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Physiological Study of *Trayopasthambha* (Ahara, Nidra Evam Brahmacharya) w.s.r. to Nidra (Sleep)

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Abstract: In the 21st century, everywhere people are in a hurry. Jet-powered aircraft send their human cargo across broad continents and vast oceans so that one could achieve his goal and fulfill their desire. But in a fast-paced life, the lifestyle is far from what the natural anatomy and physiology of the human body permit. Irregular and unnatural food habits, suppression of natural urges, lack of proper sleep, etc. are the inseparable parts of daily routine that enervate the body arising in times of crisis. According to Ayurveda Swasthya (health) does not only mean physical fitness but mental fitness as well. Ahara, Nidra, and Brahmacharya are three sub pillars that support the main pillar, the body itself. Ayurveda very frankly gives potential stress on Food, Sleep, and Abstinence to be used *Uktivat* (planned manner). This facilitates a person with benefits of life endowed with strength, complexion, and full life span, provided He / She does not indulge in Ahita Ahara and Vihar and maintains rules prescribed for that. "Sleep is the golden chain that ties health and our body together" Sleep is a way to nourish our body, mind, and spirit. It is an important component of good health and peace of mind. Getting sound sleep each night imparts physical and mental balance to prepare our body and mind for the next day. Ayurveda views restful sleep as important as diet and also an essential pillar of good health. Sleep is nothing but a temporary loss of contact with Gyanendriya and Karmendriya Nidra plays a decisive role in the development, sustenance, reproduction, and termination of life. Most of the diseases are mainly due to improper Nidra. None of the existing systems of medicine is the complete answer for all health.

Keywords: Ayurveda, *Trayopasthambha* (Ahara, Nidra, Brahmacharya), PSQI Scale, Survey on Nidra (sleep).

I. INTRODUCTION

Ayurveda, the ancient science of life emphasizes physical and mental health with preventive aspects. "Swasthasya Swasthya Rakshanam" is the main objective of Ayurveda. Curing a diseased person and reshaping his health status is also an aim of Ayurveda. Ayurveda suggests a balance in the functioning of *Dosha*, *Dhatu*, and *Mala*, as well as *Agni* and *Ojas* along with the pleasant status of *Atma*, *Indriya*, and *Manas*, are the basic requirements to be called *Swasth*.¹

In Ayurveda three *doshas* i.e., *Vata*, *Pitta*, and *Kapha* are described as *Tristhuna* (Three main pillars of the body). Similarly, *Ahara* (Balanced Diet), *Nidra* (Complete and Sound Sleep), and *Brahmacharya* (Abstinence or Regulated Sex) are described as *Trayopasthambha* (Three external sub pillars of the body). The whole life of a person is dependent upon *Tristhuna* and *Trayopasthambha*. *Ahara*, *Nidra*, and *Brahmacharya* are three sub pillars that support the main pillar, the body itself.² Ayurveda very frankly gives potential stress on Food, Sleep, and Abstinence to be used *Uktivat* (planned manner). This facilitates a person with benefits of life endowed with strength, complexion, and full life span, provided He / She does not indulge in *Ahita Ahara* and *Vihar* and maintains rules prescribed for that.

If consumed properly and in accordance with all laws and regulations, *Ahara* prolongs life, refreshes all sense organs, nourishes all dhatus (tissues), improves memory, intelligence, strength, *Oja*, and gives the body color and shine. The above benefits will not be seen if relevant norms and regulations are not followed. The emphasis here is on how food is ingested, as this has an impact on digestion.³

Colour, luster, speech, life, innovation, happiness, content, nourishment, strength, and intelligence are dependent on *Ahara*.⁴

The difference between proper healthy (Happiness) and unhealthy (Unhappiness) depends upon the quality and quantity of *Ahara*.

