



A SCIENTIFIC AYURVEDIC EXPLORATION OF NIDRA IN ELDERLY PEOPLE: A REVIEW

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ABSTRACT

Nidra (sleep) is one of the main pillars of good health in *Ayurveda*. More than half of the life is invariably spent in the *Nidra*. Sleep can be influenced by age, lifestyle, daily routines, diet, and environment. Longevity and old age are accompanied with a variety of health challenges and population studies indicate that the elderly will use between three to five times more health care services compared to the younger population. Sleep related problems are one of them causes disturbed life style. Sleep disturbances increases with aging and it is estimated that nearly 67% of the elderly people have at least one sleep related complaints. In modern sciences sleep wake circadian rhythms are regulated by a pacemaker in brain and controlled by some external factors including light, temperature and social interactions. In addition pattern of sleep have many variations in different subjects in terms of age, physiologic and psychological characteristics. *Ayurveda* has been recognized as one of the world's most authoritative mind, body, spirit, medicinal systems. In all *Ayurvedic Samhitas*, *Ahara* (food), *Nidra* (sleep) and *Brahmacharya* (sexual regime) are given prime importance under the name of “*Tryopstambha*” the sub pillars of life. *Nidra* (sleep) in a proper manner is considered as a basic human need and it is important for good health. Here in this paper a literary review on *Nidra* and its importance is attempted to present with Ayurvedic perspective to understand the various sleep conditions and sleep related problems of elderly population.

KEYWORD: *Ayurveda*, *Jara*, *Nidra*, aging, elderly people, sleep.

INTRODUCTION

Ayurveda was introduced to the earth so that man could enjoy a long and healthy lifespan.^[1] India is in a phase of demographic transition – As per the 1991 census the population of the elderly in India was 57 million as compared with 20 million in 1951. There has been a sharp increase in the number of elderly persons between 1991 and 2001 and it has been projected that by the year 2050, the number of elderly people would rise to about 324 million.^[2,3] More than half of elderly have one or more chronic disease and disability. Sleep disorders are one of them. Several physical and psychological changes are known to occur with normal ageing; however adjustment to changes in sleep quantity and quality can be among the most difficult change as it affects the whole lifestyle of the person. Although sleep disturbance is a common complaint among patients of all ages, researches suggest that older adults are particularly vulnerable. A large study of over 9,000 older adults age of >65 year found that 45% of participants reported difficulty in initiating and maintaining sleep.^[4] It is estimated that nearly 67% of the elderly people have at

least one sleep related complaint. Various sleep related problems identified in elderly people such as long time to fall asleep, disturbed sleep at night and decreased day time alertness etc. Researchers have observed direct correlation between poor sleep quality and increased physical and psychiatric morbidity, decline in cognitive functions, and impaired quality of life. Most common factor cited for sleep disturbance are lack of sufficient physical activity, poor sleep related hygiene and excessive day time napping.^[5,6] *Nidra* is one of the main pillars of good health in *Ayurveda*, and it is as important as diet in sustaining a quality health-span. Sleep can be influenced by age, lifestyle, daily routines, diet and environment.^[7,8,9] Research studies indicate that insufficient sleep can disrupt circadian rhythms that results in negative health outcomes, including obesity, cardiovascular disease, and cognitive impairment.^[10,11]

AIMS AND OBJECTIVES

1. To re-evaluate, discuss, and elaborate the various Ayurvedic concepts and principles related to *Nidra* in elderly people.

- To understand the health related problems of the elderly; aging is a natural and *yapya* (palliative) disease and also a risk factor for many diseases.
- To study the concept of *Nidra* in view of elderly sleep disorders with *Ayurveda*.

MATERIAL AND METHODS

This article is based on a review of Ayurvedic texts. Material related to *Nidra* in elderly, *vaya* (aging) and other relevant topics have been collected. The main Ayurvedic texts used in this study are *Charak Samhita*, *Sushruta-Samhita*, *Ashtang Sangraha*, *Ashtang Hridaya*, *Bhava Prakash* and *Sharangdhar Samhita* and available commentaries on these. We have also referred to the modern texts and searched various website to collect information on the relevant topics.

