

DISCUSSION

DISCUSSION ON LITERATURE

Ayurveda considered Nidra as natural urge Adharniya vega, the suppression of this urge leads to many complications considered as Adharniya vega. Nidra is one of the tripods for the maintenance of the living organism While discussing about Nidra and anidra in the perspective of Astaunindaniya, Carak has affirmed that happiness & sorrow, growth & wasting, strength & weakness, virility & impotence, the knowledge & lack of knowledge as well as survival of life and its termination depend on the sleep. Moreover, Nidra is Pushtida and Jagarana or anidra does the Karshana of the body. Untimely extreme sleep and expanded vigil take away both contentment and endurance, like the night of destructions. Carak has included the Asvapna (Insomnia) in Nanatmaja Vata Vikaras.

Sushrut enlightened this in Garbha Vyakarana Shariram, as Nidra has a responsibility nourishment and growth of the body. He further explained the Vaikariki Nidra which can be associated to sleep disorders.

Vagbhatta in Ashtanga Sangraha mentioned this in Viruddhanna-vigyaniya Adhyaya, where he explained the Trayopastambhas. Here he considered Manda Nidra due to Vata, but used Asvapna term in Vataja Nanatmaja Vikaras. In Ashtanga Hridaya – Nidra, its Vikaras and Chikitsa are revealed under Anna-rakshadhyaya where Trayopastambhas are explicated. Sharangadhara, concerted the Anidra ,Alpa nidra Atinidra in Vataja ,Pittaja ,Kaphaja Nanatmaja Vikara.

Hence it can be concluded that all Acharyas considered the importance of Nidra, hence Anidra, is explained along with physiology of Nidra only. Anidra or Alpa Nidra is seen as a Lakshana in many diseases and it may be Upadrava or Lakshana of Arishta. therefore, the Nidana, Samprapti and Chikitsa are enlightened concerning Anidra.

Sleep is one of the most important physiological functions that influence the daytime activity, vigilance, concentration and performance. Hence maintaining good quality sleep would be crucial to health. Insomnia is a common sleep disorder and is often associated with significant medical, psychological and pharmacological approaches; however, long-term use of frequently prescribed medications can lead to habituation and problematic withdrawal symptoms.

Stress is one of the commonest causes attributed to Insomnia. Sleep disturbance associated with stress has not been well-documented, predominately due to its transient's nature. It must be further emphasized that those who do respond with insomnia may later develop chronic psychophysiological insomnia as result of the initial stress. Vata and Manasa are interdependent and if one becomes vitiated, it vitiates the other Thus both seems to be vitiated in Anidra. Carak has given importance to Vata in the management of Anidra Treating this psychic disorder is a difficult task, however proper counseling and relaxation techniques along with other therapies are supportive in the management. Hence, Manaha -sukham, Manonukula-vishaya etc. are mentioned in the management of Anidra.

DISCUSSION ON PREVIOUS RESEARCH

☞ Kozasa EH et al.2010 observed Sleep hygiene is the most frequently cited intervention along with other interventions like CBT or an active control. Considering that many insomniacs present “bad” habits before sleep, these instructions can change the quality of sleep.

- ☞ Irwin et al (2008) focused on therapies such as music, Yoga, Tai Chi Chi (a westernized and standardized version of Tai Chi, consisting of 20 simple and separate movements), relaxation and sleep hygiene
- ☞ Vincent N et al (2009) Used specific questionnaires for insomnia, such as insomnia severity or the PSQI, online treatment, psychoeducation, stimulus control instruction, sleep restriction, relaxation training and Harmat L et al (2008) reports classical music were all found to lead to improvements in these two measures.
- ☞ A reduction in sleep latency, an increase in sleep efficiency (calculated using questionnaire responses) and a significant reduction in the frequency of hypnotic drug use in the CBT group were observed by Morgan K et al (2004)
- ☞ Edinger J at el. (2001) claims, cognitive changes was correlated with improvements noted on both objective (PSG) and subjective measures of insomnia symptoms, particularly within the CBT group.
- ☞ Cognitive changes were correlated with improvements noted on both objective (PSG) and subjective measures of insomnia symptoms, particularly within the CBT group by Lichstein K at el. (2001)
- ☞ Yoga led to an increase in the number of hours of sleep and in the feeling of being rested in the morning, but the waiting-list control group (no intervention) and the ayurveda (a herbal preparation) group did not show increased hours of sleep.in a study by Manjunath N at el. (2005)
- ☞ A sleep diary was used evaluate a group exposed to sleep hygiene with a stimulus control, and it was compared to that of a group exposed to sleep hygiene and a relaxation tape. Pallesen S at el. (2003)to observed that the effects of both treatments were greater for nocturnal measures as compared to daytime measures. However, there were no differences in treatment interventions when compared one to another.
- ☞ Waters W et al.(2003), states that, flurazepam was superior to progressive muscle relaxation plus cognitive distraction (PMR/ CD), sleep restriction and stimulus control (SR/SC) or sleep hygiene education.

