>	<ul style="list-style-type: none"><li>• Feeling heroic, invulnerable, euphoric • Denial • Anxiety and fear • Worry about safety of self and others • Anger • Irritability</li><li>• Restlessness • Sadness, grief, depression, moodiness</li><li>• Distressing dreams • Guilt or “survivor guilt” • Feeling overwhelmed, hopeless • Feeling isolated, lost, or abandoned</li><li>• Apathy • Identification with survivors</li></ul>
<b>Cognitive</b>	<ul style="list-style-type: none"><li>• Memory problems • Disorientation • Confusion • Slowness of thinking and comprehension • Difficulty calculating, setting priorities, making decisions • Poor concentration • Limited attention span • Loss of objectivity • Unable to stop thinking about the disaster • Blaming</li></ul>
<b>Behavioral</b>	<ul style="list-style-type: none"><li>• Change in activity • Decreased efficiency and effectiveness</li><li>• Difficulty communicating • Increased sense of humor</li><li>• Outbursts of anger, frequent arguments • Inability to rest or “letdown” • Change in eating habits • Change in sleeping patterns</li><li>• Change in patterns of intimacy, sexuality • Change in job performance • Periods of crying • Increased use of alcohol, tobacco, or drugs • Social withdrawal, silence</li><li>• Vigilance about safety or environment • Avoidance of activities or places that trigger memories • Proneness to accidents</li></ul>
<b>Physical</b>	<ul style="list-style-type: none"><li>• Increased heartbeat, respiration • Increased blood pressure</li><li>• Upset stomach, nausea, diarrhea • Change in appetite, weight loss or gain • Sweating or chills • Tremors (hands, lips) • Muscle twitching • “Muffled” hearing • Tunnel vision • Feeling uncoordinated • Headaches • Soreness in muscles • Lower back pain • Feeling a “lump in the throat” • Exaggerated startle reaction • Fatigue • Menstrual cycle changes • Change in sexual desire</li><li>• Decreased resistance to infection • Flare-up of allergies and arthritis • Hair loss</li></ul>

### Aims and Objectives:-

1. To study the effect of Bhramary Pranayam and Shavasana in stress management of night duty workers.
2. To study the mechanism of stress development and possible management through Pranayama and Asana.

### Materials and methods:-

Materials - 30 workers who are diagnosed according to DSM- IV criteria of anxiety disorders.

Online data in Medline, Embase, Google Scholar, other citations and manual search from authentic literature and Samhitas till date.

Method- Workers were divided in 3 groups named Group A, Group B and Group C. Each group contains 10 workers. They were advised Bhramary Pranayam and Shavasana daily for 30 minutes as follows-

Group A - 10 Workers were advised Bhramary Pranayama

Group B - 10 Workers were advised Shavasana

Condition of these workers were assessed weekly for one month

### Diagnostic criteria:-

The following symptoms were graded between 0 to 4 on the basis of severity of occurrence, such as-

Severity of Occurrence	Grade
Normal	0
Occasional	1
Daily (but not disturbing normal life)	2
Daily (but disturbing normal life)	3
Need to take some treatment or hospitalization	4

Symptoms observed includes-1. Restlessness, 2. Fatigue, 3. Difficulty in mind concentration, 4. Irritability,5. Sleep disturbance/ Head ache 6. Loose motions and 7. Chest pain

**Inclusion criteria:-** workers who can properly follow and learn the method of Bhramary Pranayama and Shavasana with interest were included.

**Exclusion criteria:-** those who were previously diagnosed with mental disorders. Or taking anti-psychotic treatment and other immune compromised disorders were excluded. Patients with major medical or surgical illness were also excluded.

### Assessment of management-

The effect of therapy was assessed as follows-

Relief	Percentage (%)
Complete relief	100
Marked relief	More than 75
Moderate relief	50 to 75
Mild relief	25 to 50
No relief	Below 25
<b>LAMA- Left Against Medical Advice</b>	

**Observations:-**

**A- Table showing effect on symptoms score in volunteer with Bhramary Pranayama.**

Sr. No	Symptoms	Before treatment (BT)	After treatment (AT)	Difference	Percentage of relief %
1	Restlessness	44	13	31	70.45
2	Fatigue	44	09	35	79.54
3	Difficulty in mind concentration	46	15	31	67.39
4	Irritability	52	14	38	73.07
5	Sleep disturbance/ Head ache	42	14	28	66.66
6	Loose motions	38	13	25	65.79
7	Chest pain	20	10	10	50.00
Total-		286	88	198	67.56

After treatment of one month marked change were observed in both groups. In the group advised with Bhramary Pranayam, 11 Volunteers (36.67%) observed with good improvement. In the 11 (36.67%) moderately improvement was observed, in the case of 6 (20%) volunteers mild improvement observed and in 2 (6.66%) no any change observed.

**B- Table showing effect on symptoms score in volunteer with Bhramary Pranayama.**

Sr. No	Symptoms	Before treatment (BT)	After treatment (AT)	Difference	Percentage of relief %
1	Restlessness	45	13	32	71.11
2	Fatigue	44	8	36	81.81
3	Difficulty in mind concentration	47	13	34	72.34
4	Irritability	54	10	44	81.48
5	Sleep disturbance/ Head ache	40	11	29	72.50
6	Loose motions	30	10	20	66.67
7	Chest pain	22	9	13	59.09
total-		282	61	220	72.14

After treatment of one month marked change were observed in both groups. In the group advised with Shavasana, 1 (3.33%) volunteer observed with complete relief, 13 Volunteers (43.33%) observed with good improvement. In the 12 (40%) moderately improvement was observed, in the case of 3 (10%) volunteers mild improvement observed and in 1 (3.33%) no any change observed.

### Discussion:-

In this study the volunteers In the practice of Asana and Pranayam there is significant effect on physiology. Bhramary Pranayam alters the normal breathing pattern with prolonged exhalation and short inhalation. Practicing this for 5-15 min continuously brings mind refreshment changes. It also helps to continue for meditation state. In contrast with other Pranayams, Bhramary Pranayama is also a form of meditative practice along with breathing techniques. Easy to perform, no need to withhold breath or use of alternative nostrils is the best part. The humming sound arise interest and attraction to the practitioner. For correcting hormonal imbalance, other diseases like hypertension, anxiety and depression Bhramary Pranayama is most effective. From the study it is found that 36.67 % volunteers got marked and moderate relief each. 20 % got mild relief and 6.66 % got no relief.

Shavasana is also one of the best stress relieving Asana which can be easily understood and practiced in day to day life, anywhere anytime. Shavasana relaxes body and mind as well. In the present study 3.33 % volunteers got complete

relief. 43.33 % and 40 % got marked and moderate relief. 10 % and 3.33 % got mild and no relief. If we closely observe it is very distinct that the success rate in case of Shavasana is higher and failure rate is lower.

Practicing Asanas and Pranayam is most advantageous than consuming medications. If the complaints can be relieved with the help of simple practices then there is mere need of taking the addictive or sedative medicines and developing extra load on body through there chronic use.

There are so many benefits of Yogabhyas; many experiments have been conducted so far. Still there is much scope to evaluate the importance of Yoga for the well being of mankind.

### Conclusion:-

**From the above study it is very clear that Shavasana is more effective than Bhramary Pranayam in stress management of night shift duty workers.**

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