Conceptual study of significance of Nidra on health
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ABSTRACT
Sleep or Nidra is essential for our well being and occupies about one third of our life span. Sleep affects how we feel and perform on daily basis, which has major impact on our overall quality of liveliness. Getting enough quality of sleep at right times can protect our physical and mental health, quality of life and safety. The way we feel when we are awake depend in part on what happens when we are asleep. The constructive effects of natural sleep have been deeply considered and interpreted by Ayurvedic literature as well as modern researches. Certain people have considered sleep as a mere break down time when our brain takes rest. Some of the conditions like obesity, cardiovascular diseases, diabetes etc. occur due to long periods of sleep deprivations. The present article is aimed to highlight the significance of proper sleep and effect of sleep deprivation on health in view of Ayurveda and contemporary science.

Keyword: Nidra, Sleep deprivation, Ayurveda, Sleep

INTRODUCTION
Sleep is basic human need and is essential for good health, quality of life and performing well during the day. The importance of sleep in our life can be realised by the time human being spend sleeping. It is an important physiological function of the body which occupies almost 1/3rd of our lifespan. Good sleep is essential and advantageous to the quality of sleep. A number of vital physiological changes occur during sleep and help people stay healthy and function at their best. Ayurveda regard Nidra as one of the most essential factors responsible for a healthy and full filling life. It is one of the trayopastmabhas (three subsidiary pillars) on which person’s health is firmly balanced. Sound sleep at night is a natural nourishing phenomenon, so it is called as ‘Bhutdhatri’. Quality of sleep is an indicator of good health as it is stress-relieving and normalizes bodily tissues. In Ayurvedic literature, it is also called as ‘Vaishnavi maya’, indicating that Nidra provides nutrition to maintain good health like Lord Vishnu, who nourishes and sustains this world. Due to busy work schedules people try to trim down their sleeping hours in order to find more time to read, work etc. They are unaware about the long-term health issues which can take place due to improper and inadequate sleep. But recent researches have shown a very strong association between proper sleep and wellbeing of person.
AIM
To understand the importance of physiological sleep i.e. ratiswabhavaprabhavaja nidra.

OBJECTIVES
1) To review literature of Nidra with reference to Brihattrayi.
2) To study the significance of ratiswabhavaprabhavaja nidra and sleep deprivation on health.

MATERIALS & METHODS
The classics of Ayurveda Brihattrayi designated as Charak Samhita, Sushruta Samhita, Ashtanga Sangraha and Ashtanga Hridaya and their available commentaries. Proper screening of literature from classic texts of Ayurveda. Recent advanced study in context of present study will be reviewed using resources like internet and articles.

Nidra
Vachaspatyam:
निद्रा = नि द्रा--भावेअ।
It is always used in famine gender. Sleep is a state of unconsciousness of the person. In Upanishad and Ayurvedic literature, Nidra is considered as one of the essential function of living organisms.

Concept of Nidra
When the mind as well as soul gets exhausted or becomes stationary, and the sensory and motor organs also become inactive, the individual sleeps. Sleep occurs when the seat of chetana (consciousness) is covered by tamoguna which predominates along with kapha. Sleep is another form of tamas (mental darkness). Sleep manifests when tamas naturally pre-dominates at night and the mind and intellect are in deep rest. Sleep occurs when bodily channels become accumulated with kapha and when the mind is devoid of contact with the sense organs because of fatigue.

Types of Nidra
Acharya Charak has classified Nidra in following manner:
1. Tamobhava - Caused by tamas
2. Shleshmasamudbhava - Caused by (vitiated) kapha
3. Manah- sharirshrambhava - Caused by mental exertion
4. Agantuki - indicative of bad prognosis leading to imminent death
5. Vyadhyanuvartini - Caused as a complication of other diseases like sannipata jwara
6. Ratri-swabhavprabhavaja - Caused by the very nature of the night (physiological sleep)

Acharya Dalhan has classified Nidra into three types
1. Tamsik – When sangyavaha srotas is filled with shleshma and dominated by tamoguna.
2. Swabhaviki – This type of Nidra occurs naturally in all living beings.
3. Vaikariki – If there is any disturbance in mana and body, Nidra does not occur. But if Nidra is produced, it is vaikariki.

