



Research Article

AN EPIDEMIOLOGICAL SURVEY STUDY TO KNOW THE SLEEPING AND WAKE UP TIME OF
ELDERLY AND ITS RELATION TO HEALTH

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ABSTRACT

Vridh Awsatha compared with Geriatric Population is the state of “*Vata Vridhi*” related with various *Vatavridhi* disorders. The older individuals often suffer from multiple medical problems. Like, osteoarthritis, shortness of breath, congestive heart failure, all can lead to difficulty with sleep initiation and maintenance. Trouble with sleep is strongly correlated with complaints about health and depression. Studies examining the prevalence of sleep disturbances in patients with chronic medical diseases have reported that 31% of arthritis and 66% of chronic pain patients report difficulty falling asleep, while 81% of arthritis, 85% of chronic pain, and 33% of diabetes patients report difficulty staying asleep. In a recent National Sleep Foundation survey of adults aged 65 years and over, those with more medical conditions, including cardiac and pulmonary disease and depression, reported significantly more sleep complaints. **Objective:** This study has been conducted to evaluate the sleeping and waking time of elderly and Diseases pattern with sleep status. **Methodology:** Interview based Questionnaire was prepared to know the sleep timings, waking up timings of elderly. 96 subjects of both sex was selected from OPD of AIIA, and nearby place and collected data was analyzed by using odd's. **Conclusion:** According to the study the health status is directly affected by the timings of sleeping and waking up i.e. people who wake up early tends to be healthier. So, to add the quality in the end years of life, sleep will be main domain to work upon.

KEYWORDS: *Vridh Awsatha*, Geriatric, *Vata Vridhi*.

INTRODUCTION

Vridh Awsatha compared with Geriatric Population is the state of “*Vata Vridhi*”, considered under *Swabhavajvyadhis*^[1] i.e., evitable phenomenon and it said to be fragile as the old house^[2]. Life expectancy around the world has increased steadily for nearly 200 years. During the nineteenth and early twentieth century, an increase in life expectancy was driven mainly by improvements in sanitation, housing, and education, causing a steady decline in early and mid-life mortality, which was chiefly due to infections. This trend continued with the development of vaccines and then antibiotics. By the latter half of the twentieth century, there was little room for further reduction in early and mid-life mortality. The continuing increase is due almost entirely to a new phenomenon: the decline in late-life mortality.^[3] Years are being added to our lives, life is not being added to our years: the extra years are being added at the very end of our lives and are of poor quality. Only quantity improvement is not sufficient to achieve the desired goal, aging should be

qualitatively long. *Ahara*, *Nidra* and *Bhramchriya* are the *Trayopstambha*, which are the basis to hold the life can be considered as the component for the Qualitative aging. But in today's era each and every person devoid of proper *Dinacharya* which leads in manifestations of disorders specially Non communicable and ultimately increases the diseases burden, where sleep is the main concern person unable to focus Studies examining the prevalence of sleep disturbances in patients with chronic medical diseases have reported that 31% of arthritis and 66% of chronic pain patients report difficulty falling asleep, while 81% of arthritis, 85% of chronic pain, and 33% of diabetes patients report difficulty staying asleep. In a recent National Sleep Foundation survey of adults aged 65 years and over, those with more medical conditions, including cardiac and pulmonary disease and depression, reported significantly more sleep complaints. When it comes to geriatric population condition it becomes more adverse as they are considered as dependable population with

no financial support. So, proper sleeping and waking timing should be followed to gain qualitative aging.

AIMS AND OBJECTIVES

- This study has been conducted to evaluate the sleeping and waking time of elderly
- Diseases pattern with sleep status

MATERIALS AND METHODS

A survey study was carried out at All India Institute of Ayurveda during December 2018-January 2019 on 96 subjects of each Sex. A Questionnaire was prepared to collect the relevant data to know the Sleep timings, waking up timings of elderly population and health status was assessed.

Ideal sleeping timing was consider as 5-6 AM

Ideal waking timing was consider as 10-11 PM

Healthy Individuals

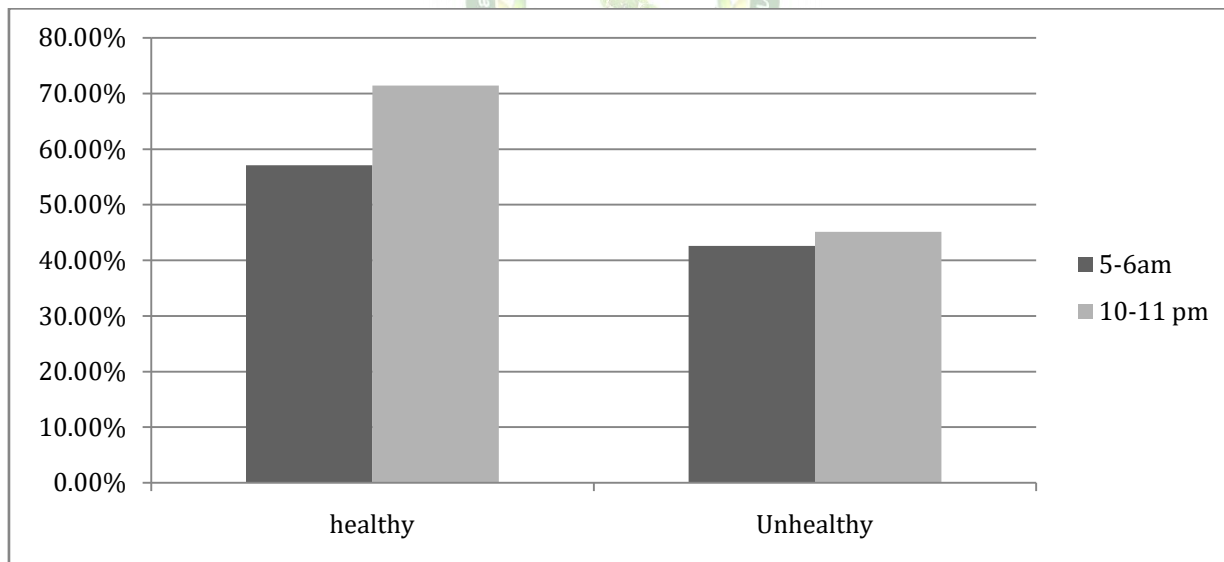
- Those individuals who were apparently healthy only physical health was taken into consideration