- ✉ Vincent N et al.(2009)Online treatment produced improvements in the primary end points of sleep quality, insomnia severity and daytime fatigue. This online treatment also produced significant changes in pre-sleep cognitive arousal and dysfunctional beliefs about sleep.
- ✉ Suri J.C., et al. using the Chervin and the Stanford Sleep Clinic questionnaire had conducted a study on a sample of adult population of Delhi which reflected that the impact of sleep disorders on the morbidity profile on this strata of society, the phenomenal burden of undiagnosed sleep disorders and its impact on social, mental, physical and economic health of the society.
- ✉ Krishna Pushpa, Shwetha S et al. aimed to analyze the quality of sleep in 67 medical students using the Pittsburgh Sleep Quality Index and to relate sleep with blood pressure (BP), body mass index (BMI) and academic performance. This study showed the high prevalence of poor sleep quality and underlined the close relationship of sleep with BP, BMI and academic performance among medical students.
- ✉ The pattern of sleep, prevalence of anxiety and depression and the overall impact of the nature of their employment on their lifestyle were studied in a segment of BPO workers employed in the call centers around New Delhi by Suri J.C. et al. in 2007. It was found that Circadian rhythm sleep disorders (CRSD) are frequently seen amongst shift workers who, in turn, comprise a large segment of the population employed in the BPO industry
- ✉ Meshram Sushant H et al. after having conducted a questionnaire-based study to assess the behavior, attitude and knowledge of sleep medicine among resident doctors had concluded that there was an intense need for including sleep medicine in their curriculum.
- ✉ In an unusual study, Ambar Chakravarthy describes his personal experience of systemic effects of late night sleep deprivation and non-restorative sleep - A common experience amongst doctors. Results of some simple self-

experimentations have been mentioned to highlight the possible pathogenetic mechanisms.

- ☞ Seetha M et al. observed in 20 patients treated with dashmoola siddha ksheera developed more confidence. Their life style became well organized and there was an urge with in themselves for active involvement in their day to day activities.
- ☞ Ranawat R at el. states that Bhastrika Yogic Kriya and Jatamansi Ghana vati showed significant results in the Management of Insomnia in 34 patients of Anidra (primary insomnia).
- ☞ Bhaduri T. at el states that Sirodhara and Yoga are very helpfull in the management of chronic insomnia along with Lifestyle modification like Diet.
- ☞ Mahendra S. at el (2012) observed that Early treatments for insomnia(anidra) focused on therapeutic approaches with interventions such as systematic desensitization, relaxation, hypnosis, biofeedback, and paradoxical intention which targeted hyperarousal associated with insomnia.

Though modern psychiatry acquired a revolutionary growth in understanding of mental faculties and related things. Still lacuna persists in the field of psychopharmacology – especially when we think about its untoward secondary complications in the human systems.

No studies have been reported to confirm the concept of dharana of *Nidra* as *Anidra*, however similar concept of Circadian rhythm sleep disorders include disorders in which sleep-wake cycle disturbance, inadequate or poor quality of sleep leads to insomnia. With this backdrop an attempt is made to estimate the efficacy of *Bhramari Pranayam* in a series of patients suffering from *Anidra*.

Present study was carried out with the hypothesis there should be influence of *Nidra vega* on the body and it may be within physiological limits or may be pathological. But *Nidra* is one among a many factors which will have the influence on the physiology and pathological process. So in the analysis of observational data limitations like influence of *vega*

dharan, was taken into consideration. As it is primary work on the *Nidra vega dharan*, chronic disorders or patients suffering from chronic illness are not selected. So in the analysis illness and medicine which is continuing are also considered as limitations.