Acharya Vagbhat has classified Nidra in seven types:
1. Kala swabhav – Caused by the very nature of night (physiological).
2. Amayaja swabhava- Caused as a complication of other diseases like sannipata jwara.
3. Chitta kheda prabhav - Caused by mental exertion
4. Deha kheda prabhav - Caused by physical exertion
5. Kapha prabhav - Caused by vitiated kapha
Physiological effects of natural sleep
Sleeping is essential for us to live a balanced life. Sleep is a natural way of restoring our physical and mental vitality and plays a significant role in good health and well-being through our life. In Ayurveda, sleep naturally occurring at night is considered as Bhutdhatri (mother who nourishes the person). A number of vital physiological changes occur during sleep and help people stay healthy and function at their best. Good quality sleep during night removes drowsiness and restores the natural equilibrium of body tissues. When a person is asleep the muscles in his body relaxes thereby helps to repair the wear and tear of cells and tissues occurring in our day to day life. For better learning and knowledge sleep is essential. Researchers have proved that a good sleep at night can improve learning. A person can grasp well when than a sleep deprived person. The benefits of proper sleep as described in different classics is given in table 1.

Table 1: Merits of healthy sleep as described in Ayurvedic literature

| Charaka Samhita | Sushruta Samhita | Ashtanga Sangra/Ashtanga Hridaya |
|-----------------|-----------------|---------------------------------|
| Bala (strength) | Aroga (Free from diseases) | Bala (strength) |
| Jnana (knowledge) | Sumanasya (Pleasant mind) | Jnana (knowledge) |
| Pushthi (Growth) | Varna (Colour/complexion) | Pushthi (Growth) |
| Sukha (Happiness) | Bala (Strength) | Sukha (Happiness) |
| Vrushata (Virility) | Natistholakari (Well-built body) | Vrushata (Virility) |
| Jeevitham (Long sapn) | Shatayu (100 years of life) | Jeevitham (Long sapn) |

Duration of sleep
Most people do not know how much sleep is needed and place themselves and sometimes others at risk for medical problems and increased risk of injuries or fatal accidents. The amount of sleep required each day changes over course of life. Although sleep needs vary from person to person, Table 2 shows general recommendations for different age groups.

Table 2: Recommended amount of sleep in different stages of life

| Age                  | Recommended amount of sleep |
|----------------------|----------------------------|
| Newborn              | 16-18 hours a day           |
| Pre-school aged children | 11-12 hours a day           |
| School aged children | At least 10 hours a day     |
| Teens                | 9-10 hours a day            |
| Adults               | 7-8 hours a day             |

Although no existing classical Ayurvedic references directly state the duration of sleep for different stages of life, they can be logically understood through various references. The stages of childhood is explained as Kapha-dominant and
naturally produces more sleep which is required for proper growth and development. The middle stage of life is Pitta-dominant and comparatively less sleep is required. Old age is Vata-dominant and in this stage sleep duration naturally decreases.

**Appraisal of nidrayattam sukham**

Ahara, Nidra and Brahmacharya are the three dynamics, which play vital role for maintenance of health in human. In the Ayurvedic literature, these factors i.e. Ahara, Nidra and Brahmacharya are compared with the thripod of sub-support and are termed as the three Upastambhas. The enclosure of Nidra in the three Upastambha establishes its significance. Sleep at the night time makes for the balance of the body constituents (Dhatusamya), alertness, good vision, and good complexion and fired digestive power.

While discussing about Nidra, the ancient Acharyas stated that happiness and sorrow, growth and wasting, strength and weakness, virility and impotence, the knowledge and ignorance as well as the survival of life and its termination depend on the sleep. According to commentator Gangadhara, Sukha (happiness), Pushti (nourishment), Bala (strength), Vrushata (sexual powers), Gyana (knowledge), ultimately Jeevita (survival of life) are the rewards of Samayoga of Nidra i.e. RatriSwabhavaprabhavaja nidra. It means that if sleep is taken at appropriate time and in moderation will bring about happiness and long life.

**Nidra and Sukha**

Sukha is desirable to mind and body (anukulavedaniyum), produces health (swasthaotpadaka), devoid of any diseases (vyapadrahitam). Hence, if a person wants to lead a helathy anf fulfilling life, he should not avoid the urge of Nidra and by Nidra it is supposed to be ‘RatriSwabhavaprabhavaja nidra’.

Arunadatta, the commentator of Ashtanga Hridaya explains the meaning of Sukha in high definition. He writes that which blossoms our mind and body is Sukha and it of two types:

1) Permanent happiness – means Moksha, devoid of all sorrows. It is everlasting thus has universal approach.
2) Temporary happiness – it has individual approach and characterized by the satisfaction of sensory desires or as the result of therapeutic action. Thus, it does not last forever.