RESULTS

Table 1

	Numbers
Healthy	14
Diseased	82

Figure 1



	Ideal timings	Sleeping	Non ideal timings	Total	OR
Healthy	10		09	19	1.2
Diseased	37		40	77	
Total	47		49	96	

Unhealthy Individuals

- Those individuals who were suffering from Non-Communicable diseases like –Diabetes Mellitus, Obesity, Osteoarthritis, Cancer etc.

Inclusion Criteria

1. Subjects in the age group 60-80 years
2. Subjects belonging to both the gender
3. Both Healthy and Diseased

Exclusion Criteria

1. Subjects below 60 years and above 80 years
2. Subjects having any Psychological disorder

Statistical analysis

The Data collected were systematically tabulated in excel sheet and analysis was done based on percentages (%). Association between sleeping and waking times and health was tested using odds ratio.

	Ideal Waking up timings	Non ideal timings	Total	OR
Healthy	08	06	14	1.79
Diseased	35	47	82	
Total	43	53	96	

DISCUSSION

There is positive relation between Ideal sleeping timing, Ideal waking up timings and health status, i.e the person sleeping between 10-11 pm and waking up at 5-6 am having good health status as represented by odds ratio 1.2 and 1.79 respectively. *Nidra* is one among the primary life supports *Trayopsthambha*. Nourishment, emaciation all are dependent on proper or improper sleep^[4]. To wake up at *Brahma Muhurta* is very much important for *Ayu Rakshan* or longevity of life. This has been stated in our Samhitas^[5] Acharya Vagbhat had stated the starting of *Dinacharya* with waking up at *Brahma Muhurta*. Hence this process is more important in our daily routine for physical and mental well being. *Brahma* means *Jnanum*^[6] and periods which helps in *Adhyayana* is known as *Brahma Muhurta*. According to *Yogashastra* *Ahoratra* is divided in 8 *Yamas*. Out of that day consists of 4 *Yama* and in night 4 *Yama*. The last *Yama* of night called as *Brahma Muhurta*. Every *Yama* has *Muhurta* includes 3.75 *Muhurta*. Hence the starting *Muhurta* of last *Yama* can be considered as a *Brahma Muhurta*. Waking at *Brahma Muhurta* with follows of *Dinacharya* and *Sadvrutta*, it increases the *Satva Guna* which will be the main controller of our good activities. It will help to increase the healthy life of human being and increase the longevity of healthy physical and mental health.^[7] As per Physiology concern, Maximum plasma cortisol secreted from adrenal cortex influence of ACTH from hypothalamus. The rate of secretion of ACTH is high in the morning that heightened the memory and attention, decreases Serotonin and its low in the evening. The ideal time for sleeping as mentioned in *Kaiyadeva Nighantu* and in *Chikitsarnava* is after the first two *Yama* (approx. 6 hours) of sunset. But due to altered lifestyle and choice, person fails to follow the Prescribed Sleeping and waking up timing. Today's lifestyle, stress, changing food habit, office work causes late night sleep and late morning awake, so it imbalances the level of secretion of serotonin and melatonin.^[8] That imbalance causes depression, insomnia, awakens, lack of positivity and loneliness. Insufficient sleep is well recognized and declared as a Public Health problem-By Center of Diseases and control in United states <6 Hours (Brazil) <5 Hours National sleep foundation. Sleep deprived people appears less healthy, less attractive and more tired. This suggest that humans are sensitive to sleep related facial cues,

with more potential implication for social and clinical judgment and behaviour^[9]. Late night waking causes vitiation of *Vata*.^[10] And also considered one of the reason behind *Oja* depletion^[11] During sleep, immune system release proteins called cytokines, which regulate the immunity, inflammation and hematopiesis, roles in tissue repair, in the control cell replication and apoptosis, cytokines are highest at night whereas anti inflammatory cytokines IL-10 rise during daytime^[12], so the person with improper sleep suspected to have low immunity.

However, both insufficient and excessive sleep have been consistently reported to be associated with various health-related conditions such as hypertension, obesity^[13], diabetes^[14], cardiovascular events or mortality^[15] and stroke. There are various Factors Contributing to Sleep Problems in the Elderly Population that are Primary sleep disorders, Circadian rhythm disorder, Sleep apnea (obstructive, central or mixed), Restless legs syndrome Periodic limb movement disorder (nocturnal myoclonus) REM-behaviour disorder Pain from any source, Neurologic disease (e.g., Parkinson's disease, Alzheimer's disease), Cardiovascular disease, Gastrointestinal disease, Pulmonary disease, Psychiatric disorders (e.g. anxiety, depression, psychosis, dementia, delirium), Medications and other substances, Alcohol, Anti-cholinergics, Anti-depressants Diuretics, Levodopa, Corticosteroids, Poor sleep habit. So, it's become important to consider the sleep as the main contributor for healthy ageing. Proper awareness about Healthy Lifestyle should be propagated to maintain the promotion of healthy Aging.

CONCLUSION

According to the study the health status is directly affected by the timings of sleeping and waking up i.e. people who wake up early tend to be healthier. So, to add the quality in the end years of life, sleep will be main domain to work upon.

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