"Healthy sleep is as important as proper nutrition and regular exercise for our health and well-being, and sleep is critical for performance and safety," said AASM President Dr. Kannan Ramar. "It is the position of the AASM that sleep is essential to health, and we are urging educators, health care professionals, government agencies, and employers to prioritize the promotion of healthy sleep."⁵

According to *Ayurveda*, the term *Nidra* means the physiological state of the rest of the human body, mind, and motor organs. When the mind including *Atma* (soul) and body get exhausted due to day-long activities, the *Karmendriyas* (sense organs) disassociate themselves from their objects and this makes the person go to sleep.⁶

Brahmacharya refers to refraining one's mind and body from indulging in sex-related matters. At the outset, it appears as if it covers only the physical aspect. But it also covers the mental aspect. The practice of *Brahmacharya* promotes life and preserves health and as such is a similar wordily act.

According to *Chakrapani*, *Brahmacharya* is a process in which one has control over their senses, such as their eyes, and is free of *Manasika Doshas*, among other things, which aids in the *Brahma Gyana*.⁷

Brahmacharya is purity in thought, word, and deed. It is celibacy and continence. *Brahmacharya* is the vow of celibacy. The term 'celibacy' is from the Latin 'caelebs', meaning unmarried or single, and signifies the state of living unmarried. But *Brahmacharya* is not mere bachelorhood.

It includes the control, not only of the sex or reproductive *Indriya* but also of all other *Indriyas* in thought, word, and deed. This is the definition of *Brahmacharya* in a broad sense of the term.

II. AIMS & OBJECTIVES

- 1) Brief study about the three *Upastambha* (*Ahara*, *Nidra* Evam *Brahmacharya*) mentioned in *Ayurvedic* texts.
- 2) Detail study of *Nidra* according to *Ayurveda* as well as modern science.
- 3) To study the role of *Nidra* in maintaining a healthy lifestyle.
- 4) Assessment of *Nidra* on individuals.

III. MATERIAL AND METHODS

A. Research Design

Single observational study.

B. Sources of Data

200 apparently volunteers will be randomly selected from jodhpur and surrounding areas.

IV. SELECTION OF VOLUNTEERS

A. Inclusion Criteria

- 1) Volunteers of either gender will be taken.
- 2) Volunteers of the age group 18-40 years will be taken.

B. Exclusion Criteria

- 1) Volunteers having any type of systemic disease like diabetes, hypertension, etc.
- 2) A person who is not willing to participate in the study.
- 3) Volunteers who are on sedatives.

V. ASSESSMENT CRITERIA OF SURVEY STUDY

In this "PHYSIOLOGICAL STUDY OF *TRAYOPASTHAMBHA* (*AHARA*, *NIDRA* EVAM *BRAHMACHARYA*) W.S.R. TO *NIDRA* (SLEEP)" was studied on 200 healthy volunteers were randomly selected and evaluated to participate in the survey. Those who fulfilled the criteria only were selected for this survey.

For this survey used, the "PITTSBURGH SLEEP QUALITY INDEX" (PSQI) Scale and self-developed questionnaires to access symptoms of *Nidra* mentioned in *Ayurveda* classical texts. These completely filled questionnaires were collected from all volunteers.

VI. OBSERVATION AND RESULTS

For this survey used, the "PITTSBURGH SLEEP QUALITY INDEX" (PSQI) Scale and self-developed questionnaires to access symptoms of *Nidra* mentioned in *Ayurveda* classical texts. These completely filled questionnaires were collected from all volunteers.

VII. DEMOGRAPHIC DATA OF VOLUNTEERS

Table no. 1: Age-wise distribution

Age	No. of volunteers	Percentage (%)
18-21	41	20
22-25	31	15
26-29	51	26
30-33	29	15
34-37	18	9
38-40	30	15
Total	200	100

Table no. 2: Sex-wise distribution

Sex	No. of volunteers	Percentage (%)
Male	109	54
Female	91	46
Total	200	100

Table no. 3: Religion-wise distribution

Religion	No. of volunteers	Percentage (%)
Hindu	160	80
Muslim	40	20
Total	200	100

Table no. 4: Diet-wise distribution

Diet	No. of volunteers	Percentage (%)
Vegetarian	107	53
Mixed	93	47
Total	200	100