In this study the efforts are made to provide a practical base to the concept of *vega dharan* and its effect on health at physical and mental level. When a person stays awake for a extend, the it is that he will be unable to remain awake, and the more possible he is to start to feel drowsy. This growing sleepiness is recognized as the homeostatic sleep drive. The purpose of sleep restraint is to regulate the sleep-wake cycle by tailoring the moment spent in bed to the individual's right sleep need.

Vata and Mana are interdependent and if one becomes vitiated, it vitiates the other. In this disorder, both are seem to be vitiated. Hence, *Acharya Charak* gave importance to *Vata* in the *Management of Anidra*. Treating this psychic disorder is a difficult task. Proper counseling, relaxation techniques along with other therapies are considerable in the *Management*. Hence, *Manaha Sukham, Manonukula Vishaya* etc. are mentioned in sleeplessness, which are indicative of psychic *Management*.

Hence a treatment consisting of *Bhramari Pranayam* and Sleep Hygiene was planned for the study. 93 patients of *Anidra* were registered for this study and the significant data pertaining to their *Nidanatmaka* aspects are being discussed as under:

DISCUSSION ON OBSERVATION

Age: Out of the 93 patients of *Anidra* studied in this series, maximum 40% patients belonged to the age group of 26 –35 years. Minimum patients (3%) were found from the age group 56 to 60. This age group denotes the initial stage of *Vata* predominance. *Rajas* is mainly related with *Vata*. Vitiating of these both plays an active role in the pathogenesis of *Anidra*.

Sex: In this series maximum number of patients i.e. 66% patients were males whereas 34% patients were females. Though, generally insomnia is seen on higher side in females than males, this observation may be due to more availability of the patients in particular sex. Also *Dharana* of *Nidra Vega* is done more by the male sex due to lifestyle.

Prakriti : All the patients of this study were having *Dvandvaja Prakriti* with highest number of patients i.e. 41% patients having *Vata-Pitta Prakriti* . This gives evidence that *Vata-Pitta Prakriti* patients are more at risk for developing *Anidra* because, generally *Vata and Pitta Prakriti* people have disturbed or less sleep. 63% patients were having *Rajas* Predominant *Manasa Prakriti* followed by 25% patients, who were having *Tamas* predominant *Manasa Prakriti* . *Rajas* is the main causative factor in *Anidra* as it has *Pravartaka* property, which keeps mind active leading to *Anidra*.

Education, Socio-economic Status, Occupation & Marital Status: Maximum number of patients i.e. 44% were having post graduate level education and 2% patients were illiterate. 44% patients were from rich class and 10% patients were from a poor socioeconomic background. 44% patients were IT professionals followed by 32% were students. Maximum 66% patients were married. The above data signifies that as majority of the patients were postgraduate level educated, they were from upper class and were IT professionals and unmarried too. The research work reported that there is no relationship of education with sleeplessness.

Upper class may have more struggle in life, hence the mental problems are also more. IT professionals suffer from excessive mental tension and worry, which may lead to disease manifestation. In the married may be because of commitments, targets, problems related to the lifestyle the prevalence of disease is more common. But, to say this with confirmation a survey is necessary.

Diet Habitat: Maximum 59% patients were having Non-vegetarian type of food. Non-vegetarian food is *Rajas* and *Tamas* in nature that affects *Vata Dosha*, and thus might be enhancing the disease manifestation.

Vyasana: 51% patients had the addiction of smoking, 12% each alcohol and 24% tobacco or pan chewing addiction. Caffeine, an alkaloid drug in coffee and tea has a stimulant action on CNS and increased mental activity. Researchers reported that alcohol can alter sleep. Though it initially produce sleep, but fall in blood concentration leads increased arousal due to cortical stimulation. Nicotine, a poisonous alkaloid content of tobacco and pan is responsible for dependence and leads to CNS stimulation. All these contents have CNS stimulant activity. They aggravate the disease condition further.

Habitat: Maximum 66% patients were urban dwellers, while 34% were rural dwellers. The living style is much changed in urban areas than rural. The environmental factors, the working atmosphere, living condition – all contribute for this. Still Indian life style is having its root in rural areas, which is best for living healthily.

Family History & Present Status: 14.28% patients each had positive family history for psychic and physical disturbance. 7.14% patients had family history of Alcohol addiction. 32.14% patients had negative relationships in family and in 14.28% patients, family had a negative attitude and insight toward the patients, which might act as a stressor and may be enhancing the psychic symptoms found in insomnia.