Concept of *vridhnavastha* [later stage of life]

The whole life span is broadly divided into three parts, out of these *Vridhnavastha* is the last part and is mainly characterized by degenerative changes. Aging refers to a multidimensional process of physical, psychological, and social change. The changes are always degenerative in nature.^[12,13,14] According to Ayurveda the lifespan of an individual is divided into three parts known as *Vaya*. These are *Balyavastha* (childhood), which lasts up to the age of 16 years; *Madhyavastha* (young and middle age), which lasts from the age of 16 years to 60–70 years; and *Vridhnavastha* or *Jirnavastha* (old age), which refers to the period after 60 or 70 years.^[15,16,17] Thus, every person will pass through a period when various decaying changes will take place, and this time period is known as *Vridhnavastha*. This stage is characterized by decay in the body, *Dhatu* (various anatomical tissues), perception power of the *Indriya* (sensory and motor organs), potency, strength, speech, various mental and cognitive functions e.g., memory, intellect, reception, retention, analytic ability, etc. During this phase there is predominance of *Vata Dosha* (one of the three physiological body factors). The major physical changes seen at this time are wrinkling of skin, greying of hair, baldness, and a diminishing ability to do physical work etc.^[18] The diseases that complicate this stage are *Kasa* (cough), *Shwas* (asthma), and so on.^[19,20] *Vridhnavastha* may be of two types: timely (if it manifests after the age of 60 – 70 years) or untimely.^[21]

Ayurveda and science of aging

Jara also called as *Vardhakya* (aging) is defined as that which has become old by the act of wearing out. According to Ayurveda, *Jara* (aging) is not a disease but a natural phenomenon like hunger, thirst or sleep. In the theory of natural destructions (*Swabhavo paramavada*), *Acharya Charaka* describes that there is a causative factor for the manifestation of a being but there is no cause for the cessation of this manifestation, since death following birth is a state of natural flow.^[22,23] The term *Jara* denotes four entities: *Nityaga* which signifies continuation of consciousness, *Dhari* which denotes the factor(s) that prevent the body from *Jara*

(aging), *Jeevitam* which represents the act of keeping alive and *Anubandha* that denotes transmigration of the body.^[16,17] Accordingly, *Jara* (aging) is influenced by factors affecting *Shareera* (physical), *Indriya* (emotional), *Satwa* (psychic level), *Agni* (metabolism) and *Bala*, *Ojas* (immunity). In addition, *Parinama* (cellular transformation), *Sharira vridhnikara bhavas* (genotypic and phenotypic characteristics) and *Garbhahinivrittikara bhava* (pregnancy-induced fetal development and changes) also affect an individual's aging process.^[24,25,26]

Jara is accompanied by the process of decay and manifests in the form of various degenerative changes. Although these changes are natural (*Kalaja Vridhnavastha*-natural aging), they are not pleasant.^[20,27]

Etymological derivation of *Nidra*^[28]

- The word *Nidra* is feminine, formed by the prefix ni+dra+rak+ta.
- This is a state of nature which causes encapsulation to the consciousness of a person.

Definition

The definitions given in ancient texts are as follows

- According to *Acharya Vyas* "Sleep is the mental operation having the absence of cognition for its grasp".
- "Sleep is a state of unconsciousness, but the consciousness remains about his own unconsciousness."^[29]
- Statement by "*Mandukya Upanishad*", *Nidra* is a condition in which "*Atma*" does not have any dream or desire for anything and that state is called "*Susupti*".^[30]
- Acharya Charak* affirmed that when the mind (as well as soul) gets exhausted or becomes inactive and the sensory and motor organs become inactive then the individual gets sleep.^[30]
- Acharya Susruta*, described the sleep occurs when the *Hridaya*, the seat of *Chetana* is covered by *Tamas*.^[32]
- Acharya Dalhana*, the commentator of *Susruta* states, that- *Nidra* is the state of combination of mind and intellectual in which the person feels happy.^[33]
- According to *Astanga Sangraha* commentary, stated that, the *Manovaha Srotas* become accumulated with *Sleshma* and mind is devoid of sense organs because of fatigue, when individual fell asleep.^[34]