Table no. 5: Education-wise distribution

Education	No. of volunteers	Percentage (%)
Postgraduate	87	43
Graduate	47	23
Undergraduate	27	14
Higher secondary	33	17
Uneducated	6	3
Total	200	100

Table no. 6: Occupation-wise distribution

Occupation	No. of volunteers	Percentage (%)
Desk work	64	32
Fieldwork	57	28
Housewife	18	9
Student	61	31
Total	200	100

Table no. 7: Marital status-wise distribution

Marital status	No. of volunteers	Percentage (%)
Married	121	60
Unmarried	79	40
Total	200	100

Table no. 8: Socio-economic status-wise distribution

Socio-economic status	No. of volunteers	Percentage (%)
Upper	57	28
Middle	128	64
Lower	15	8
Total	200	100

Table no. 9: Habitat-wise distribution

Habitat	No. of volunteers	Percentage (%)
Rural	72	36
Urban	128	64
Total	200	100

Table no. 10: *Prakriti*-wise distribution

<i>Prakriti</i>	No. of volunteers	Percentage (%)
<i>VP</i>	40	20
<i>PV</i>	36	18
<i>VK</i>	50	25
<i>KV</i>	2	1
<i>KP</i>	10	5
<i>PK</i>	62	31
Total	200	100

Table no. 11: *Agni*-wise distribution

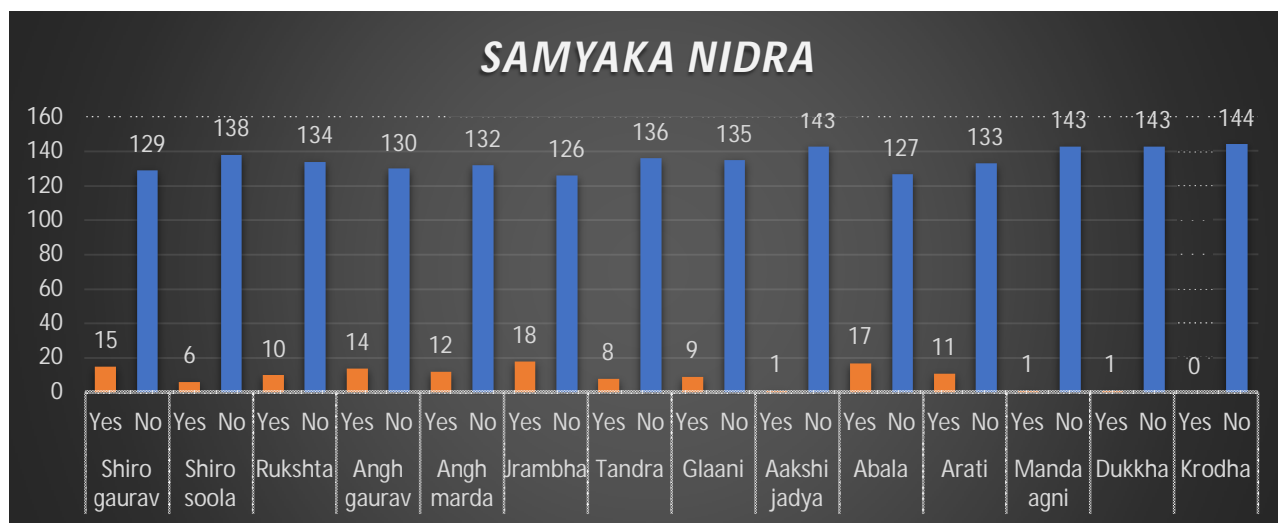
<i>Agni</i>	No. of volunteers	Percentage (%)
<i>Mandha</i>	41	20
<i>Sama</i>	17	8
<i>Tikshana</i>	81	41
<i>Vishama</i>	61	31
Total	200	100

Table no. 12: *Nidra*-wise distribution

<i>Nidra</i>	No. of volunteers	Percentage (%)
<i>Samyaka</i>	144	72
<i>Asamyaka</i>	56	28
Total	200	100