Agni: In this study, majority of the patients i.e. 63% had *MandAgni*. As *Nidra* is stated to enhance *Agni* (Su. Chi. 24/88), sleeplessness may produce *MandAgni* by hampering it.

Koshtha: 60% of patients were having *Madhyama Koshtha* followed by 24% patients having *Krura Koshtha*. *Madhyama* and *Krura Koshtha* are suggestive of *Pitta* and *Vata*

Dosha dominance respectively, may be because of majority of the patients were having *Vata-Pitta Sharirika Prakriti* in this study.

Sleep: All the patients i.e. 100% reported disturbed sleep, as disturbed sleep is one of the chief symptoms of insomnia.

Dreams: In this study, 60% patients had occasional dreams, while 12% patients had regular dreams in their sleep. Dream is the pre-state of deep sleep. In deep sleep, nobody sees the dreams. Sometimes, dreams are also indicative of underlying disorders, which disturb the sleep and may cause *Anidra*.

Mala Pravritti: 67% patients were having regular *Mala Pravritti* and 13% patients had complaint of constipation.

Mutra Pravritti: Maximum number of patients i.e. 75% had normal micturation. 15% patients had polyuria. Frequent micturation is commonly seen in *Anidra* patients.

Satmya, Satva, Appetite, Exercise Tolerance: 60% patients were having *Madhyama Satmya* followed by 22.00% patients *Pravara* and 12% *Avara Satmya*. *Charak* has mentioned that a person having *Madhyama* and *Avara Satva* are more vulnerable to diseases, which is supported in this study. Maximum number of patients i.e. 60% were having moderate appetite, 30% were having poor appetite, and 10% had normal appetite. Proper sleep helps in the digestion, improves *AgniBala* etc. Maximum number of patients i.e. 25% patients were having good exercise tolerance, though maximum number of patients i.e. 68% patients belonged to moderate exercise category, which indicates that their working capacity is decreased because of sleeplessness. **Nidana:** Maximum number of patients i.e. 82.14% patients were having *Manasika Nidanas*, followed by 71.43% having *Aharaja Nidana*, 46.43% having *Viharaja Nidana* and 28.57% having *Anyana Nidanas*. This gives evidence that *Manasika Nidanas* have great role in disease manifestation

– *Anidra*. *Aharaja* and *Viharaja Nidanas* also having importance as they are having mainly *VataPitta Prakopaka* effect.

Chief Complaints: All the patients had complaint of sleeplessness, followed by 95% patients having difficulty in falling asleep and 60% patients having difficulty in maintaining sleep. 80% were having distress in their working area, 39% had impaired sleep wake schedule. As sleeplessness – *Anidra* is due to *Dushti* of *Vata* and *Rajas* – sleeplessness, disturbed sleep might be seen due to their *Chala* and *Pravartaka Guna* respectively.

Associated Complaints: These associated complaints are due to *Vata*, *Pitta* and *Rajasa*. Though some of the symptoms like *Akshi Gaurava*, *Shiro Gaurava* etc. are seen in *Kapha Prakopa*, in *Anidra* also they are seen, due to *Vata* only.

Effect On Insomnia:

Effect On Sleeplessness: *Bhramari Pranayam* provided 92.88% relief, Combined Therapy provided 98.26% relief followed by 93.56% relief in Sleep Hygiene group. Hence it was statistically highly significant in all the three groups. Thus, Combined is better than other two groups in sleeplessness, though the difference in percentage of *Bhramari Pranayam* and Combined Therapy was not very significant.

Effect On Disorders of Sleep wake (SW) schedule:- 76.53% relief was provided by *Bhramari Pranayam* which was statistically significant. Though, 75.26% relief was observed also in combined group, which was insignificant followed by 74.56% relief in Sleep Hygiene administered group having insignificant relief. Thus, *Bhramari Pranayam* is better in. Disorders of Sleep wake (SW) schedule.

Effect on Sleep Quality:- Sleep quality was improved 95.12% in combined therapy, 93.68% in *Bhramari Pranayam* and 92.56% in Sleep Hygiene group. All the results were significant. But, combined therapy showed better result in sleep quality.

Effect on Sleep time:- In Combined therapy group 65.28% improvement in sleep time was observed whereas 61.08% and 59.97% increase in sleep time were noted in *Bhramari Pranayam* and Sleep Hygiene treated groups. Though, all were statistically significant, combined therapy is comparatively better than other two groups.