Acharya Susruta described that, those who take proper sleep in proper time will not suffer from disease, the mind of them will be peaceful, they gain strength and good complexion, good virility, their body will be attractive, they won’t be lean or fatty and they live good hundred years. Here, Acharya Sushruata has given cardinal importance to timely sleep i.e. sleeping at night or ‘Ratriswabhavaprabhavaaja nidra’.

According to acharya Charaka, one desirous of health and happiness should follow the regimen prescribed for the and alleviation of prevention of unborn born disorders. Although activities of all creatures are directed intuitively towards sukha,good and bad coarse they adapt the depend upon knowledge and ignorance respectively.

The of equilibrium of dhatus is indicated by alleviation of disorders and its examination is done on many conditions illustrated by acharya Charaka in Vimanasthana. It also includes conditions like timely sleep, non-appearance of abnormal dreams, and easy awakening. It denotes that acharya Charaka has given significance to Nidra in achieving equilibrium of dhatus i.e. dhatusatmya along with other conditions.

**Suppressing the desire to sleep**

Modern medicine has demonstrated that sleep has essential physiological functions, and sleep deprivation has demeritorious effects on a number of bodily functions. Ayurvedic classics have clearly mentioned that one should never suppress the natural urge of sleep. Doing so causes delusion, excessive yawning, malaise, squeezing pain all over the body, drowsiness, lassitude, headache and heaviness in the head and eyes. All of these can be resolved with good sleep and mild massage. **Sleep deprivation,** also known as insufficient **sleep** or sleeplessness, is the condition of not having enough **sleep**. It can be either chronic or acute and may vary widely in severity. A chronic sleep-restricted state adversely affects the brain and cognitive function.

Table 3: Symptoms due to suppression of urge of sleep

| Charaka Samhita | Sushruta Samhita | Ashtnga Sangraha |
|-----------------|-----------------|----------------|
| Jrumbha         | Jrumbha         | Jrumbha        |
| Angamarda       | Angamarda/Ang ajadya | Angamarda |
| Shirojadya      | Shirojadya      | Murdhagau rav |
| Akshigaurav     | Akshijadya      | Akshigaurav    |
| Tanda           | -               | -              |
| -               | -               | Moha           |
| -               | -               | Alasya         |

**Effects of sleep deprivation**

Sleep is an important determinant of life. Research has shown that both short sleepers and long sleepers are at an increased risk of all causes of mortality. Untimely, excessive sleep or prolonged vigil is like the night of destruction that takes away happiness and longevity. Improper sleep can also lead to sorrow, emaciation, weakness, sterility, ignorance or death. Sleep deprivation is the cause for diseases due to vitiation of Vata dosha, which includes disorders like Ardita, Ekangeroga, Sarvanga roga, Pakshavadha,
Akshepaka, Dandaka, Bhrama, Vepathu, Vishada, Atipralapa, Atatvabhinivesha etc. Sushrutacharya has described the untimely sleep pattern as an important cause of Ajirna.

**Day sleep and its effects**

Daytime napping is considered a normal part of the daily routine for babies and young children. However, some people continue to nap throughout their life. Sleeping during the day in any season except summer is not advised as it vitiates kapha and pitta dosha and makes the body more unctuous. Sushruta Samhita explains that all three doshas are vitiated by day sleep. Kapha dosha when vitiated results in dullness and heaviness all over the body and sleepiness. Vitiated pitta results in increased sensation of heat and digestion related problems. Vitiated vata results in dizziness and body ache.

**Indication for Day sleep**

Sleeping during the day is indicated for those who are exhausted by singing, study, alcohol, sexual act, detoxification therapies, carrying heavy weights or walking long distances, for those suffering from indigestion, wasting, who are too old, too young, weak, thirsty, suffering from diarrhoea, colic pain, dyspnoea, hiccup or emaciated, for those injured by fall or assault, afflicted with insanity, or exhausted by travelling, anger, vigil, grief or fear and for those who are accustomed to it, day sleep is allowed. In all seasons, such sleep equalizes the dhatus and increases bala (strength). Shleshma/ kapha nourishes body parts, provides stability and promotes the life span. During the summer day sleep is advised for all as the nights are small and vata dosha accumulates due to heat, dryness and aadana kala. Day sleep is also indicated for those suffering from fat loss, kapha dosha or blood, to those of scanty perspiration or rukha (dry) and krusha (lean) constitution and those having digestion problems.

**Effects of being awake at night**

Staying awake at night produces dryness in the body along with complicatons of vitiating vata dosha and pitta dosha and decreased kapha dosha. Vitiated vata dosha causes giddiness, stiffness all over the body, restlessness, lack of concentration and decision-making power, excessive yawning, headache etc., while vitiating pitta dosha mainly causes digestion related problems.