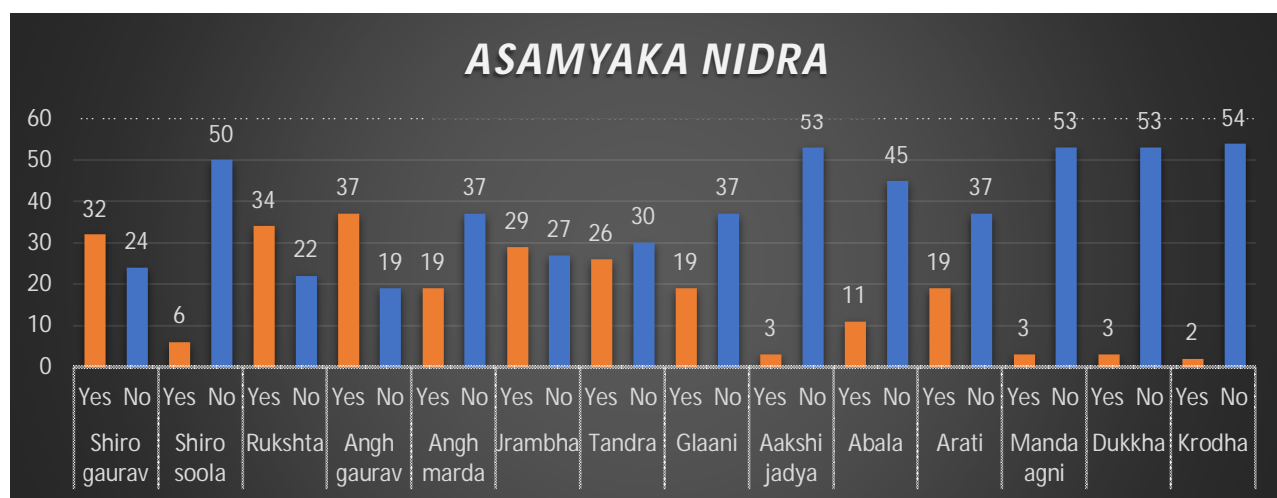
In *Samyaka Nidra* symptoms are-

Symptoms	No. of Volunteers		Percentage
	Yes	No	
<i>Shirogaurav</i>	Yes	15	10.41
	No	129	89.58
<i>Shirosoola</i>	Yes	6	4.16
	No	138	95.83
<i>Rukshta</i>	Yes	10	6.94
	No	134	93.05
<i>Anhgaaurav</i>	Yes	14	9.72
	No	130	90.27
<i>Anghmarda</i>	Yes	12	8.33
	No	132	91.66
<i>Jrambha</i>	Yes	18	12.5
	No	126	87.5
<i>Tandra</i>	Yes	8	5.55
	No	136	94.44
<i>Glaani</i>	Yes	9	6.25
	No	135	93.75
<i>Aakshijadya</i>	Yes	1	0.69
	No	143	99.30
<i>Abala</i>	Yes	17	11.80
	No	127	88.19
<i>Arati</i>	Yes	11	7.63
	No	133	92.36
<i>Mandaagni</i>	Yes	1	0.69
	No	143	99.30
<i>Dukkha</i>	Yes	1	0.69
	No	143	99.30
<i>Krodha</i>	Yes	0	0
	No	144	100



In Asamyaka Nidra symptoms are-

Symptoms	No. of Volunteers		Percentage
	Yes	No	
<i>Shirogaurav</i>	Yes	32	57.14
	No	24	42.85
<i>Shirosoola</i>	Yes	6	10.71
	No	50	89.28
<i>Rukshta</i>	Yes	34	60.71
	No	22	39.28
<i>Anhggaurav</i>	Yes	37	66.07
	No	19	33.92
<i>Anghmarda</i>	Yes	19	33.92
	No	37	66.07
<i>Jrambha</i>	Yes	29	51.78
	No	27	48.21
<i>Tandra</i>	Yes	26	46.42
	No	30	53.57
<i>Glaani</i>	Yes	19	33.92
	No	37	66.07
<i>Aakshijadya</i>	Yes	3	5.35
	No	53	94.64
<i>Abala</i>	Yes	11	19.64
	No	45	80.35
<i>Arati</i>	Yes	19	33.92
	No	37	66.07
<i>Mandaagni</i>	Yes	3	5.35
	No	53	94.64
<i>Dukkha</i>	Yes	3	5.35
	No	53	94.64
<i>Krodha</i>	Yes	2	3.57
	No	54	96.42