Nidra is considered second amongst the *Trividha Upstambhas*. One who gets sound sleep at night, can digest the food well. His *Kayagni* is enhanced and there is proper nourishment of the body.^[35] As per *Acharya Charaka*, *Nidra* is a condition in which *Manas* including *Indrias* desolate themselves from their object. According to *Acharya Susruta*, *Nidra* is related to god *Vishnu*, It is sinful and encroaches upon all living being by nature.^[36]

Acharya Vagbhat has said that *Nidra* is produced from *Tamas* at the time of commencement of the creation. It is another form of *Tamas* is predominant, generally at night.

Nidra In Vedic Literature

In the former most *Rig-Veda*, it is suggested that arrangement in the city/town /country should be maintained as all the persons can be slept comfortably, means there should be no danger of thieves and dacoits.^[37] It is also said when sunset in the evening all living beings are tired by the whole day working are slept comfortably.^[38] It is further said in other words that arrangement of the city or country should be excellent as women can also slept in courtyard without fear, in passage or in vehicles during journey without fear. It is also advised that women should use perfume then go to sleep on comfortable bed at night.^[39] In *Yajurveda* it is prayed to god *Agni* that you have to awake thoroughly because we shall sleep comfortably and take rest furthermore you have to perfect us in night without carelessness and wake in the next morning at the appropriate time.^[40] In *Samveda*, it is prayed to the god sun that avoid us from such calamity which comes with bed dreams.^[41] In *Atharvaveda* it is said that who wants benediction, must utter 5th shukt in night before sleeping.^[42]

Nidra In Upanishad

The term purana means that which lives from of old or that which is always new though it is old. *Puranas* are generally based on the *Vedas*. The word Upanishad means 'an approach to the knowledge of the reality, expounded in the books of that name. In *Mandukyopnishad*, *Nidra* is considered as ignorance of truth. It is called *tama*. Origin of *Nidra* is only factor which differentiates *Jivatma* (united with ignorant *Nidra*) from *Paramatma* (free from *Nidra*).^[43] In *Chhadogyopanishada* it is said that in *Sushupti* (*Nidra*) stage *Purush* is lost in himself, so he is known as in "Swapiti" condition, because in this stage *Purush* acquired himself.^[44] In *Prashnopanishad*, it is said that the person have divine knowledge when awakened after sleeping, he feels results of all religious sacrifice means he experience extreme happiness and enjoyment.^[45] *Brahadaranyakyopanishada* is given explanation of *Bramha* with the help of awakened, *Swapna* etc. stages.^[46]

Nidra In Darsanika Literature

Darshan- means looking or sight. It is also means the eye, the mirror and knowledge especially religious. In *Vedant* system of physiology "Swapa" and "Swapna" words are come at different places. In the explanation of *Susupti* stage, it is stated that when *Purush* is become identical to *Paramatma* and immersed in *Paramatma*, that particular stage is known as *Susupti*.^[47] There all the discussion about *Swapna* indicates the experiencing dreams is delusion and false knowledge.^[48] The word "Swapna" is also come in *Nyaya* system of philosophy

and considered as false knowledge as world. Actually *Swapna* is used for the discussion about *Pramana* and *Prameya*.^[49] In yoga system of philosophy *Nidra* is described as a stage of *mana* and included in five stages i. e. *Vritti* of *Mana* i.e. *Pramana* (equipment of knowledge), *Viparyaya* (false knowledge), *Vikalpa* (doubt or uncertainty), *Nidra* (sleep) and *Smriti* (memory).^[50]