Lack of adequate sleep can affect judgement, mood and ability to learn and retain information. It may also increase the risk of serious accidents and injury. In the long term, chronic sleep deprivation may lead to a host of health problems including obesity, diabetes, cardiovascular disease and early mortality.

**DISCUSSION**

Sleep is chief nourisher at life’s feast. It occurs due to increased Tamoguna. Charakacharya specifically defines ‘Ratriswabhavaja nidra’ as ‘Bhutadhatri’. Sushruta coated that sleep as ‘Vaishnavi’ and ‘Kalaratri’ by Vagbhata. Thus, sleep is essential for survival. Dependent on sleep is sukha. Sukha is desirable to mind and body (anukulavedaniyam), produces health (swasthyaotpadaka), devoid of any diseases (vyapadrahitam). Hence, if a person wants to lead a helathy and fulfilling life, he should not avoid the urge of Nidra and by Nidra it is supposed to be ‘Ratriswabhavaprabhavaja nidra’.

Equilibrium of dhatus (dhatusamya) is characterized by the symptoms such as getting sleep at proper time (nidralabho yathakalam), absence of bad dreams (vaikarikanam swapnanam adarshanam)
Lack of sleep leads to an increase in vata dosha in the body. It could also lead to yawning, aches in various body-parts, loss of concentration as well as digestion problems. Not only it is important to get the correct amount or the correct quality of sleep, but it is equally important to sleep at the right time. For example, sleeping right after a meal is not recommended, because it could lead to indigestion as it increases the kapha and decreases the vata and the pitta. If one stays awake for too late at night, it leads to an increase in vata dosha. This should be made up by sleeping during day on empty stomach for half of the usual time. Ayurveda also recommends sleeping during the day for a while during the summer season as it helps balance the doshas. As per Ayurveda, the best time to sleep is to match it with sun-sleep after sunset and rise with the sun. Sleeping too much is considered tamasic and increases and imbalances the kapha in the body. This weakens the digestive power and leads to heaviness in the body. If one fulfils these checkboxes when it comes to sleep, then it can go a long way in aiding digestion, nourishing tissues and promoting overall health. It also helps to balance the doshas and the gunas.

**CONCLUSION**

- All is well if someone sleeps well. In Ayurveda, Nidra is included in ‘Trividha Upastambha’ along with Ahara and Brahmacharya. For acquisition of perfect physical and mental health, it is essential to observe scrupulously a prescribed regimen every day and sleep (next to ahara) is important in that regimen.

- One’s physical, mental and spiritual health depends on ‘Nidra’. Sleeping in time promotes development, complexion, strength, enthusiasm, apetite, alertness and most importantly equilibrium of dhatus.

- Man has to struggle continuously against his ever-changing environment to keep himself fit and in the best of his health. As humans are rhythmic animals; possession of circadian rhythm enables them to fit better into his rhythmic environment.

- People working in night shifts can have adverse effect on their circadian rhythm because the sleep-wake internal clock setting is at odds with sleep wake cycle of the shift schedule ultimately resulting in circadian rhythm sleep disorders. A majority of workers in night duties are unable to sleep adequately during daytime and hence may develop cumulative sleep debt leading to significant sleep deprivation. Sleep deprivation can further complicate their health as it can result in fatigue, mood changes like depression, decreased cognitive functioning, poor executive functioning, impaired vigilance, and a predisposition to infections.

- People aren't aware of the risks of sleep deficiency. In fact, they may not even realize that they're sleep deficient. ‘Nidravegadharana’ i.e. suppression of urge of sleep had already been narrated in Brihattrayi. This ‘Nidravegadharana’ leads to
symptoms like excessive yawning, body ache, drowsiness, chronic headache, heaviness in eyes, unusual feelings etc.

- Unfortunately, a person can't just accumulate sleep deprivation and then log many hours of sleep to make up for it (although paying back "sleep debt" is always a good idea if you're sleep deprived). The best sleep habits are consistent, healthy routines that allow all of us, regardless of our age, to meet our sleep needs every night, and keep on top of life's challenges every day.

- Thus, being a necessity, observance of Golden rules of Nidra prescribed in Ayurveda will go a long way in making the society free from physical, mental and spiritual ailments.

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Conflict of Interest: Non

Source of funding: Nil

Cite this article:

Conceptual study of significance of Nidra on health
Bhojane Samiksha, Satpute Sanjay M.

Ayurlog: National Journal of Research in Ayurved Science- 2020; (8) (3): 01-09