VIII. DISCUSSION SURVEY STUDY

A. Discussion on PSQI Scale

The Pittsburgh Sleep Quality Index (PSQI) is a self-report questionnaire that assesses sleep quality over a 1-month time interval. The measure consists of 19 individual items, creating 7 components that produce one global score, and takes 5–10 minutes to complete.⁸ Developed by researchers at the University of Pittsburgh.⁹ The PSQI is intended to be a standardized sleep questionnaire for clinicians and researchers to use with ease and is used for multiple populations. The questionnaire has been used in many settings, including research and clinical activities, and has been used in the diagnosis of sleep disorders. Clinical studies have found the PSQI to be reliable and valid in the assessment of sleep problems to some degree, but more so with self-reported sleep problems and depression-related symptoms than actigraphy measures.¹⁰

B. Discussion on General Status of Volunteers

A total of 200 healthy volunteers were taken in the present survey study. Out of which 144 volunteers were found in *Samyaka Nidra* and 56 volunteers were found in *Asamyaka Nidra* based on the PSQI Scale and self-developed relevant *Nidra* proforma.

C. Discussion on Shirogaurav Symptoms

Among 200 healthy volunteers, 144 (72%) volunteers were *Samyak Nidra* (good sleep) and 56 (28%) volunteers were *Asamyaka Nidra* (Poor sleep).

In *Samyaka Nidra Shirogaurav* was found in 10.41% of volunteers. Due to may be many other reasons like wear glass, using mobile and electronic gadgets etc.

In *Asamyaka Nidra Shirogaurav* was found in 57.14% of volunteers.

D. Discussion on Shirosoola Symptoms

Among 200 healthy volunteers, 144 (72%) of volunteers were *Samyaka Nidra* (good sleep).

In *Samyaka Nidra*, *Shirosoola* symptoms were found in 4.16% of volunteers.

Among 200 healthy volunteers, 56 (28%) volunteers were *Asamyaka Nidra* (Poor sleep).

In *Asamyaka Nidra*, *Shirosoola* symptoms were found in 10.71% of volunteers.

E. Discussion on Rukshata Symptoms

Among 200 healthy volunteers, 144 (72%) of volunteers were *Samyaka Nidra* (good sleep).

In *Samyaka Nidra*, *Rukshata* symptoms were found in 6.94% of volunteers. Volunteers were taken from *Jangal Pradesh*. *Jangal Pradesh* has dominancy of *Vata*. Due to environmental dominancy of *Vata* may be occur *Rukshata*.

Among 200 healthy volunteers, 56 (28%) volunteers were *Asamyaka Nidra* (Poor sleep).

In *Asamyaka Nidra*, *Rukshata* symptoms were found in 60.71% of volunteers.

F. Discussion on Anghgaurav Symptoms

Among 200 healthy volunteers, 144 (72%) of volunteers were *Samyaka Nidra* (good sleep).

In *Samyaka Nidra*, *Anghgaurav* symptoms were found in 9.72% of volunteers.

Among 200 healthy volunteers, 56 (28%) volunteers were *Asamyaka Nidra* (Poor sleep).

In *Asamyaka Nidra*, *Anghgaurav* symptoms were found in 66.07% of volunteers.

G. Discussion on Anghmarda Symptoms

Among 200 healthy volunteers, 144 (72%) of volunteers were *Samyaka Nidra* (good sleep).