Effect On After awakening:- 77.14% improvement was provided by combined therapy in mood after awakening followed by 76.63% and 78.36% improvement by *Bhramari Pranayam* and Sleep Hygiene respectively. All the results were statistically significant. Here better relief was obtained by Sleep Hygiene.

Effect On Associated Symptoms like *Shirahshula, Angamarda* etc:- 89% relief was provided by *Bhramari Pranayam* which was statistically significant. 93% relief was observed also in combined group, which was significant followed by 90% relief in Sleep Hygiene administered group having significant relief. Thus, Combined Therapy is better in *Shirashuladi* Associated Symptoms.

Effect on *Manasa Bhavas*:

***Manasa – Arthesu Avyabhicharanena (Deviation)*:** Statistically significant with 78.00% relief in *Manasa* was observed in Combined therapy followed by 76.67% relief in *Bhramari Pranayam* group and 77.91% relief in Sleep Hygiene group. Both were found statistically insignificant. Hence, Combined therapy provided better relief than both group.

Vijnanam – Vyavasayena (Performance): Combined therapy provided significant of 83.33% relief, whereas Sleep Hygiene provided significant with 65.67% relief and *Bhramari Pranayam* provided insignificant of 55% relief in *Vijnanam*.

Harsha – Amodena (Cheerfulness): Combined therapy provided significant of 63.33% relief, whereas Sleep Hygiene provided insignificant with 60.17% relief and *Bhramari Pranayam* provided significant of 65% relief in *Harsha*.

Priti – Tosena (Happiness): Combined therapy group provided 92.33% relief which was statistically significant followed by 91.9% relief by *Bhramari Pranayam* and 90.09% relief by Sleep Hygiene was observed. Thus, combined therapy showed better results in relief of *Priti*.

Dhairyam-Avishadana (Fearfulness): *Bhramari Pranayam* provided 76% relief, combined therapy provided 77.04% relief followed by 78% relief in Sleep hygiene group, which was statistically highly significant in all the three groups. The difference in percentage of *Bhramari Pranayam*, Sleep hygiene and combined therapy was very minor.

Viryam – Utthanena (working capacity): Combined therapy provided significant of 99.33% relief, whereas Sleep Hygiene provided insignificant with 98.67% relief and *Bhramari Pranayam* provided significant of 97.39% relief in *Viryam*.

Avasthan – Avibhramena (Confidence in perception): Combined therapy provided significant of 43.33% relief, whereas Sleep Hygiene provided significant with 45.67% relief and *Bhramari Pranayam* provided insignificant of 45% relief in *Avasthan*.

Shraddha – Abhiprayena (Attitude and interest): Combined therapy provided significant of 54.86% relief, whereas Sleep Hygiene provided significant with 55.61% relief and *Bhramari Pranayam* provided insignificant of 71% relief in *Shraddha*

Medha – Grahanena (grasp or understand): Combined therapy provided significant of 81.43% relief, whereas Sleep Hygiene provided insignificant with 71% relief and *Bhramari Pranayam* provided insignificant of 66.67% relief in *Dwesha*

Samjna – Naagrahanenan (Attentive): Combined therapy group provided 54% relief which was statistically significant followed by 65.44% relief by *Bhramari Pranayam* and 54.32% relief by Sleep Hygiene was observed. Thus, combined therapy showed better results in relief of *Samjna – Naagrahanenan* (Attentive).

Smriti – Smaranena (Recall and remember): Combined therapy group provided 71% relief which was statistically significant followed by 71.11% relief by *Bhramari Pranayam* and 69.22% relief by Sleep Hygiene was observed. Thus, combined therapy showed better results in relief of *Smriti – Smaranena* (Recall and remember).

Hriya – Apatarpanena (Shyness): Combined therapy group provided 43% relief which was statistically significant followed by 39.87% relief by *Bhramari Pranayam* and 41.19% relief by Sleep Hygiene was observed. Thus, combined therapy showed better results in relief of *Hriya – Apatarpanena* (Shyness).

Shila – Anushilanena (Conduct): Combined therapy group provided 57% relief which was statistically significant followed by 56.17% relief by *Bhramari Pranayam* and 55% relief by Sleep Hygiene was observed. Thus, combined therapy showed better results in relief of *Shila – Anushilanena* (Conduct).

Dhriti – Alauyena (controlling will power): Combined therapy provided significant of 39.33% relief, whereas Sleep Hygiene provided insignificant with 43.21% relief and *Bhramari Pranayam* provided significant of 41.39% relief in *Viryam*.

