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 by 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 increase 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 go...

INTRODUCTION

Ayurveda was introduced to the earth so that man could enjoy a long and healthy lifespan.¹⁻² 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.³⁻⁴ 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.⁵ 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.⁶⁻⁷ 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.¹⁻² Research studies indicate that insufficient sleep can disrupt circadian rhythms that results in negative health outcomes, including obesity, cardiovascular disease, and cognitive impairment.⁸⁻¹¹

AIMS AND OBJECTIVES

1. To re-evaluate, discuss, and elaborate the various Ayurvedic concepts and principles related to Nidra in elderly people.
2. 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.
3. 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, Ashtanga Samhagaha, Ashtanga Hridaya, Bhava Prakash and Sharangdhar Samhita and available commentaries on these. We have also referred to the modern texts and searched various websites to collect information on the relevant topics.

Concept of vriddhavastha [later stage of life]
The whole life span is broadly divided into three parts, out of these Vriddhavastha 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 Vriddhavastha 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 Vriddhavastha. 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. Vriddhavastha 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 Vardhukya (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), Jeevitaṁ which represents the act of keeping alive and Anubhandha that denotes transmigration of the body.[16,17] Accordingly, Jara (aging) is influenced by factors affecting Shāreera (physical), Indriya (emotional), Satwa (psychic level), Agni (metabolism) and Bala, Ojas (immunity). In addition, Parinama (cellular transformation), Sharīra vṛiddhikara bhavas (genotypic and phenotypic characteristics) and Garbhahinivṛittikāra 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 Vriddhavastha-natural aging), they are not pleasant.[20,27]

Etymological derivation of Nidra[28]
1. The word Nidra is feminine, formed by the prefix ni+dra+rak+ta.
2. 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
1. According to Acharya Vyas “Sleep is the mental operation having the absence of cognition for its grasp”.
2. “Sleep is a state of unconsciousness, but the consciousness remains about his own unconsciousness.”[29]
3. Statement by “Mandukya Upanishad”, Nidra is a condition in which “Aima” does not have any dream or desire for anything and that state is called “Susupit”.[30]
4. Acharya Charak affirmed that when the mind (as well as soul) gets exhausted or becomes inactive.potency and the sensory and motor organs become inactive then the individual gets sleep.[31]
5. Acharya Susruta, described the sleep occurs when the Hridaya, the seat of Chetana is covered by Tamas.[32]
6. Acharya Dhalhana, the commentator of Susruta states, that Nidra is the state of combination of mind and intellectual in which the person feels happy.[33]
7. According to Astanga Sangrahana commentary, stated that, the Manovahata 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 Mana including Indriyas 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 Vagbhhat 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 fired 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 sleep 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 purama means 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 Tidra).[43] In Chhadogypopnishada it is said that in Sushupti (Nidra) stage Purush is lost in himself, so he is known as in “Swapna” condition, because in this stage Purush acquired himself.[44] In Prashnopnishad, 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] Brahadaranyakopanishada is given explanation of Brahma 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 Hzidaya 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.\cite{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.\cite{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.

**REFERENCES**

4. Roepke susan K; & Sonia Ancoli-Israel; sleep disorders in the elderly; Indian j med res, 2010; 131: 301-310.
8. Watson N.F., Badri M.S., Beniky G.,Bliwise D.L., Buxton O.M., Buysse D. joint consensus statement of the American academy of sleep medicine and sleep research society on the recommended amount of sleep for a healthy adult: methodology and discussion. Sleep, 2015; 38: 1161-1183. [PMC free article][PubMed][Google scholar]
Charak Samhita, Vidyotini, 1998; 782. [Google Scholar]


37. Rigveda, saptam mandal, shukt-55, mantra, 5.

38. Rigveda, saptam mandal, shukt-55, mantra, 7.


40. Jyurveda, chapter 5, mantra, 14.

41. Samveda, indra khand-2 chapter, 3rd khand, mantra, 7.

42. Atharvaveda 5th shukt, 1st khand, 5th Anuvadaka.

43. Manukyopanishad, prathamagam, shlok, 14.

44. Chhandogypanishad chapter 6, khand 8, shlok, 1.

45. Prashnoanishad 4th prashna, 5.

46. Brahadranyopanishada 2nd chapter, 1st braman, 19th phrase.

47. Bramha sutra sanker bhasya, chap 3 pada 2 sutra, 8.


49. Nyaya Darshan, chap.4, 2nd Aabanika.

50. Yoga Darshana, Samadhi Pada, Sutra, 6.


55. Townsend- Roccichelli, Judith phD;Sanford, Julie T. DNS,RN; vande waa, Elizabeth phD Managing sleep disorders in the elderly Nurse practioner, May 2010; 35(5): 30-37.


60. Kashyapa Samhita Sutrasthana, 19.