In *Samyaka Nidra*, *Anghmarda* symptoms were found in 8.33% of volunteers. Volunteers were taken from *Jangal Pradesh*. *Jangal Pradesh* has dominancy of *Vata*. Due to the environmental dominancy of *Vata* may occur *Anghmarda*.

Among 200 healthy volunteers, 56 (28%) volunteers were *Asamyaka Nidra* (Poor sleep).

In *Asamyaka Nidra*, *Anghmarda* symptoms were found in 33.92% of volunteers.

H. Discussion on Jrambha Symptoms

Among 200 healthy volunteers, 144 (72%) of volunteers were *Samyaka Nidra* (good sleep).

In *Samyaka Nidra*, *Jrambha* symptoms were found in 12.5% of volunteers.

Among 200 healthy volunteers, 56 (28%) volunteers were *Asamyaka Nidra* (Poor sleep).

In *Asamyaka Nidra*, *Jrambha* symptoms were found in 51.78% of volunteers.

I. Discussion on *Tandra* Symptoms

Among 200 healthy volunteers, 144 (72%) of volunteers were *Samyaka Nidra* (good sleep).

In *Samyaka Nidra*, *Tandra* symptoms were found in 5.55% of volunteers. *Tandra* is the state of non-reception of senses by the sense organ indicative of *Kapha Dushti*. It may be due to a history of frequent coughs and colds.

Among 200 healthy volunteers, 56 (28%) volunteers were *Asamyaka Nidra* (Poor sleep).

In *Asamyaka Nidra*, *Tandra* symptoms were found in 46.42% of volunteers.

J. Discussion on *Glaani* Symptoms

Among 200 healthy volunteers, 144 (72%) of volunteers were *Samyaka Nidra* (good sleep).

In *Samyaka Nidra*, *Glaani* symptoms were found in 6.25% of volunteers. May be due to insecurity of career, family etc.

Among 200 healthy volunteers, 56 (28%) volunteers were *Asamyaka Nidra* (Poor sleep).

In *Asamyaka Nidra*, *Glaani* symptoms were found in 33.92% of volunteers.

K. Discussion on *Aakshijadya* Symptoms

Among 200 healthy volunteers, 144 (72%) of volunteers were *Samyaka Nidra* (good sleep).

In *Samyaka Nidra*, *Aakshijadya* symptoms were found in 0.69% of volunteers.

Among 200 healthy volunteers, 56 (28%) volunteers were *Asamyaka Nidra* (Poor sleep).

In *Asamyaka Nidra*, *Aakshijadya* symptoms were found in 5.35% of volunteers.

L. Discussion on *Abala* Symptoms

Among 200 healthy volunteers, 144 (72%) of volunteers were *Samyaka Nidra* (good sleep).

In *Samyaka Nidra*, *Abala* symptoms were found in 11.80% of volunteers. May be due to occupational like fieldwork.

Among 200 healthy volunteers, 56 (28%) volunteers were *Asamyaka Nidra* (Poor sleep).

In *Asamyaka Nidra*, *Abala* symptoms were found in 19.64% of volunteers.

M. Discussion on *Arati* Symptoms

Among 200 healthy volunteers, 144 (72%) of volunteers were *Samyaka Nidra* (good sleep).

In *Samyaka Nidra*, *Arati* symptoms were found in 7.63% of volunteers. May be due to career insecurity etc.

Among 200 healthy volunteers, 56 (28%) volunteers were *Asamyaka Nidra* (Poor sleep).

In *Asamyaka Nidra*, *Arati* symptoms were found in 33.92% of volunteers.

N. Discussion on *Mandaagni* Symptoms

Among 200 healthy volunteers, 144 (72%) of volunteers were *Samyaka Nidra* (good sleep).

In *Samyaka Nidra*, *Mandaagni* symptoms were found in 0.69% of volunteers.

Among 200 healthy volunteers, 56 (28%) volunteers were *Asamyaka Nidra* (Poor sleep).

In *Asamyaka Nidra*, *Mandaagni* symptoms were found in 5.35% of volunteers.