Vashyata – Videyataya (obidence and control): Combined therapy provided significant of 81.97% relief, whereas Sleep Hygiene provided significant with 65.67% relief and *Bhramari Pranayam* provided significant of 57.01% relief in *Vashyata*.

Rajah: Combined therapy group provided 81.47% relief which was statistically significant followed by 85.26% relief by *Bhramari Pranayam* and 85% relief by Sleep Hygiene was observed. Thus, combined therapy showed better results in relief of *Rajah*.

Moha: Combined therapy group provided 68.01% relief which was statistically significant followed by 65.17% relief by *Bhramari Pranayam* and 66.21% relief by Sleep Hygiene was observed. Thus, combined therapy showed better results in relief of *Moha*

Krodha: Combined therapy group provided 97.77% relief which was statistically significant followed by 96.33% relief by *Bhramari Pranayam* and 98% relief by Sleep Hygiene was observed. Thus, combined therapy showed better results in relief of *Krodha*

Shoka: Combined therapy group provided 74.25% relief which was statistically significant followed by 75.41% relief by *Bhramari Pranayam* and 70% relief by Sleep Hygiene was observed. Thus, combined therapy showed better results in relief of *Shoka*

Bhaya: Combined therapy group provided 69% relief which was statistically significant followed by 69.77% relief by *Bhramari Pranayam* and 68.32% relief by Sleep Hygiene was observed. Thus, combined therapy showed better results in relief of *Bhaya*

Dvesha: Combined therapy group provided 80.14% relief which was statistically significant followed by 79.39% relief by *Bhramari Pranayam* and 75.15% relief by Sleep Hygiene was observed. Thus, combined therapy showed better results in relief of *Dvesha*

Upadhi: Combined therapy group provided 86.60% relief which was statistically significant followed by 85.67% relief by *Bhramari Pranayam* and 85.91% relief by Sleep Hygiene was observed.. Thus, combined therapy showed better results in relief of *Upadhi*.

Effect On Brief Psychiatric Rating Scale (BPRS)

Somatic concern: Combined therapy group provided 94.23% relief which was statistically significant followed by 95.67% relief by *Bhramari Pranayam* and 95% relief by Sleep Hygiene was observed. Thus, combined therapy showed better results in relief of Somatic concern.

Anxiety: Combined therapy group provided 87.21% relief which was statistically significant followed by 85.31% relief by *Bhramari Pranayam* and 82.67% relief by Sleep Hygiene was observed. Thus, combined therapy showed better results in relief of Anxiety.

Emotional withdrawal: Significant relief of 91.21% and 90.01% by Sleep Hygiene and *Bhramari Pranayam* respectively were provided while Combined therapy provided 92.05% relief which was significant. Here, also Combined therapy provided better result than *Bhramari Pranayam* and Sleep Hygiene in Emotional withdrawal

Conceptual disorganization: Combined therapy group provided 72.84% relief which was statistically significant followed by 71.22% relief by *Bhramari Pranayam* and 70.04% relief by Sleep Hygiene was observed. Thus, combined therapy showed better results in relief of Conceptual disorganization.

Tension: Combined therapy group provided 95.55% relief which was statistically significant followed by 94.42% relief by *Bhramari Pranayam* and 93.38% relief by Sleep Hygiene was observed. Thus, combined therapy showed better results in relief of Tension.

Manneurism and posturing: Combined therapy group provided 68.84% relief which was statistically significant followed by 67.16% relief by *Bhramari Pranayam* and 65.21% relief by Sleep Hygiene was observed. Thus, combined therapy showed better results in relief of Manneurism and posturing.

Suspiciousness: Combined therapy group provided 79.31% relief which was statistically significant followed by 75.39% relief by *Bhramari Pranayam* and 77.85% relief by Sleep Hygiene was observed. Thus, combined therapy showed better results in relief of Priti.

Grandiosity: Combined therapy group provided 61.65% relief which was statistically significant followed by 59.36% relief by *Bhramari Pranayam* and 59.84% relief by Sleep Hygiene was observed. Thus, combined therapy showed better results in relief of Priti.

Hostility: Combined therapy group provided 66% relief which was statistically significant followed by 64.71% relief by *Bhramari Pranayam* and 62.42% relief by Sleep Hygiene was observed. Thus, combined therapy showed better results in relief of Hostility.