Physiology of Nidra

According to *Acharya Caraka*, when the *Mana* including *Indriyas* is exhausted and thus they dissociate themselves from their objects, the individual sleeps.^[51] When the *Mana* (as well as the soul) gets exhausted or becomes inactive and the *Gyanendriyas* and *Karmendriyas* become inactive then the individual gets sleep. *Acharya Susruta* said about the physiology of *Nidra* that *Hridaya* is the seat of *Chetna* in living being. When this is invaded by *Tamo-guna*, persons are subjected to *Nidra*. *Tamo-guna* is the cause of sleep and *Satva-guna* is the cause of awakening but overall, nature itself is more dominant cause.^[52] *Acharya Caraka* explained physiology of *Nidra* that when *Srotas* of the body become covered by *Kapha*, then the body is fatigued by exertion and when the sense organs are not functioning, *Nidra* manifests in the body.^[53]

Modern Aspect of Sleep physiology

The human body has many rhythms that influence and regulate physiologic functions, performance, moods and behavioural responses. A major determination of sleep is the internal biological clock that regulates the circadian rhythm can result in interrupted sleep and cause a myriad of problems, including fatigue, mental changes, cognitive difficulties and physical changes.^[54]

Importance of Nidra

According to *Charaka*, *Sukha*, *Dukha*, *Pusti*, *Karshya*, *Bala*, *Abala*, *Vrushata*, *Klibata*, *Gnyanam*, *Agnyana* (ignorance), *Jivana* and *Mrityu* (death), occurrence of all these depends on the proper or improper *Nidra*.^[55] *Acharya Susruta* has said that by using proper and adequate *Nidra*, the person will be free from diseases, will have a pleasure in mind endowed with strength, color or complexion and virility.^[56] *Acharya Vagbhata* has said when *Nidra* is observed judiciously, it will lead to happiness and long life just as the mind of the yogies become clear from knowledge of the soul and penance.^[57] According to *Acharya Bhavamishra* *Nidra* is best for alleviating *Pitta Dosh*.^[58] He also quoted that when a person sleep just after meal, it mitigates *Vata* and *Pitta Dosh*, while increases *Kapha Dosh* in the body. It stauts the body and brings comfort.^[59] *Acharya Kashyapa* has accepted that comfortable *Nidra* is essential for milk production in mother.^[60]

Ahara, *Nidra* and *Brahmacharya* are the three main pyramids of life, which play vital role for maintenance of health in human being. In the Ayurvedic Literature, *Ahara*, *Nidra* and *Brahmacharya* are compared with

the triangles are termed as the three *Upastambhas* or Tripods.^[61] The inclusion of *Nidra* in the three *Upastambha* i.e. the sub-pillars of life establishes its value. While explaining about *Nidra*, Acharyas stated, that delight 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.^[62]

DISCUSSION

Elderly people are highly prone to physical and mental morbidities due to, problems associated with physical and mental health, socio-economic factors such as breakdown of the family support systems, and decrease in economic independence.

Sleep-related problems in older people are mostly ignored by the physicians. Suppressed emotions, disturbed sleeping patterns, worries, anger, old age, overexcitement and ill health may be other responsible factors. Timing of the sleep is one of the important factors which is controlled by the suprachiasmatic nucleus of the hypothalamus, which responds to light and cause sleepiness at night when it is dark. The important observation made during the study-Sleep is directly connected with mental state in today's era, people are not getting plenty hours of sleep. If a healthy person not getting proper sleep, he will become a patient. It is not a serious problem in the start, but later on stage it leads to number of health nuisance and ailments, and in elderly people it will become serious health issues.

CONCLUSION

Ayurveda cautions that poor sleep patterns can be debilitating as it triggers age-associated pathological conditions that can hasten the aging process. Poor sleep quality not only disrupts the circadian rhythms but also triggers metabolic diseases including diabetes, obesity, and cardiovascular disease. The major conclusion of this study was that poor sleep quality in elderly increased risk of early death. Ayurvedic concept of sleep being a pillar of life that endows the body with strength, complexion and healthy growth that continues throughout life. The research findings are in agreement with Ayurveda's emphasis on good quality sleep as a staple of optimal health and longevity. The main aim of this article is, to overview & highlights the concept of *Nidra* & its importance on elderly people. In today's era *Nidra* is the very important factor to be studied. *Nidra* is a key factor to play a big role in our healthy life.

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