O. Discussion on *Dukha* Symptoms

Among 200 healthy volunteers, 144 (72%) of volunteers were *Samyaka Nidra* (good sleep).

In *Samyaka Nidra*, *Dukha* symptoms were found in 0.69% of volunteers.

Among 200 healthy volunteers, 56 (28%) volunteers were *Asamyaka Nidra* (Poor sleep).

In *Asamyaka Nidra*, *Dukha* symptoms were found in 5.35% of volunteers.

P. Discussion ON *Krodha* Symptoms

Among 200 healthy volunteers, 144 (72%) of volunteers were *Samyaka Nidra* (good sleep).

In *Samyaka Nidra*, *Krodha* symptoms were found in 0% of volunteers.

Among 200 healthy volunteers, 56 (28%) volunteers were *Asamyaka Nidra* (Poor sleep).

In *Asamyaka Nidra*, *Krodha* symptoms were found in 3.57% of volunteers.

Some symptoms were discovered in *Samyaka Nidra* that was stated by numerous *Acharya* in *Asamyaka Nidra*. *Samyaka Nidra* volunteers' consumption of some unfinished diet/*Aahar Drayas* The age of a person is very important in determining susceptibility to certain recurring illnesses.

Healthy volunteers are between the ages of 22-29 years. *Dhatus* are tending to attend to their complete growth (*Paripaka Dhatus Avastha*) at this age, and they have high physical strength. The sickness will not progress due to the strong *Dhatu* pathology, but some symptoms such as *Shirosoola*, *Shirogurav*, *Glaani*, *Tandra*, and so on were discovered.

IX. CONCLUSION

Ahara (Diet), *Nidra* (Sleep), and *Brahmacharya* (Celibacy) are three variables that have a significant part in the maintenance of Health and are referred to as "*Upastambhas*," or three sub-pillars, which when any of them is disturbed leads to disturbance in Health, according to *Ayurvedic* theory.

Adults should get 7-9 hours of sleep per night. But in the modern era, poor sleep habits are having negative consequences on the body because of an increase in the number of shift workers, a heavier study load, a change in lifestyle, etc.

In the survey of 200 healthy volunteers, a maximum number of volunteers was found *Smyaka Nidra* in the area of jodhpur and surrounding.

In my present study found 144 volunteers (72%) of *Samyaka Nidra* and 56 volunteers (28%) of *Asamyaka Nidra*.

Acharya was described various symptom of *Asamyaka Nidra* were found maximum in *Asamyaka Nidra* volunteers. A Maximum 66.07% symptom of *Anghgurav* and minimum 3.57% symptom of *Krodh* was found in *Asamyaka Nidra* volunteers.

The various symptom of *Asamyaka Nidra* found in my study, are sequences following: -

Anghgurav 66.07%, *Anghmarda* 63.92%, *Rukshta* 60.71%, *Shirogurav* 57.14%, *Jrambha* 51.78%, *Tandra* 46.42, *Glaani* 33.92%, *Arati* 33.92%, *Abala* 19.64%, *Shirosoola* 10.7%, *Aakhsijadhya* 5.35%, *Mandhagni* 5.35%, *Dukha* 5.35% And *Krodha* 3.57%.

Some symptoms were found in *Samyaka Nidra* which was mentioned by various *Acharya* in *Aasamyak Nidra*. *Samyaka Nidra* volunteer's intake of some unwhole diet/ *Aahar Drayas*. Age of a person has great importance in causing susceptibility to various recurrent illness.

In healthy volunteers belong to 22-29 years of age. During this age, *Dhatus* are tending to attend their complete growth (*Paripaka Dhatus Avastha*), and possess good physical strength. Due to good strength of *Dhatu* pathology` the disease will not proceed but some symptoms like *Shirosoola*, *Shirogurav*, *Glaani*, *Tandra*, etc. were found.

On the basis of observation and result analysis, it can be concluded that which symptoms of *Asmayaka Nidra* are described by *Acharya* in their *Samhita* have been observed in my research work.

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