Hallucinatory behavior: Combined therapy group provided 82.29% relief which was statistically significant followed by 83.61% relief by *Bhramari Pranayam* and 80% relief by Sleep Hygiene was observed. Thus, combined therapy showed better results in relief of Hallucinatory behavior.

Motor retardation: Combined therapy group provided 79.52% relief which was statistically significant followed by 78.43% relief by *Bhramari Pranayam* and 75% relief by Sleep Hygiene was observed. Thus, combined therapy showed better results in relief of Motor retardation.

Uncooperativeness: Combined therapy group provided 73.1% relief which was statistically significant followed by 74% relief by *Bhramari Pranayam* and 72.4% relief by

Sleep Hygiene was observed. Thus, combined therapy showed better results in relief of Uncooperativeness.

Unusual thought content: Combined therapy group provided 79.3% relief which was statistically significant followed by 81.17% relief by *Bhramari Pranayam* and 80% relief by Sleep Hygiene was observed. Thus, combined therapy showed better results in relief of unusual thought content.

Blunted affect: Combined therapy group provided 94.27% relief which was statistically significant followed by 95% relief by *Bhramari Pranayam* and 93.63% relief by Sleep Hygiene was observed. Thus, combined therapy showed better results in relief of Blunted effect.

Excitement: Combined therapy group provided 93.33% relief which was statistically significant followed by 95.67% relief by *Bhramari Pranayam* and 95% relief by Sleep Hygiene was observed. Thus, combined therapy showed better results in relief of Excitement.

PROBABLE MODE OF ACTION OF BRAMARI PRANAYAM

In *Bhramari Pranayam*, patients feel relaxation both – physically as well as mentally. Relaxation of the frontals muscle tends to normalize the entire body and achieve a decrease in activity of sympathetic nervous system with lowering of heart rate, respiration, oxygen consumption, blood pressure, muscle tension. It strengthens the mind and spirit and this continues even after the relaxation. Corresponding to different levels and powers of consciousness there are different nerve plexuses and glands in human organisms. Special stimulation of different nerve plexus, glands and brain cells accompanies mental function of different type at different levels. Thus, the Hindu theory of *Chakras* – center of consciousness – is based on this fact.

According to Ayurveda, the forehead and head are areas of many vital spots – *Marma*, which have got very important place in the body. In some cases, even slight stimulation of such *Marma* may have beneficial effect on the body, due to their connection with higher centers. *Bhramari Pranayam* makes the patient to concentrate on this area, by which the stability arrives in the mind function and this leads to locate the *Mana* in ‘*Ni-rindriya Pradesha*’ and patient may get sleep.

In this way, *Bhramari Pranayam* can be considered as an adjunct aid among the method of relaxation through its procedural effect and might be able to break the pathogenesis of *Anidra* at different levels.

PROBABLE MODE OF ACTION OF SLEEP HYGEINE

In today's challenging globe no one is getting time to lie down peacefully and relax for a while. We are constantly open to the elements of stress and pressure. If we lie down in a comfortable position for a while and meditate we positively feel better. The practices of Sleep hygiene also bring into being a meditative outcome helping to prevail over the grievance of insomnia. The method of Sleep hygiene produces almost similar effects as that of Yog *Anidra* technique in yogic science.

In Ayurved, there are number of measures explained for relaxation of body and mind. By these measures like *ratricharya* and relaxation the mind comes down to a restful state, it lessen constant worry, facilitates normal and better function of mind. All the yields of relaxation are achieved by the practice of Sleep hygiene.

LIMITATIONS

Following limitations of the study should be addressed in subsequent trials of yoga for Adharniya vega of *Nidra*. The effects of the intervention, although promising, must be interpreted with caution. In particular, the beneficial effects of general activation and social support (i.e., personal participation) are unknown. A subsequent study planned by

our group was included an attention-control group to control for these factors. A potential understanding on quality of life was lacking. Additionally, this study was subject to the common limitations of research involving self-report. Although back-filling of diaries was reduced by collecting these forms after every fortnight, there was still the potential for delayed completion of these forms. Electronic data collection would improve the accuracy of daily sleep, Actigraphy and symptom reporting.

Few side effects of the intervention occurred, all of which were minor. Safety of the intervention was supported with proper counselling and modifications of yoga to meet such needs. This baseline knowledge may be important for future studies of yoga for *Anidra*.